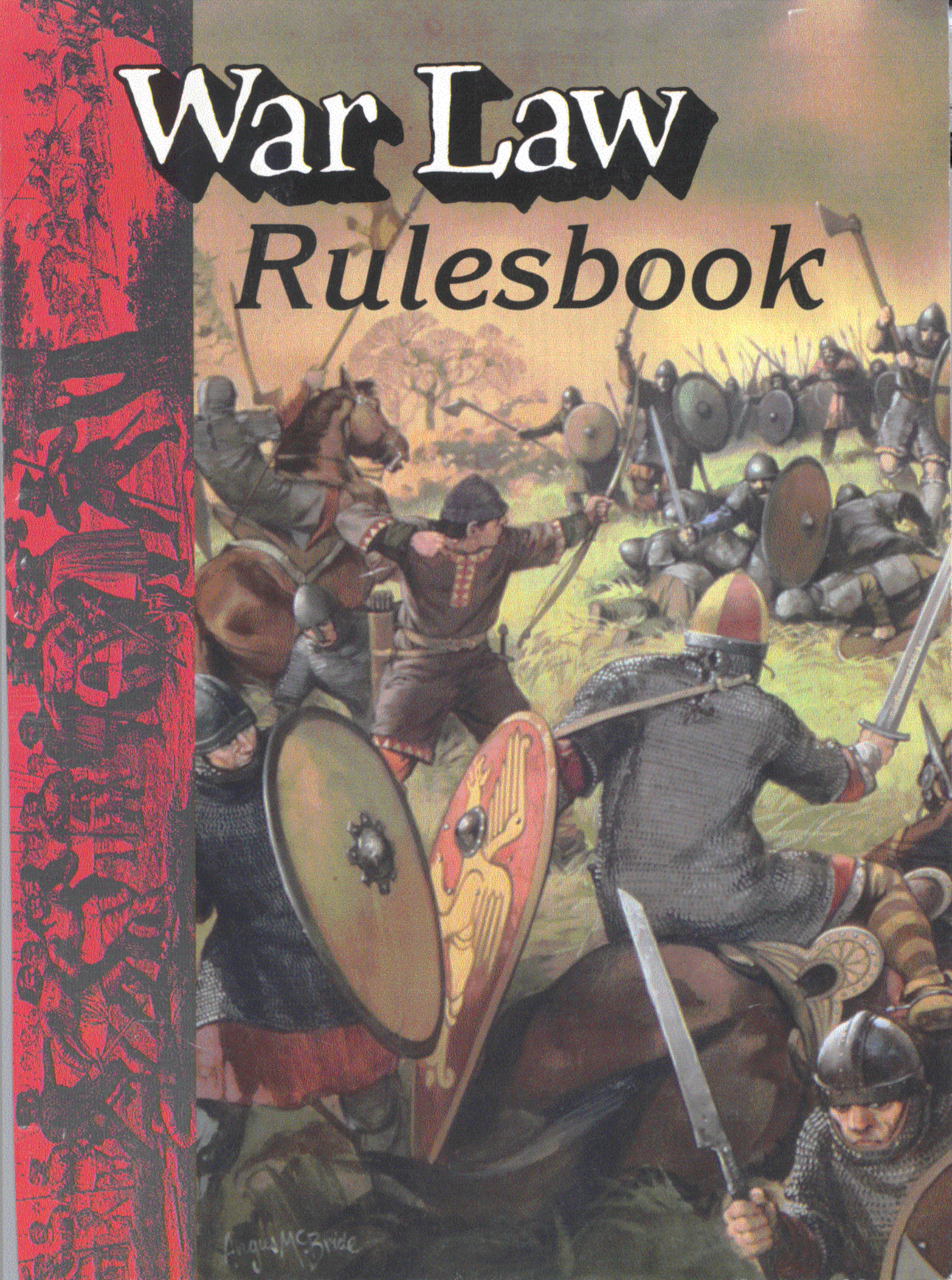
War Law

Rulesbook



War Law™

Designers: *Refereed Game and Unit Generation System:* Ron Goral, David Eubanks, Coleman Charlton; *Standard Game:* Coleman Charlton; *Scenarios:* Tim Taylor; *Optional Material:* Ron Goral, David Eubanks, Coleman Charlton, Lem Richards, David Blank, Ross Henton
Developer/Editor: Coleman Charlton
Cover Illustration: Angus McBride
Interior Illustration: Jeremy Raben
Maps and Counters: Jonathan Hart Eddy
Project Specific Contributions: *Page Design:* Jonathan Hart Eddy; *Box and Cover Graphics:* Terry Amthor; *Editorial Contributions & Playtesting:* Kevin Barrett, Lem Richards, Tim Taylor, David Blank, Ross Henton, Mark Colborn, Todd Caldwell, Tom Holly, Lyle Gross, Guillermo Reyes
ICE MANAGEMENT — *Art Director/Production Manager:* Terry K. Amthor; *Sales Manager:* Deane Begiebing; *Editing & Development Manager:* Coleman Charlton; *President:* Peter Fenlon; *CEO:* Bruce Neidlinger; *Controller:* Kurt Rasmussen.
ICE STAFF — *Marketing Consultant:* John Morgan; *Editing & Development Staff:* Kevin Barrett, Monte Cook, Pete Fenlon, Jessica Ney, Terry Amthor; *Graphics & Production Staff:* Ted Dinwiddie, Jonathan Hart Eddy, Will Hyde, B.T. Thompson; *Sales & Customer Service Staff:* John Brunkhart, Jo Lori Drake; *Finance & Administration Staff:* Chad McCully; *Shipping Staff:* John Breckenridge, Kurt Fischer.

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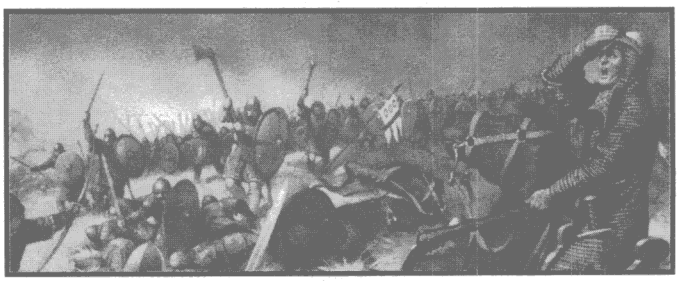
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PART I INTRODUCTION

Welcome to *War Law*; ICE's attempt to address the many requests we have received over the years to produce a mass combat system for ***Rolemaster***™ (***RM***). You may be in for a little surprise, because this is not just another set of miniatures rules with a heap of unit statistics (although you will find these things). *War Law* actually allows ***RM*** players to develop and run military units as if they were Player Characters: we provide a method of unit stat generation, skill development, and guidelines for experience point acquisition and level advancement for groups of soldiers. Also, given the rules for Leaders, ***RM*** players can incorporate their normal role playing characters into a military campaign where they can muster troops, train them, and then lead them into battle.

War Law is intended to be a supplement to the ***Rolemaster*** system. References will be made to various ***RM*** sub-systems such as Armor Type and spell resolution. Obviously, players should have access to, and be familiar with the ***RM*** role playing game.

Note: *For readability purposes, War Law uses standard masculine pronouns when referring to persons of uncertain gender. In such cases, these pronouns are intended to convey the meanings: he/she, her/his, etc.*

WHAT IS WAR LAW?

The *War Law* system simulates mass combat in a fantasy setting. This system consists of two main sets of rules: the Standard Game and the Refereed Game.

Standard Game ..... Part II: Sections 2.0–11.0
Refereed Game ..... Part III: Sections 12.0–18.0

The Standard Game (SG) — The Standard Game is provided for a quick way of resolving large scale combats between two opposing forces in a minimum amount of time. The Standard Game doesn't require a Gamemaster or Referee; instead, the rules provide a set of guidelines that make a GM unnecessary for resolving movement and combat.

The Standard Game is an abstracted method for simulating large scale battles without a GM. In that sense, it is more like a military simulation board game than a role playing game.

The Refereed Game (RG) — A GM should look at the Refereed Game as an extension of the standard *AL&CL* combat system that uses units (i.e., organized groups of combatants) instead of individual combatants. By using the RG turn sequence (Section 14.0), a GM can resolve large scale battles in almost exactly the same way he resolves normal ***RM*** combat. It will help to think of each unit as a single entity with certain characteristics: an OB, a DB, an AT, etc.

Compared to the Standard Game, the Refereed Game is provided for GMs who want to have more flexibility and variations when resolving large scale combat between players. The RG provides more detail, accuracy, and flexibility, while sacrificing speed of play. A GM can easily use parts of the RG with the Standard Game and vice versa. The Refereed Game also allows for the addition of a number of Optional Rules, found in Part V, to be used as deemed necessary.

HOW TO USE WAR LAW

War Law provides players with various methods for resolving battles between large numbers of combatants. Therefore, given that the reader has conceived of a battle that he wants to resolve (whether due to a situation which has arisen in his campaign, or just because he wants to try out the system), the first decision which must be made is: how does one want to resolve the fight?

If there are just two players, each of which has some units wanting to do battle, then they should proceed to the Standard Game rules.

If a GM wants to use *WL* to resolve a battle in his FRP campaign, he can:

- Use the Standard Game rules for battles in which the SG time, distance, and unit scales are appropriate.
- Use the SG with elements of the RG, when most of the SG is appropriate but several elements need to be modified.
- Use the RG for resolving battles in a manner similar to a normal *AL&CL* battle, i.e., the GM handles the refereeing duties as well as controlling many of the units.

However, there are many variations possible on these themes. The battles can be simulated using paper and pencil, counters on a hex grid, miniatures on tabletop terrain, or they can be role played through, with the referee providing a running commentary on how the battle is progressing.

What *War Law* does is provide a system which is very flexible, and can be made as realistic (and complex) or playable (and simple) as desired.



THE PARTS OF WAR LAW

These guidelines are broken into seven Parts.

Part I — *Introduction:* the introduction to the product which you are currently reading.

Part II — *The Standard Game:* a two player battle system based on a standard wargaming unit/hex system.

Part III — *The Refereed Game:* a battle system which allows for mass combats to be resolved in a variety of ways, but which requires a GM.

Part IV — *Units & Leaders:* guidelines for generating role playing style military units and leaders.

Part V — *Optional Material:* a number of optional rules and guidelines for a ***Rolemaster*** GM wishing to run a military campaign.

Part VI — *Tables and Forms:* a compiled set of *War Law*'s reference tables, attack tables, and unit forms.

Most GMs will not want to use all the rules all the time, as this is very time consuming. Remember that in role playing, all rules should be considered as alterable guidelines. If the GM finds any section too tedious for his campaign, it should be altered or deleted to suit his campaign.

1.0 CONVENTIONS & NOTATIONS

This section presents some of the conventions, definitions, and abbreviations unique to *War Law*. For the standard ***Rolemaster*** conventions and notations refer to *ChL* section 1.2, *SL* section 2.0, and *AL* sections 1.3 and 2.0.

ROLEMASTER PRODUCTS

Rolemaster (***RM***) is ICE's complete fantasy role playing system, combining *Arms Law & Claw Law*® (*AL&CL*), *Spell Law*® (*SL*), and *Character Law & Campaign Law*™ (*ChL&CaL*). The rules in *War Law* are designed to be in conjunction with the standard ***RM*** system.

RM is supported by a variety of play aids. Such products can decrease the time and effort required for the creation of an exciting game, and increase the amount of realism and detail obtained during play. These play aids include:

Creatures & Treasure™ (*C&T*) — ICE's compendium of information and statistics for three key elements of fantasy role playing: creatures, treasures, and encounters. It also includes guidelines and statistics for dozens of new races.

The *Rolemaster Companions*™ (*RMC*s) — Compendiums of new spell lists, new professions, new races, new monsters, and a variety of other optional material, rules, and guidelines.

The *Shadow World*® Series — Modules and adventures in a rich, self-contained fantasy environment designed specifically for use with ***RM***, but which can be used as isolated or hidden areas in any GM's campaign world.

Space Master™ — ICE's science fiction role playing system is compatible with *Rolemaster*, allowing Gamemasters to inject sci–fi elements into their FRP games and vice versa. *Space Master* is a Science Fiction Gaming Trilogy that consists of three separate products: *Space Master: The Role Playing Game*™, *Space Master: Star Strike*™ (a fast paced simulation of interplanetary ship combat), and *Space Master: Armored Assault*™ (a simulation of tactical planetary combat on the land, in the sea, and in the air).

Middle-earth Role Playing™ — A complete system specifically designed to introduce people to fantasy role playing in J.R.R. Tolkien's Middle-earth. It is suitable for those who have never before played a FRP game, as well as more experienced gamers who are looking for a realistic, easy to play FRP system for low-level adventures. It is compatible with ***Rolemaster*** and can serve as a great introduction to ***RM*** for novices.

ICE's *Middle-earth*® Module Series — A wide variety of rules, guidelines, and modules for use with fantasy role playing in J.R.R. Tolkien's Middle-earth. Completely compatible with both ***RM*** and *Middle-earth Role Playing*.

ABBREVIATIONS

AL	*Arms Law*	Fer	Ferocity
AL&CL	*Arms Law & Claw Law*	GM	Gamemaster
AMP	Accumulated Morale Penalty	HPT	Hit Point Total
AT	Armor Type	LRT	Luck Roll Table
C&T	*Creatures and Treasures*	Lvl	Level
Cas	Casualties	MPs	Movement Points
ChL	*Character Law*	MPT	Movement Point Total
CP	Command Potential	MR	Morale Rating
DB	Defensive Bonus	NPC	Non-Player Character
Dis	Discipline	OB	Offensive Bonus
DR	Density Rating	PC	Player Character
DRM	Dice Roll Modifier	***RM***	***Rolemaster***
EhP	Exhaustion Points	*RMCI*	*Rolemaster Companion I*
End	Endurance	*RMCII*	*Rolemaster Companion II*
RMCIII	*Rolemaster Companion III*		
RMCIV	*Rolemaster Companion IV*		
RR	Resistance Roll		
SB	Shield Bonus		
SG	Standard Game		
SL	*Spell Law*		
Sur	Survivability		
SZ	Size		
USC	Unit State Counters		
USS	Unit Status Sheet		
UT	Unit Type		
WL	*War Law*		

CALCULATIONS

In the Refereed Game many calculations are required; therefore, have a calculator close by if one is available. In case the reader is not familiar, the formulae below describe how to compute the percentages needed to play the Refereed Game.

- To calculate A% of B, use: A × B ÷ 100

  Example: *13% of 56 = 13 × 56 ÷ 100 = 7.28,*

- To calculate what percent A is of B, use: (A × 100) ÷ B

  Example: *To calculate what percent 43 is of 89, (43 × 100) ÷ 89 = 48.3%*

- To calculate a final multiplier, multiply all cumulative multipliers together.

  Example: *If due to a variety of factors, a unit's OB of 65 is to be multiplied by 0.5, 0.8, and 1.2, the final modified OB would be 65 × (0.5 × 0.8 × 1.2). This equals: 65 × 0.48 = 28.8 (rounds to 29).*

DICE ROLLS

Each die used in ***Rolemaster*** is a 20-sided die (or a 10-sided die) which gives a result between 0 and 9. If two of these dice are used, a variety of results can be obtained. However, results between 1 and 100 are the primary basis of the ***Rolemaster*** system (i.e., ***RM*** is a "percentile" system).

Note: *20-sided dice and 10-sided dice can be obtained at your local hobby and game stores.*



PERCENTILE ("1–100") ROLLS

1–100 Roll — Most of the rolls in ***Rolemaster*** are "1–100" rolls (also called "D100" rolls). To obtain a 1–100 result roll two dice together — one die is treated as the "ten's" die and the other as the "one's" die (designate before rolling, please). Thus a random result between 01 and 100 (a "00" is treated as 100) is obtained.

Example: *The GM asks a player to make a 1–100 roll. The two dice are rolled; the ten's die is a "4" and the one's die is a "7" Thus the result is "47".*

Low Open-ended Roll — To obtain a "low open-ended roll" first make a 1–100 roll. A roll of 01–05 indicates a particularly unfortunate occurrence for the roller. The dice are rolled again and the result is subtracted from the first roll. If the second roll is 96–00, then a third roll is made and subtracted, and so on until a non 96–00 roll is made. The total sum of these rolls is the result of the low open-ended roll.

Example: *The GM asks a player to make a low open-ended roll, and the initial roll is a 04 (i.e., between 01 and 05). A second roll is made with a result of 97 (i.e., between 96 and 100); so a third roll is made, resulting in a 03. Thus, the low open-ended roll that the GM requested is -96 (= 04 - 97 - 03).*

High Open-ended Roll — To obtain a "high open-ended roll" first make a 1–100 roll. A roll of 96–00 indicates a particularly fortunate occurrence for the roller. The dice are rolled again and the result is added to the first roll. If the second roll is 96–00, then a third roll is made and added, and so on until a non 96–00 roll is made. The total sum of these rolls is the result of the high open-ended roll.

Example: *The GM asks a player to make a high open-ended roll, and the initial roll is a 99 (i.e., between 96 and 100). A second roll is made with a result of 96; so a third roll is made with a result 04. Thus, the high open-ended roll that the GM requested is 199 (= 99 + 96 + 04).*

Open-ended Roll — An open-ended roll is both high open-ended and low open-ended.

NON-"1–100" ROLLS

1–10 Roll — In instances when a result (roll) between 1 and 10 is required, only one die is rolled. This gives a result between 0 and 9, but the 0 is treated as a 10. Such a roll is referred to as "1–10" or "D10".

1–5 Roll — Roll one die, divide by 2 and round up ("1D5").

1–8 Roll — Roll one die; if the result is 9 or 10, reroll until a 1 to 8 result occurs ("1D8").

5–50 Roll — Roll 1–10 five times and sum the results.

2–10 Roll — Roll two dice, divide each result by 2 (round up), and then add the two results to obtain the "2–10" ("2D5") result.

Other Required Rolls — Any other required rolls are variants of the above.

UNMODIFIED ROLLS (UM)

Certain results on some rolls indicate an immediate effect and no modifications are considered. These rolls are marked on the appropriate charts with a UM. For example, all weapon attacks result in a fumble if the initial unmodified 01–100 roll falls within the fumble range of the weapon.

DEFINITIONS

Accumulated Morale Penalty (AMP) — This is the sum of the morale penalties that a unit recieves as a result of attacks (see Section 6.1.5) and Morale Checks (see Section 7.1).

Armor Type — A numeric representation of the composite armor type of a unit (see *AL* 4.1).

Attack Roll — A dice roll that determines the success or failure of an attack.

Attack — An attempt by one combatant/unit to damage another.

Blocking Terrain — Missile attacks may not pass through "blocking" terrain (e.g., woods, impassable terrain, etc.).

Casualty — A combatant (soldier) who is incapacitated or killed.

Chance — Sometimes an event has a "chance" or a "percentage chance" of occurring, and this chance is given in the form of "#%." To determine if the action occurs, make an unmodified, non-open-ended roll. If the result is less than or equal to the "#%", the event occurs.

Combatant — Each individual participant in a battle is called a combatant.

Command & Control — The extent to which a leader and his subordinates can give orders to their troops.

Command Structure — Method of delegating authority within a military unit.

Defensive Bonus — A measure of a combatant/unit's ability to defend itself. The DB can be augmented with a shield bonus, a portion of the OB, and various other modifiers.

Density Rating — A measure of the number of combatants and/or objects within a given area.

Discipline — A unit stat which measures its ability to perform under pressure.

Disengagement — A unit's attempt to break off contact with an enemy unit/combatant.

Disrupted — Certain combatant/units that have failed a morale check are disrupted and less effective in a battle.

Endurance — A unit stat which measures the amount of physical activity a unit may engage in before becoming exhausted.

Engagement — Contact between two opposing units/combatants.

Facing — After each combatant is moved, it must be "faced" in a specific direction. Facing determines a combatant's front, flank and rear.

Ferocity — A unit stat which measures its aggressiveness and is used as a modifier to OB.

Formation — Each unit must be in a specific formation that affects its movement, combat, and morale capabilities.

Hits (Hit Points) — Accumulated damage, pain, and bleeding, that can lead to shock, unconsciousness, and sometimes death. Each unit/combatant can take a certain number of hits before dissolving or passing out.

Impassable Terrain — Terrain that totally prohibits normal movement (e.g., a wall, a sheer cliff, a ravine, etc.).

Leader — A leader is a special combatant who can modify the morale and combat capabilities of other combatants and units.

Level — A measure of the experience a unit possesses.

Luck Roll — A dice roll which is used to determine how much a specific result for a given action deviates from the average result for that action.

Maneuver Roll — A dice roll used to determine if an attempted maneuver is successful.

Maneuver — An action that involves risk, the use of skill, unusual concentration, etc.

Mass-combat System — A game system that emphasizes rules for battles involving "units" (i.e., groups of similar individual combatants).

Melee Attack — An attack against a target adjacent to the attacker (e.g., hand-to-hand attacks with swords, axes, polearms, etc.).

Missile Attack — A ranged attack against a target not adjacent to the attacker (e.g., bows, thrown weapons, slings).

Monster — A monster is a beast-like combatant that has special capabilities.

Morale Check — A dice roll used to determine if the morale status of a unit/combatant changes.

Morale Rating — A measure of a unit/combatant's resistance to panic and demoralization on the battlefield.

Morale — A combatant/unit's morale reflects how resistant a combatant/unit is to panic and demoralization on the battlefield.

Movement Rating — A measure of the distance a unit/combatant may move during a given period of time.

Offensive Bonus — A measure of a unit/combatant's proficiency with its weapons of choice when attacking. A portion of the OB may be applied to enhance the DB in the form of a parry.

Open-ended Roll — See Dice Rolls above.

Primary Weapon — A unit/combatant's first weapon of choice.

Rallying — An attempt by a disrupted combatant/unit to become undisrupted and thus operate normally once again.

Recruitment Skill — A measure of a leader's ability to muster troops from a given area.

Secondary Weapon — A unit/combatant's second weapon of choice.

Size — The number of combatants in a unit.

Special Creatures — Large creatures and creatures that use magic.

Spell User — A combatant who can cast spells.

Stat — One of the statistics representing the capabilities of a combatant/unit.

Survivability — A unit stat which measures the ability of the members of a unit to return to active service after being injured.

Target — A combatant or unit being attacked is called the "target of the attack."

Terrain — Terrain represents various features of the battlefield (e.g., trees, bushes, buildings, roads, walls, etc.).

Time Increment — The length of a combat round in the Refereed Game — based upon the size of engaged units.

Turn Sequence — The order that activities occur in during a turn of play.

Turn — Combatants/units fight and move in terms of a fixed period of battle time called a turn. Each Standard Game turn represents 120 seconds of battle time, but a given turn may take much longer for the players to actually resolve. The amount of time for a turn in the Refereed Game will depend upon the situation and the GM's decisions.

Unit — A unit is a group of similar combatants who move and fight together in a battle.

A WL COMPUTER PROGRAM

Note: *This is **not** an ICE product and is entirely the creation and responsibility of David Eubanks.*

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PART II
THE STANDARD GAME

The Standard Game is provided for a quick way of resolving large scale combats between two opposing forces in a minimum amount of time. Specific rules for magic, if necessary, are found in the Standard Game Optional Rules (Section 10.0) and the Refereed Game (Section 16.7).

A GM can use the Standard Game rules and modify them as he sees fit to match his game.

OVERVIEW

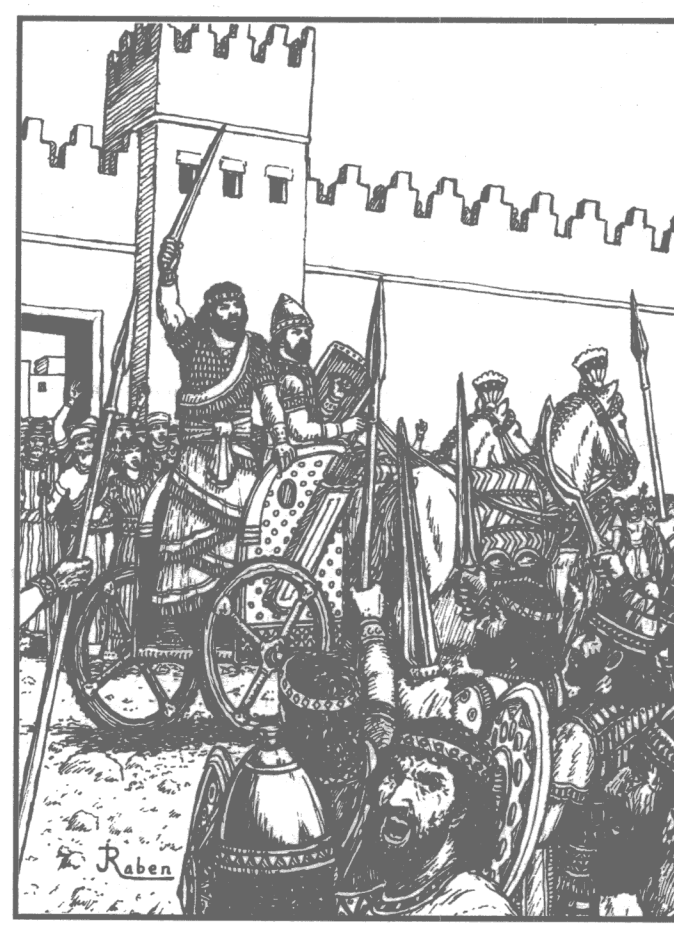
For veteran ***Rolemaster*** users, this mass combat system uses a familiar set of statistics and rules. There are two types of forces: *multi-man units* of 50–100 combatants each, and *leaders*. Each unit has an Offensive Bonus, a Defensive Bonus, an Armor Type, a level, and a shield bonus. In addition, units also have a movement point total and a morale rating. In the Standard Game, leaders have a leadership rating that can affect units they are associated with. See Section 9.0 for guidelines for creating units and leaders.

Units move, fight, and maneuver in a manner similar to the standard ***RM*** procedures. However, as units move and fight during a game, they will have four states that change as a battle progresses. These states are: a morale state, a casualty state, a formation state, and a parry state.

2.0 THE PLAYING ENVIRONMENT

In the Standard Game, specific time, distance, and unit scales are adopted. This is for simplicity, but rules in the Refereed Game provide for units of any size. These rules refer to "hexes" and "turning hexsides." GMs who do not want to use hexes can easily use "centimeters or inches" instead of hexes **and** use "turning 60°" instead of "turning hexsides."

Before beginning play both sides must agree on the scales and rules to be used. Then they must determine the units and leaders to be used (see Section 3.0) **and** they must set up a playing surface (see Sections 2.2 and 2.3).



2.1 SCALE

The scale for the Standard Game is assumed to be 50–100 combatants per unit (see Section 9.1) and 120 seconds per turn. Distance is measured in increments (i.e., hexes) of approximately 100 feet per ⅝" (0.625") hex **or** 30 meters per 1.56 centimeter hex.

SCALE SUMMARY

Unit Size — 50–100 combatants per unit

Turn Length — 120 seconds per turn (12 ***RM*** rounds)

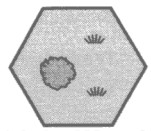
Hex Size — 1 hex = ⅝" = 100 ft (≈1/1920 scale)

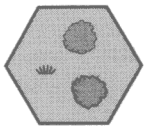
1 hex = 1.56cm = 30m (≈1/1920 scale)

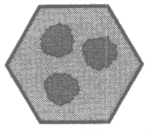
Note: *Unless specific scale miniatures are used, the scale factors above can be varied without significantly affecting most of the rules. Try to keep the changes proportional for all three factors (unit size, turn length, and hex size).*

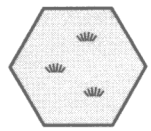
2.2 TERRAIN

Each hex on the playing surface has a "terrain type." The terrain type of a hex affects the morale and DB of a unit in the hex, and it also determines the movement point cost of entering the hex. The SG Terrain Effects Table 5.9 summarizes these factors.


Light Woods


Medium Woods


Heavy Woods


Brush


Stream


Wall



Slope Hexsides

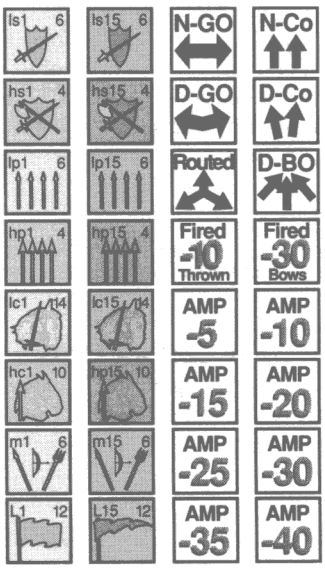

Urban


Buildings

2.3 USING THE DISPLAY SYSTEM IN WAR LAW

THE PLAYING PIECES (2.3.1)

In *War Law*, each unit/leader and its combat status are represented by a Unit/Leader counter, a section of the Unit Status Sheet, and by various Unit State Counters. See Section 3.5 for a complete description of these components.



THE PLAYING SURFACE (2.3.2)

The playing surface for the *War Law* Standard Game Consists of the following components:

The Hex-sheets — A set of four 8½"x11" clear plastic sheets each with a superimposed hex grid that is used to regulate the position of units/leaders, their movement, range for missile fire, etc. These sheets can be combined to form a playing surface of up to 17"x22"; just overlap the hex grids along the edges and use pieces of transparent tape to hold them together. If a larger playing surface is desired, most photocopying businesses can make duplicates of these transparent hex-sheets, and many hobby stores carry or can order larger hex-sheets similar to these.

The Terrain — A 22"x36" sheet of sample terrain from those types listed on the SG Terrain Effects Table 5.9.

In order to set up a battlefield, just cut out the terrain that the battle calls for **and** place the terrain in the appropriate positions under the clear plastic hex-sheets. If you have problems with the terrain slipping, just use transparent tape to hold it in place.

Players and GMs should feel free to make their own battle maps and terrain that represents the specific battlefields that exist in their campaign worlds.

FRIENDLY EDGES OF THE PLAYING SURFACE

Each side must also have a "friendly edge of the playing surface" (i.e., a direction that its units consider to be "towards friendly territory"). This is important determining the movement of Routed units (see Section 5.4). The half-hexes on the edge of the playing surface are considered to be full hexes.



3.0 UNITS AND LEADERS

The term "unit" in the Standard Game refers to multi-man groups of 50–100 combatants that operate together on the battlefield. The term "leader" refers to an individual that can affect the morale and attack capabilities of units.

Note: *The Standard Game assumes that units operate in formations in which only 25–40% of the combatants are on the front line and capable of directly attacking and defending.*

3.1 UNIT STATISTICS

Units have various statistics (i.e., stats) in combat related categories that will affect play. Each unit has:

Unit Type	UT
Offensive Bonus	OB
Defensive Bonus (Melee and Missile)	DB
Shield Bonus	SB
Armor Type	AT
Movement Point Total	MPT
Level	Lvl
Morale Rating	MR

This section provides a brief description for each statistic. Section 11.2 provides some statistics for a variety of sample units. Section 9.0 and Part IV provide guidelines for determining the statistics for your own ***RM*** units.

UNIT TYPE

There are four types of Standard Game units: *Standard* units, *Polearm* units, *Cavalry* units, and *Miscellaneous* units. Standard units are normal melee combat groups that are not mounted and are not armed with polearms. Miscellaneous units are units that have little or no melee combat ability; they usually are missile troops or units with special capabilities and functions. See Section 3.5 for a description of the counters used to represent the various types of units.



OFFENSIVE BONUS

A unit's Offensive Bonus (OB) is a measure of how well the unit can fight, and functions like a character's OB in ***RM***. The higher the OB is, the better the attack will be. As in ***RM***, a unit's OB can be split between attack and parry (see Section 3.2.4).

Note: *If a GM is using a modified version of the Standard Game, he may wish to modify a unit's OB in certain situations. It may even become negative (fighting in the dark in 5 feet of water with two-handed swords, for example).*

DEFENSIVE BONUS

A unit's Defensive Bonus (DB) is a measure of how well the armor and quickness of the soldiers protect them from attack. There are two ratings for DB — one versus melee attacks, and one versus missile attacks. A unit's DB can vary in combat due to:

- The use of shields (if any)
- The terrain type of the hex that it is in
- Forfeiting part of the unit's OB (i.e., parrying)

Note: *If a GM is using a modified version of the Standard Game, the DB may be modified in certain situations, but should never be less than zero.*

SHIELD BONUS

A unit's shield bonus may only be used to increase the unit's DB if the following conditions are met:

- The attack comes across one of its front hexsides (see Section 3.2.1).
- The unit is using shields.
- If a unit has fired bows (i.e., has a 'Fired -30' counter, see Section 4.0), it may not use its Shield Bonus.
- If a unit is using a two-handed weapons during the Melee Phase, it may not use its Shield Bonus.

Note that some shields have different ratings for melee DB and missile DB (see *AL* Table 8.2.5).

ARMOR TYPE

General Armor Type (AT) of troops is as described in ***RM***. This is a number from 1–20 inclusive and is used to index combat results (see *AL* Section 4.1).

MOVEMENT POINT TOTAL

A unit's Movement Point Total (MPT) is based upon how many 100 foot increments the unit can move in clear terrain in a column formation in one turn.

Based upon its terrain, each hex requires a certain number of movement points (MPs) to enter (see Section 5.0). During a given turn, a unit may expend some, all, or none of its movement points entering hexes. Movement points may not be accumulated from turn to turn; they must either be spent or lost.

LEVEL

A unit's level is the average level of the combatants that make up the unit (round off). A unit's level is used for Resistance Rolls versus magic attacks and versus other factors such as poisons and diseases.

MORALE RATING

Each unit has a morale rating between one and ten. The higher the number, the better the unit's morale is.

3.2 UNIT STATES

At any given time during play each unit will have four states that represent its current status:

- A Formation State
- A Morale State
- A Casualty State
- A Parry State

Note: *The modifications in this section are given as bonuses and penalties and assume an average OB of 40 to 90 and a DB of 0 to 30.*

FORMATION STATES (3.2.1)

During play each unit will be in one of the four following formation states:

General Order: Loose formation that must be assumed in certain terrain and if "Disordered." Some poorly trained units may only be able to operate in General Order formation (see Section 9.5).

Column: Fast for movement but bad for combat

Battle Order: Slow for movement but good for combat

Routed: Only assumed when in a Routed morale state (see Sections 5.4 and 7.0)

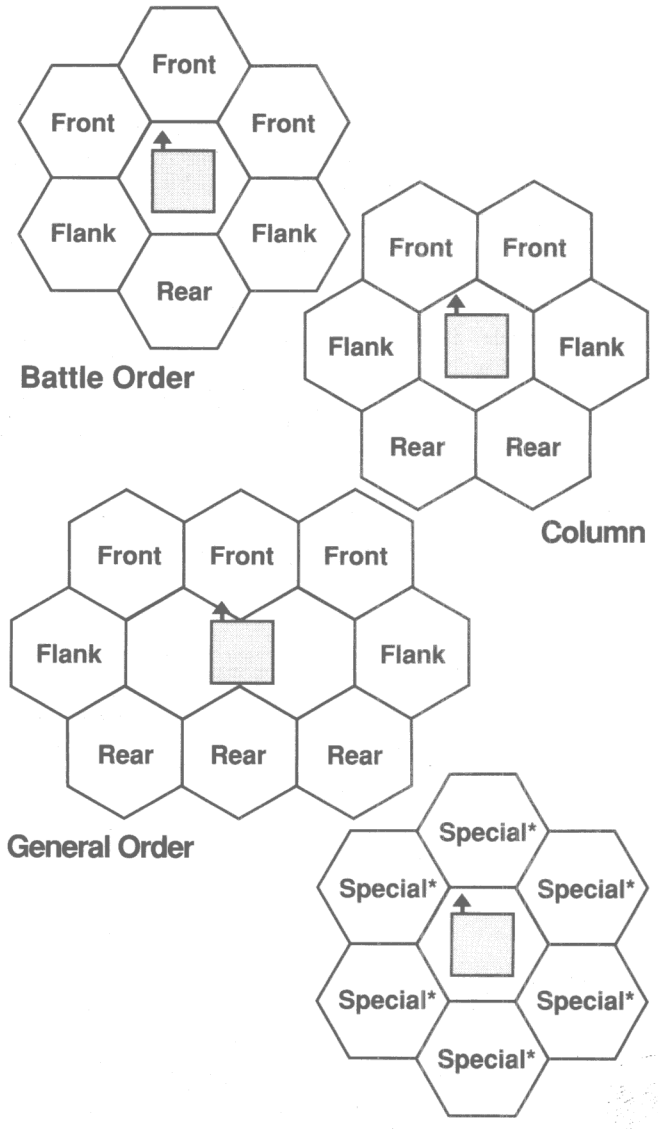
Depending upon its unit type, a unit's formation may affect its OB and DB as indicated in the Formation Effects Chart. A unit's formation also affects the number of movement points it costs to enter certain types of terrain (see Section 5.0 and the SG Terrain Effects Table 5.9).

Note: *In some situations, certain units will not be able to assume certain formations. For example, since a unit in general order formation must occupy two hexes, it may not assume general order if only one hex is available.*

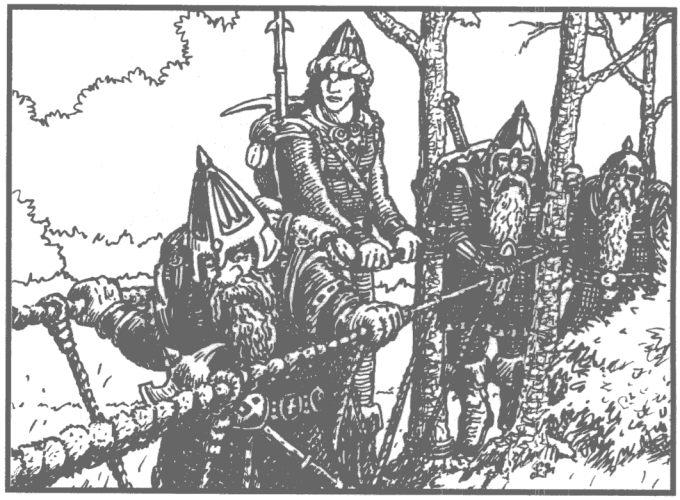
FORMATION EFFECTS CHART

Formation State	MODIFIER FOR Melee OB	Melee DB	Missile OB	Missile DB	Morale Rolls
General Order					
Standard Units	-10	+0	+0	+10	+0
Cavalry Units	-10	+0	+0	+0	+0
Polearm Units	-20	-10	+0	+5	-5
Misc. Units	-20	-10	+0	+10	+0
Column					
Standard Units	-10	-10	-30	-20	-5
Cavalry Units	-20	-20	-30	-30	-5
Polearm Units	-20	-20	-30	-20	-10
Misc. Units	-20	-20	-30	-20	-5
Battle Order					
Standard Units	+10	+10	+0	+0	+10
Cavalry Units	+10	+10	+0	-10	+10
Polearm Units	+10	+15	+0	+0	+20
Misc. Units	+0	+0	+0	+0	+10
Routed					
All	*	-25	*	-25	*

* — All OBs are zero, see the Routed morale state for the morale mod of -40.



* — A Routed unit treats all adjacent hexes as front hexes for the purposes of its movement. All of its adjacent hexes are treated as rear hexes for all other purposes (e.g., it has no zones of control, all attacks against it are treated as rear attacks, etc.).



MORALE STATES (3.2.2)

Each unit will be in one of four morale states:

Prepared / Psyched: OB/Morale Bonus; this state drops to normal after one of the following occurs: the unit attacks **or** the unit drops below 'Full Strength' **or** the unit gets a Morale Check result of 'X', 'R', 'D', or a negative number.

Normal: Normal Capabilities; but a unit with a non-zero Accumulated Morale Penalty (AMP, see Section 7.0) must make a Morale Check in each Morale Phase.

Disordered: Reduced Movement and OB/Morale Penalties; must make a Morale Check in each Morale Phase. When a unit enters a Disordered state, it must "retreat" (see Section 7.3).

Routed: Severe OB/Morale Penalties; all OBs are zero; no missile attacks allowed; must make a Morale Check in each Morale Phase. When a unit enters a Routed state, it must "retreat" (see Section 7.3). The movement of a Routed unit has a number of special restrictions (see Section 5.4).

Note: *The Prepared / Psyched state can be used to represent berserkers and troops whose fervor has been raised on the eve of battle.*

MORALE EFFECTS CHART

Morale State	Movement Effects	OB Mod	Morale Mod	Formation Restriction
Prepared	none	+15	+20	none
Normal	none	+0	+0	none
Disordered	½x normal	-10	-25	none
Routed	normal *	†	-40	Routed only

* — Must move to get as close as possible to its "friendly edge" of the playing surface (see Section 5.4).
† — All OBs are zero; no missile attacks.

CASUALTY STATES (3.2.3)

Each unit will be in one of the five following casualty states:

Full Strength: Normal Capabilities

¾ Strength: OB/Morale Mods

½ Strength: OB/Morale Mods

¼ Strength: OB/Morale Mods

Eliminated: Unit Removed from Play

Note: *These states include the dead, the wounded, those who have stopped fighting, and those who have fled; exact casualties may be calculated at the end of play (see Section 8.0).*

CASUALTY EFFECTS CHART

Casualty State	OB Mod	Morale Mod
Full Strength	none	none
¾ Strength	none	-10
½ Strength	-20	-20
¼ Strength	-40	-30
Eliminated	—	—

PARRY STATES (3.2.4)

As in ***RM***, a unit's OB can be split between attack and parrying at the beginning of a turn. This represents a unit's defensive posture.

- All, zero, or half (round off) of the OB can be allocated to parrying.
- A unit's DB is increased by the amount used to parry.
- A unit's OB is reduced by the amount used to parry.
- If a unit does not have shields, missile attacks may not be parried. A missile attack against a unit with shields in a "all OB" parry state is only affected as if the unit was in a "half OB" parry state.
- In a given attack phase, only one attack may be parried.
- Attacks against a unit's flank or rear (see Section 5.0) may not be parried.

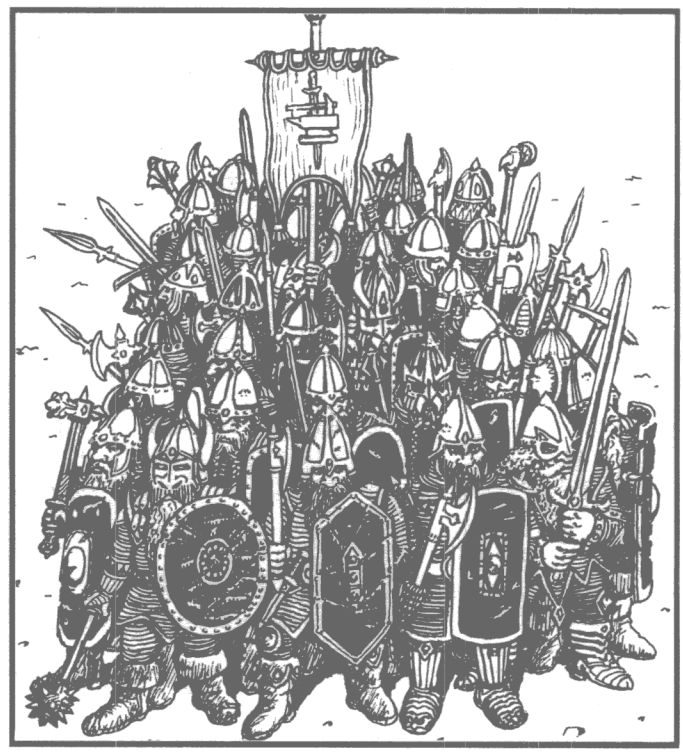
Note: *If both players agree, parrying can be ignored and each unit can be assumed to be in a "zero" parry state. The use of this option can speed up play.*

3.3 LEADERS

In the Standard Game, leaders are individuals with special capabilities. A leader may modify morale and melee attack rolls for a unit in the same hex or in adjacent hexes (see Section 9.3 and 10.3). A leader's statistics are: a movement point total, a morale modification, and a melee attack modification. A leader is always in a normal morale state.

For movement point purposes, a leader may use whichever formation movement point costs he chooses **and** all adjacent hexes are "front hexes" for movement purposes.

A leader is eliminated if alone in a hex that is occupied by an enemy unit or if he is attacked by a missile attack that gets a result of at least one casualty (see Section 6.2). A leader may also be attacked by individual PCs if the Section 10.1 optional rules are being used.



3.4 ZONES OF CONTROL

Each unrouted unit exerts a zone of control (ZOC) into its "front" hexes (see the diagrams in Section 3.2.1). An unrouted unit must stop movement upon entering a zone of control of an enemy unit. A Routed unit may continue moving after it enters an enemy ZOC (see Section 5.5), but it automatically takes one casualty (see Section 6.1.5) for every enemy ZOC that it leaves.

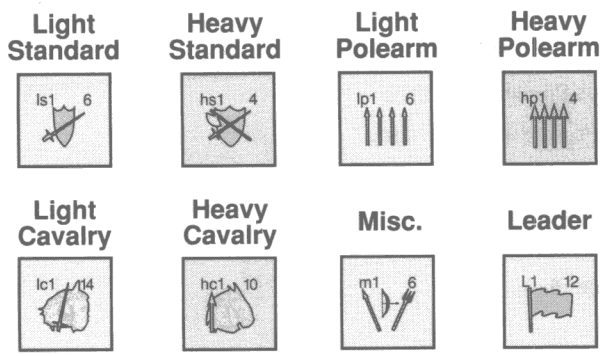
Note: *An unrouted unit starting a turn in a zone of control may move into another zone of control, but must then stop movement for that phase (see Section 5.7). A unit may change facing and/or formation in an enemy unit's ZOC as long as it has the required MPs.*

3.5 KEEPING TRACK OF UNITS AND LEADERS

Each player should keep track of his units and leaders by using a Unit Status Sheet (USS) and the counters provided in *War Law*.

UNIT/LEADER COUNTERS

Each unit and leader should be represented on the playing surface by a counter that corresponds to its unit type (i.e., standard, polearm, cavalry, miscellaneous, or leader). Some unit types are further subdivided into "Heavy" and "Light" units for movement point purposes (see Section 9.2). Each unit/leader counter has a unique letter/number that should be recorded on the appropriate part of the player's Unit Status Sheet.



UNIT STATUS SHEET (USS)

On its player's USS, each unit and leader should have its:

- Letter/number that corresponds to the counter representing the unit on the playing surface
- Statistics (i.e., UT, OB, DB, SB, AT, MPT, Lvl, MR, etc.)
- Current casualty state (for units)
- Current parry state (for units)
- Morale state if it is Prepared/Psyched (for units)

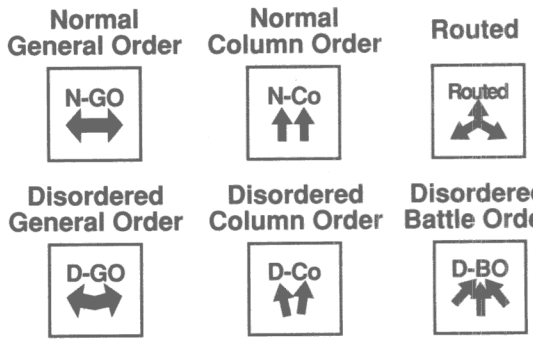
UNIT STATE COUNTERS (USC)

Unit state counters (USC) are normally used to keep track of each unit's formation state and morale state. A unit with no USC on top of it is in battle formation and has either Normal (or Prepared/Psyched) morale.

UNIT STATE COUNTER CHART

Formation State	Morale State: *Normal*	*Disordered*	*Routed*	*Prepared*
Battle Order	none	D–BO	n/a	none
General Order	N–GO	D–GO	n/a	N–GO
Column	N–Co	D–Co	n/a	N–Co
Routed	n/a	n/a	Routed	n/a

Note: *See the diagram for the counters corresponding to the designations in this chart.*





4.0 SEQUENCE OF PLAY

In the Standard Game, it is assumed that there are only two opposing forces: Side-A and Side-B. The Refereed Game can be easily extended to handle multiple force battles moderated by a GM.

Once the two armies are arrayed on the battlefield and will soon be engaged in combat, unit actions should be carried out in the order of the sequence of play. If the situation does not have an obvious "First Player," both players should roll dice: the high roller is Side-A.

Note: *If both players agree, parrying can be ignored and each unit can be assumed to be in a "zero" parry state. The use of this option can speed up play.*

4.1 TURN SEQUENCE

SIDE-A'S TURN

PREPARATION PHASE:

1) Remove "Fired" counters from all of Side-A's units (i.e., any remaining from earlier phases).
2) If parrying is being used, both sides allocate parry states for their various units (i.e., zero, all, or half). This should be recorded on each side's *Unit Status Sheet* by checking the appropriate box. If no parry state is recorded for a given unit, the unit is assumed to be at 'zero' parry (i.e., all of its OB is used on offense and nothing on defense).

MISSILE FIRE PHASE: Side-A's units may now fire missiles. First Side-A declares all missile fire, then Side-B announces which attack (if any) each of its units will parry, and finally all missile attacks are resolved.

Mark each unit that fires with a "Fired" counter: "Bow" or "Thrown". Until this "Fired" counter is removed in a subsequent Side-A Prep Phase, the following restrictions apply to the unit:

1) If the attack was a bow (or sling) missile attack, the unit may not move **and** may not use its Shield Bonus **and** receives a -30 modification to its Melee OB.
2) If the attack was a "Thrown" missile attack, the unit may not move **and** receives a -10 modification to its Melee OB.

MOVEMENT PHASE: Side-A units without a "Fired" counter may move and/or change formation. Side-A's leaders may move.

DEFENSIVE MISSILE FIRE PHASE: Each Side-B unit may fire missiles at one adjacent unit in one of its frontal hexes (i.e., in one of its ZOCs). First Side-B declares all such missile fire, then Side-A announces which attack (if any) each of its units will parry, and finally all of these missile attacks are resolved.

Mark each unit that fires in this phase with a "Fired" counter. Until this "Fired" counter is removed in the next Side-B Preparation Phase, such a unit is restricted as outlined in the Missile Fire Phase above. A unit that already has a "Fired" counter may still fire during this phase; do not place a second "Fired" counter on such a unit.

MELEE PHASE: Each Side-A unit that has melee weapons must melee an enemy unit (if any) in an adjacent frontal hex (i.e., in one of its ZOCs). Each Side-B unit armed with melee weapons must melee an enemy unit (if any) in an adjacent frontal hex. If a unit has more than one enemy unit in its frontal hexes, it may choose which one to attack. The resolution of these attacks proceeds as follows:

1) Side-A declares all of its melee attacks
2) Side-B declares all of its melee attacks
3) Side-B declares which attack each of its units will parry
4) Side-A declares which attack each of its units will parry
5) All of melee attacks are resolved simultaneously

MORALE PHASE: Each Disordered unit, each Routed unit, and each unit with a non-zero Accumulated Morale Penalty (AMP, see Section 7.0) must make a "Morale Check". After Morale Checks, retreats, and advances are resolved (see Section 7.0), each "routed" unit must move (i.e., flee) as outlined in Section 3.2.2.

SIDE-B'S TURN

Side-B performs all of the phases listed above: Side-B performs the activities listed for Side-A, and vice versa.

4.2 SUMMARY

Play proceeds using the following sequence of phases, which is repeated until the battle is over. A battle ends upon mutual agreement of the two players or when conditions agreed on are met.

Side-A Preparation Phase
Side-A Missile Fire Phase
Side-A Movement Phase
Side-B Defensive Missile Fire Phase
Melee Phase
Morale Phase

Side-B Preparation Phase
Side-B Missile Fire Phase
Side-B Movement Phase
Side-A Defensive Missile Fire Phase
Melee Phase
Morale Phase

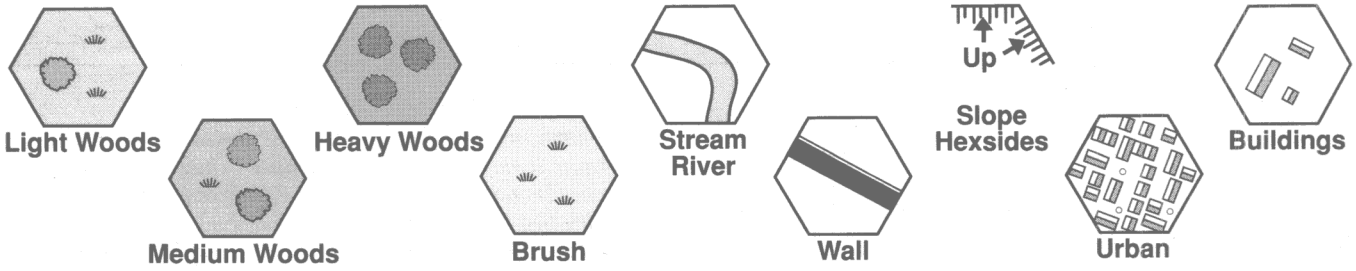
5.0 MOVEMENT

During its Movement Phase, a side may move some, all or none of its units and leaders. A side must perform all of the movement for one unit/leader before moving the next unit/leader — i.e., a side may not move one unit partially, move another unit, and then move the first unit again.

A unit/leader moves by entering one of its "Front" hexes and expending the movement points (MPs) required by the terrain in the hex (see Section 2.2 and the SG Terrain Effects Table 5.9). Movement points may also be expended to change facing and to change formation. Movement for a unit continues until the owning player wishes to stop or until the unit does not have enough movement points to enter a new hex.

MOVEMENT SUMMARY

- Units may not move into hexes occupied by enemy units.
- Units must stop movement when they enter a "Front" hex (i.e., "zone of control", ZOC, see Section 5.5) of an enemy unit.
- Only one unit may occupy a hex at the end of a movement phase.
- An unrouted unit may move through the hex of another friendly unit, as long as one of the units is in General Order. A Routed unit may move through a unit, but the unit moved through modifies its Accumulated Morale Penalty by -20 (see Section 7.1).
- Any number of friendly leaders may occupy a hex at any time.
- A unit with a "Fired" counter may not move.
- A unit may always move one hex regardless of the terrain in the hex (unless that terrain is "n/a" to enter).
- Movement points are required to change formation.
- Movement points are required to change facing.



STANDARD GAME TERRAIN EFFECTS TABLE 5.9

	MOVEMENT POINT COST			TERRAIN MODIFIERS		
Terrain Type	Routed & General Order	Column	Battle Order	Morale	Melee DB	Missile DB
Clear	1	1	2	0	0	0
Along a Road *	1	0.5	2	*	*	*
Brush	1	1	3	+5	0	+5
Lt. Woods	1	2	3	+5	+5	+10
Med. Woods	2	n/a	4	+5	+10	+20
Hvy Woods	2	n/a	n/a	+10	+20	+30
Up slope	+1	+1	+2	+10†	+15†	+5†
Streams	+1	+1	+2	+10‡	+20‡	0‡
Rivers	+3	n/a	n/a	+25‡	+40‡	0‡
Buildings	cot	cot	cot	+5	+5	+5
Urban (City)	1	0.5	2	+10	+10	+10
Impassable (e.g., wall)	n/a	n/a	n/a	n/a	n/a	n/a

Notes: **n/a** = not allowed **cot** = cost of other terrain in the hex

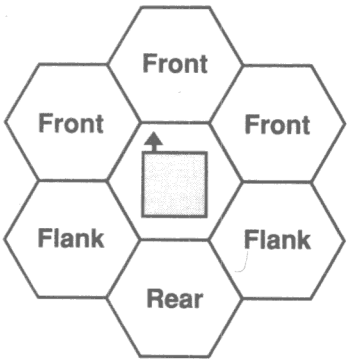
* — Movement along a road negates the movement point costs for other terrain, but the terrain modifiers for a unit in a road hex is based upon the other terrain in the hex. If using the WL display system, indicate a road by marking it on the clear plastic hex-sheets with a crayon, marking pencil, or erasable marker.

† — These modifications apply to a unit that is up slope from the attacking unit(s). The morale mod only applies if all adjacent enemy units are "down slope" from the defending unit.

‡ — These modifications apply to a unit if the attacking unit(s) are in Stream/River terrain. The morale mod only applies if all adjacent enemy units are in Stream/River terrain. These mods would not apply if the attacking unit(s) are not hindered by streams and rivers (e.g., aquatic races, flying creatures, etc.).

5.1 BATTLE ORDER

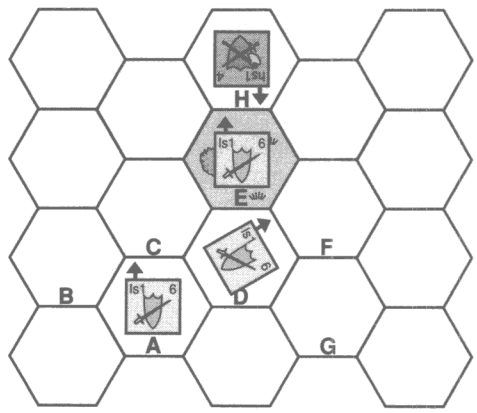
Each unit in Battle Order must occupy a hex at all times and thus it has six adjacent hexes. Each unit must also "face" toward one of these 6 hexes. Each of these six hexes are classified as: front, flank, or rear.



Battle Order

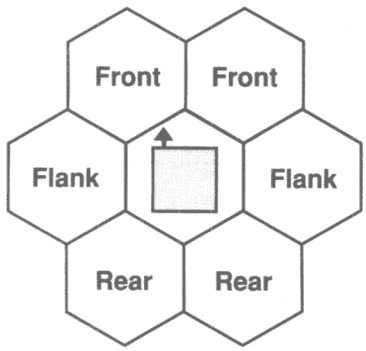
When a unit in Battle Order enters a hex, it must face in the the hexside opposite the hex it entered from. A unit may turn within a hex for 1 movement point per hexside changed.

Example: *Unit 'ls1' has 6 movement points (MPs) and starts Battle Order in hex A facing hex C (see example diagram). It may spend 2 MPs and move to hex B, C, or D. It moves to hex D and faces hex F (it is required to face the hexside opposite the hex it entered from). The unit has 4 MPs left and moves to hex E (3 MPs since it contains Lt. Woods terrain) and faces hex H. The unit has 1 MPs left, but it is now in a front hex of enemy unit 'hs4', so it must halt movement.*



5.2 COLUMN

Each unit in Column must occupy a hex at all times and thus has six adjacent hexes. Each unit must also "face" toward two of these 6 hexes (i.e., towards a "hex-spine"). Each of these six hexes are classified as: front, flank, or rear.

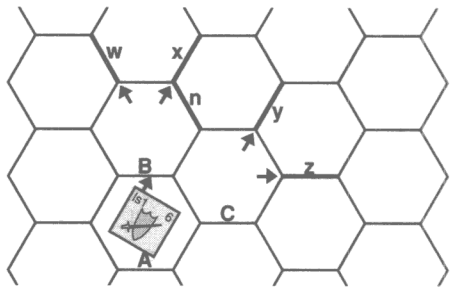


Column

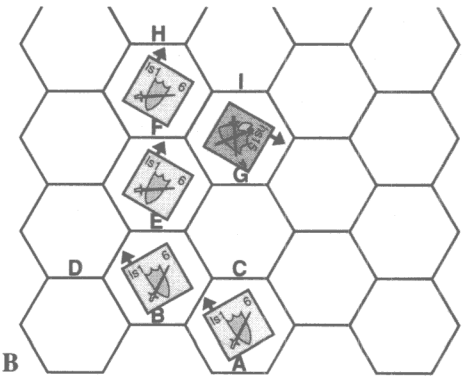
When a unit in Column enters one of its front hexes, it must face one of the two hex-spines adjacent to the hexside opposite the hex it entered from (see the diagram below). A unit in Column may turn within a hex for 2 movement points per hex-spine changed. A unit in Column moving along a road may change facing to follow the road without expending movement points for turning.

Example A: *If a unit in Column is in hex A in the diagram below, it can move to hex B or hex C. If it moves to hex B, it must face hex-spine 'w' or hex-spine 'x'. If it moves to hex C, it must face hex-spine 'y' or hex-spine 'z'. If it is in hex C facing hex-spine 'y', it may spend 2 MPs and face either hex-spine 'n' or hex-spine 'z'.*

Example B: *Unit 'ls1' has 6 movement points and starts Column in hex A facing hex-spine B–C (see example diagram). It may spend 1 MP and move to hex B or C. It moves to hex B and faces hex-spine D–E (it is required to face one of the two hex-spines opposite the hex it entered from). The unit has 5 MPs left and moves to hex E and faces hex-spine F–G. The unit has 4 MPs left, and is now in a flank hex of enemy unit 'hs4' which is in Battle Order. It doesn't have to halt movement because it is only in 'hs4's flank hex, so it moves to hex F and faces hex-spine H–I. Then it spends 2 MPs to turn and face hex-spine I–G. The unit then halts movement, even though it has 1 MP left. Note that it can not move into hex G, because it is occupied by an enemy unit.*



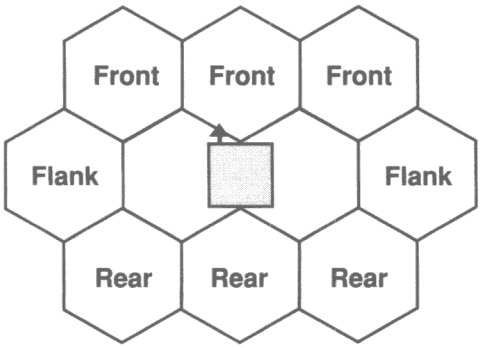
Example A



Example B

5.3 GENERAL ORDER

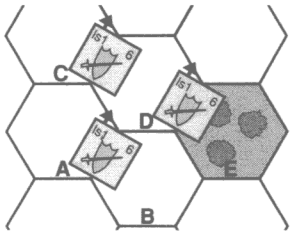
Each unit in General Order must occupy a hexside at all times — it is considered to occupy both hexes adjacent to that hexside. It must face in one of the two directions of the hexside as shown below. Thus, such a unit has eight adjacent hexes. Each of these six hexes are classified as: front, flank, or rear.



General Order

When a unit in General Order moves forward, it must move into two of its "Front" hexes. It must face in the same direction that it was facing in the hex it entered from. The movement point cost is the larger of the movement point costs for the two hexes moved into.

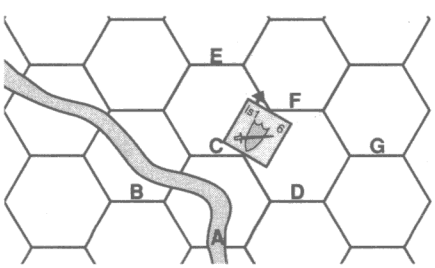
Example: *Unit 'ls1' starts in General Order in hexes A&B facing hex D. It can move to hexes C&D or to hexes D&E as shown in the diagram below. If it moves to hexes C&D, the MP cost is 1 because both are clear terrain. If it moves to hexes D&E, the MP cost is 2 because one hex is clear and the other is Heavy Woods.*



A unit in General Order may turn by moving to one of its adjacent hexsides (front or rear). Thus, it remains in one of its hexes and moves into either its center front hex or its center back hex (see diagram below). The movement point cost is the movement point cost for the hex moved into.

Example: *Unit 'ls1' starts in hexes C&D facing hex F (see the diagram below). It can turn by moving to any of the following positions:*

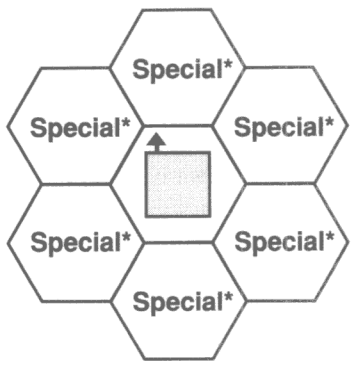
Hexes C&A facing hex D	*MP cost 2 (due to Stream)*
Hexes A&D facing hex C	*MP cost 2 (due to Stream)*
Hexes C&F facing hex E	*MP cost 1*
Hexes F&D facing hex G	*MP cost 1*



5.4 ROUTED FORMATION

Each routed unit must occupy a hex at all times and thus has six adjacent hexes. Each of these six hexes are classified as a front hex for the purposes of the routed unit's movement. All of its adjacent hexes are treated as rear hexes for all other purposes (e.g., it has no zones of control, all attacks against it are treated as rear attacks, etc.).

Note: *Remember a Routed unit suffers severe OB/morale mods, all of its OBs are zero, it may make no missile attacks, it must make a Morale Check in each Morale Phase, and it must "retreat" when it becomes Routed (see Sections 3.2.2 and 7.3).*



Routed

MOVEMENT RESTRICTIONS

Unless a Routed unit is completely surrounded by enemy units and/or impassable terrain, it *must* move during the Movement Phase of its turn. It must move so as to get as close as possible to its "friendly edge of the playing surface" (see Section 2.0) by the end of its movement. If two or more ways will get a Routed unit equidistant from its "friendly edge," it choose which way to move. A Routed unit that reaches the edge of the battle's playing surface is considered to be eliminated (see Sections 7.2 and 8.0).

Note: *These restrictions may force a Routed unit to move through a friendly unit(s) and/or an enemy ZOC(s) (see below).*

ENEMY ZOCS

Following the restrictions above may force a Routed unit to move through an enemy ZOC. A Routed unit may continue moving after it enters an enemy ZOC (see Section 5.5), but it automatically takes one casualty (see Section 6.1.5) for every enemy ZOC that it leaves. If a Routed unit ends its movement in an enemy ZOC, it automatically takes one additional casualty.

FRIENDLY UNITS

Following the restrictions above may force a Routed unit to move through a hex containing a friendly unit. If this occurs, the unit moved through is affected as follows:

- A Prepared unit becomes Normal.
- A Normal unit receives a -20 mod to its AMP.
- A Disordered unit becomes Routed.
- A Routed unit is eliminated and the moving Routed unit is eliminated.

If a Routing unit doesn't have enough movement points to continue moving after entering a hex containing a friendly unit, the Routing unit is eliminated.

5.5 ZONES OF CONTROL

Each *unrouted* unit exerts a zone of control (ZOC) into its "front" hexes (see the diagrams in Section 3.2.1). An unrouted unit must stop movement upon entering a zone of control of an enemy unit. A Routed unit may continue moving after it enters an enemy ZOC (see Section 5.5), but it automatically takes one casualty (see Section 6.1.5) for every enemy ZOC that it leaves.

Note: *An unrouted unit starting a turn in a zone of control may move into another zone of control, but must then stop movement for that phase (see Section 5.7). A unit may change facing and/or formation in an enemy unit's ZOC as long as it has the required MPs.*

5.6 CHANGING FORMATION

Changing formation normally requires the expenditure of movement points as indicated in the Formation Change Chart. It takes half of a unit's movement points (round off) to change to General Order. It takes all of a unit's movement point total to change to anything but General Order.

After changing formation, a unit may face in any direction as long as at least one of its front hexes (see Sections 5.1–5.4) is still the same as one of the front hexes of its previous formation.

As soon as a unit is routed, it must immediately assume a Routed formation. If the unit was in General Order, it must occupy one of its two previous hexes.

FORMATION CHANGE CHART

	CHANGING FROM:		
CHANGING TO:	**General Order**	**Column**	**Battle Order**
General Order	—	½ MP	½ MP
Column	all MPs	—	all MPs
Battle Order	all MPs	all MPs	—

5.7 DISENGAGING

If a unit begins its movement phase in the zone of control (ZOC) of an enemy unit using melee weapons, it is *engaged*. An engaged unit that wishes to move has two choices:

Move Normally — The unit may move normally; but, if the moving unit is in the zone of control of an enemy unit, the enemy unit can make an immediate melee attack against the moving unit. If the moving unit starts in the zone of control of more than one enemy unit, each enemy unit may make an immediate melee attack against the moving unit. Such attacks are modified by -25 in addition to all other modifications.

Disengage — The first hex that a disengaging unit moves to is dependent upon its formation state:

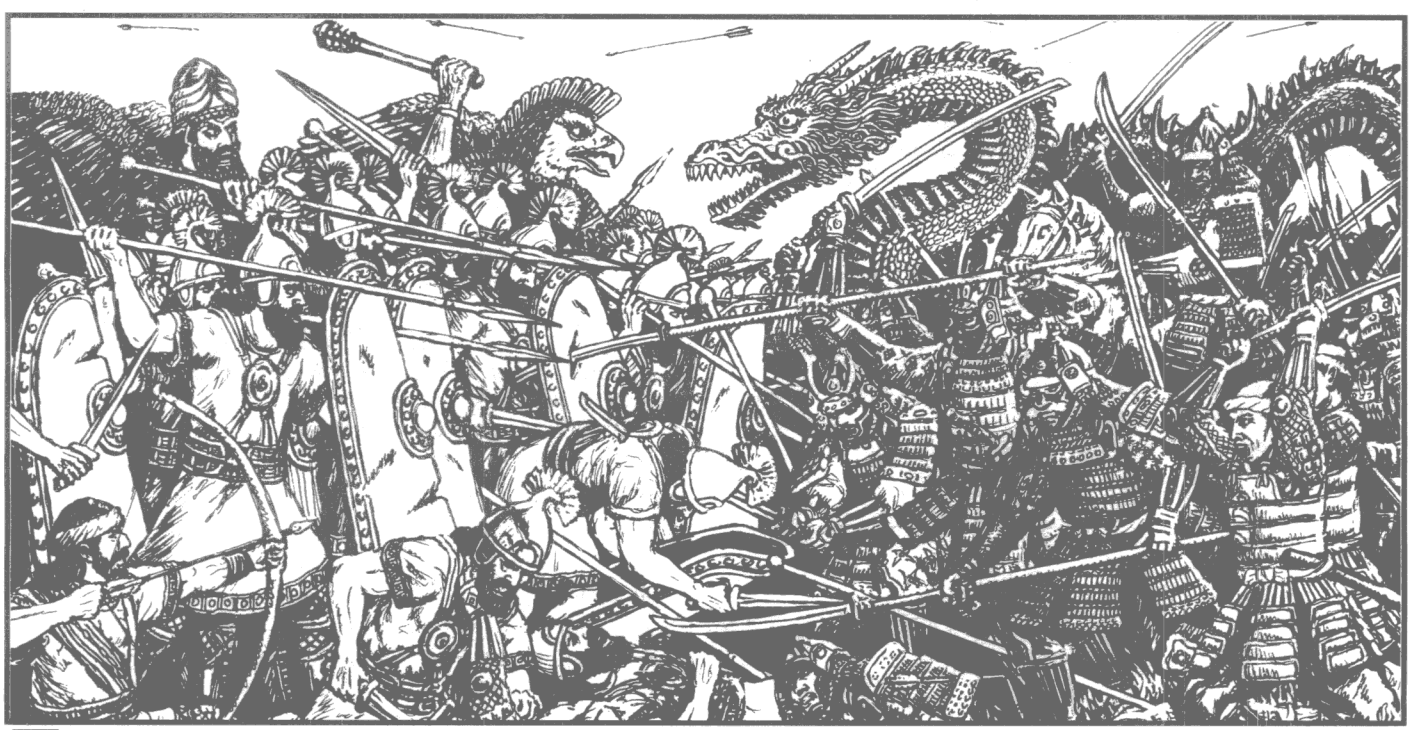
- A unit in *Column* or *General Order* may move to one (or two for General Order) of its rear adjacent hexes (see Sections 5.1–5.4) at double normal terrain cost (normal movement restrictions apply).
- A unit in *Battle Order* may move into one of its rear or flank hexes at double normal terrain cost.
- A *Routed* unit may move to any adjacent hex at normal terrain cost.

In any case, the unit remains facing the same direction that it was facing before disengagement. After moving one hex as outlined above, a disengaging unit may then move normally using any remaining movement points.

Note: *A unit may change facing and/or formation in an enemy unit's ZOC as long as it has the required MPs.*

5.8 STACKING

Only one unit may occupy a hex at the end of each movement phase. A unit may move through a hex occupied by another friendly unit, but neither may be in Battle Order. Any number of leaders may occupy a hex at any given time.



6.0 ATTACKS

To make an attack a unit must make an open-ended "luck roll" and get a result from the SG Luck Table 6.3.1. This result is added to the attacking unit's OB and the defender's DB is subtracted to obtain the attack's *Net Mod*. The *Net Mod* is applied to the appropriate Attack Table to obtain the result of the attack.

6.1 MELEE ATTACKS

During a given Melee phase, a unit must make one melee attack against one enemy unit in one of its front hexes (i.e., one of its zones of control).

TOTAL OFFENSIVE BONUS (6.1.1)

The OB for a melee attack consists of the attacker's OB with the weapon being used and all modifications due to the attacker's situation:

Attacker's OB =

OB stat	Section 3.1
- parry amount	Section 3.2.4
+ formation state modifier	Section 3.2.1
+ morale state modifier	Section 3.2.2
+ casualty state modifier	Section 3.2.3
+ leader modification	Section 3.3
+ position bonus	+15 for flank, +25 for rear
-30/-10 for a "Fired" counter	Section 4.1

POSITION BONUSES

Position bonuses may increase an attacker's OB.

- A unit making a melee attack from one the target's flank hexes receives a +15 OB modification.
- A unit making a melee attack from the target's rear hex receives a +25 modification.

TOTAL DEFENSIVE BONUS (6.1.2)

The DB modifier for an attack consists of the defender's DB (including the portion of OB allotted to parrying) and all modifications due to the defender's situation:

Target's DB =

DB stat	Section 3.1
+ parry amount	Section 3.2.4
+ formation state modifier	Section 3.2.1
+ shield bonus	Section 3.1
+ terrain modifier	SG Terrain Effects Table 5.9

LUCK ROLL & NET MOD (6.1.3)

A 1–100 open-ended roll is made for each unit's attack. This is called the unit's *luck roll*. Because each unit attack actually represents 20–50 normal *AL* attacks, this attack roll is not used as it is used in normal ***RM*** combat. Instead, the attack roll is applied to the SG Luck Table 6.3.1 to obtain an "Attack Mod" that represents the average attack roll results for 25–50 attacks (assuming a normal distribution).

This *Attack Mod* is used with the attacker's OB and the defender's DB to obtain an attack result from the unit attack tables (see Section 6.1.4). The *Net Mod* for a unit's attack is:

Attacking Unit's OB – Defending Unit's DB + Attack Mod

USING THE UNIT ATTACK TABLES (6.1.4)

Based upon the attacking unit's weapon, one of four unit attack tables is used to resolve a melee attack:

- 1-Handed Slashing Weapon Unit Attack Table 6.3.2
- 1-Handed Concussion Weapon Unit Attack Table 6.3.3
- 2-Handed Weapon Unit Attack Table 6.3.4
- Polearm Unit Attack Table 6.3.5

An attack's *Net Mod* (see Section 6.1.3) is cross-indexed with the Armor Type of the defending unit to obtain the attack's result.

ATTACK RESULTS (6.1.5)

0 — No casualties and no additional mod to its Accumulated Morale Penalty (AMP) — already existing AMP remains in effect.

1–10 — A number result indicates how many casualties have been taken by the defending unit — check off that many boxes on the unit's Unit Status Sheet. Each casualty in the Standard Game is equal to 2 to 2.5 casualties in the Refereed Game.

a, b, c, d, e, f — A letter result indicates that the unit receives a mod to its Accumulated Morale Penalty (AMP) as indicated by the Attack Table Result Key (see Section 6.3). This means that the unit will have to make a Morale Check during the following Morale Phase (see Section 7.0)

USING THE REFEREED GAME ATTACK TABLES (6.1.6)

For more accuracy you can use the Refereed Game Unit Attack Tables A-1.1 to A-8.7 instead of the Standard Game Unit Attack Tables. Just multiply the "Cas" result by 50 (i.e., assume 50 attacks) to obtain the Standard Game casualties and the corresponding AMP mods.

Note: *Use the Refereed Game Unit Attack Table that corresponds to the weapon actually being used by the attacking unit.*

6.2 MISSILE ATTACKS

A missile attack is resolved in the same way as a melee attack is resolved (Section 6.1), with the following exceptions:

- The attacking unit must have a missile weapon.
- The Missile Weapon Unit Attack Table 6.3.6 is used.
- A missile attack may only attack a target "*within range.*"
- The defending unit must be in "*line of sight.*"
- The attacking unit must still have "ammunition."

2

TOTAL OFFENSIVE BONUS (6.2.1)

The OB for a missile attack consists of the attacker's OB with the weapon being used and all modifications due to the attacker's situation:

Attacker's OB =

OB stat	Section 3.1
- parry amount	Section 3.2.4
+ formation state modifier	Section 3.2.1
+ morale state modifier	Section 3.2.2
+ casualty state modifier	Section 3.2.3
+ range OB mod	Section 6.2.3
-20 if in the zone of control of an enemy unit (not applicable during the Defensive Missile Fire Phase)	

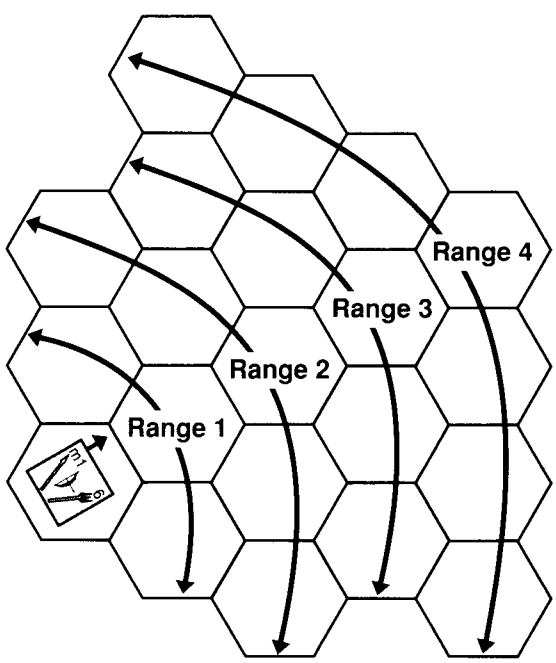
Note: *There is no position bonus for missile attacks.*

TOTAL DEFENSIVE BONUS (6.2.2)

The DB modifier for a missile attack consists of the defender's DB (including the portion of OB allotted to parrying) and all modifications due to the defender's situation:

Target's DB =

DB stat	Section 3.1
+ parry amount (up to half OB only)	Section 3.2.4
+ formation state modifier	Section 3.2.1
+ shield bonus	Section 3.1
+ terrain modifier	SG Terrain Effects Table 5.9



RANGE (6.2.3)

A unit's missile attack range is given in terms of a number of hexes. The range includes the defender's hex but not the attacker's hex; thus, a missile attack with a range of one may affect only adjacent hexes.

The range OB mod of each missile attack is based upon the missile weapon used and the attack range. The Range OB Mod Table 6.3.7 provides these modifications based upon the standard ***RM*** range mods.

Note: *These WL range modifiers take into account a number of factors (e.g., rate of fire, volley fire, type of weapon, etc.); thus the modifiers given differ from the standard* ***RM*** *range modifiers.*

LINE OF SIGHT (6.2.4)

Basically, an attacking unit has line of sight to a target if the target is "in front of the attacker" **and** there are no intervening units or blocking terrain.

To determine line of sight (LOS), place a straight edge (string, ruler, rubberband, etc.) between the center of the attacking unit's hex and the center of the defending unit's hex.

- The defending unit is *not* in LOS, if the straight edge does not cross one of the attacking unit's frontal hexes (i.e., ZOCs) or the hex-spine of one of its frontal hexes.
- The defending unit is *not* in LOS, if the straight edge crosses part of any hex containing a unit or blocking terrain — do not count the attacking unit's hex and hex-sides or the defending unit's hex and hex-sides for these purposes. If the line of sight falls exactly along a hexside between two hexes, the LOS is blocked if either hex is blocked

Note: *For a unit in General Order (attacker or defender) trace line of sight from/to the center of the hex-spine occupied by the unit (see Section 3.2.1).*

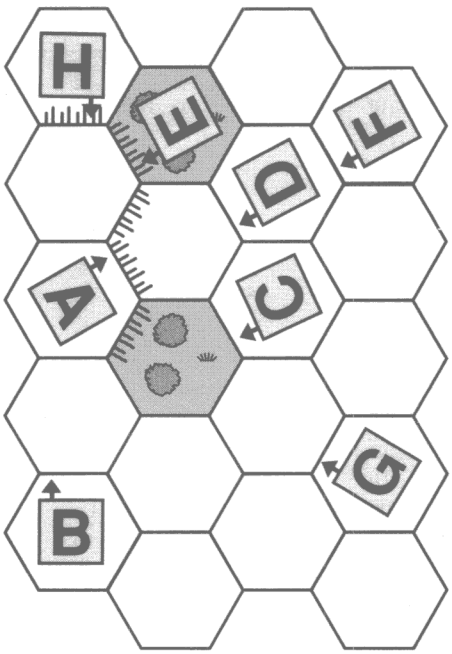
Note: *If a unit has LOS to a target unit, then the target unit always has LOS back to the firing unit.*

Blocking terrain includes:

- A friendly or an enemy unit
- All types of woods terrain
- A slope or hex higher than either unit
- Building terrain
- Urban terrain

Note: *Units on significantly higher terrain may be able to fire over some blocking terrain. This situation should be very rare due to the limited ranges of the weapons used. Before play begins, both sides should examine the terrain being used and agree on any exceptions to the standard line of sight rules. See the Optional Rule in Section 10.10.*

Example: *Unit-A is in battle formation and has missile weapons that can fire to a range of 4 hexes. It is in the position shown in the diagram below. Unit-A may fire at units E, D, and C — the slope hexside is adjacent to unit-A and thus does not block LOS. Unit-A may not fire at unit-F because unit-D blocks LOS. Unit-A may not fire at unit-G because the woods hex blocks LOS. Unit-A may not fire at unit-B because unit-B is behind unit-A. Unit-A may not fire at unit-H because the hex between the two units is higher than unit-H.*



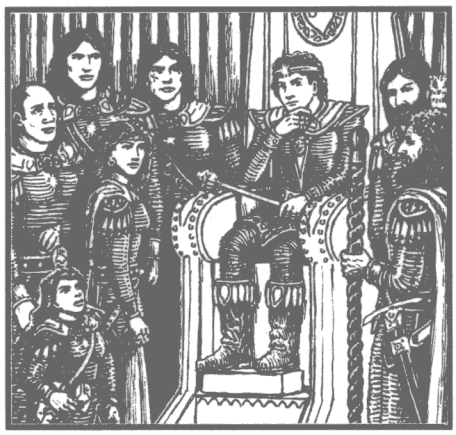
6.3 ATTACK TABLES

AMMUNITION (6.2.5)

For the purposes of limited Standard Game battles, only thrown weapons have ammunition limits. Unless stated otherwise, a unit armed with throwing weapons is assumed to be able to only make one such attack during a battle — just put a mark next to that weapon on the unit's Unit Status Sheet once expended. If special units carry more than one thrown weapon, just record the multiple weapons on the unit's Unit Status Sheet.

ATTACK TABLE RESULT KEY

Result	Casualties	AMP Mod
0	0	0
0a	0	-5
0b	0	-10
1b	1	-10
2b	2	-10
3c	3	-15
4c	4	-15
5c	5	-15
6d	6	-20
7d	7	-20
8e	8	-25
9e	9	-25
10f	10	-30



SG LUCK TABLE 6.3.1

Roll	Attack Mod
> 300	+55
251 – 300	+50
201 – 250	+45
176 – 200	+40
151 – 175	+35
126 – 150	+30
96 – 125	+25
91 – 95	+20
86 – 90	+17
81 – 85	+14
76 – 80	+11
71 – 75	+8
66 – 70	+6
61 – 65	+4
56 – 60	+2
46 – 55	0
41 – 45	-2
36 – 40	-4
31 – 35	-6
26 – 30	-8
21 – 25	-11
16 – 20	-14
11 – 15	-17
06 – 10	-20
-25 to 05	-25
-50 to -26	-30
-75 to -51	-35
-100 to -76	-40
-150 to -101	-45
-200 to -151	-50
> -200	-55

ONE-HANDED SLASHING WEAPON UNIT ATTACK TABLE 6.3.2

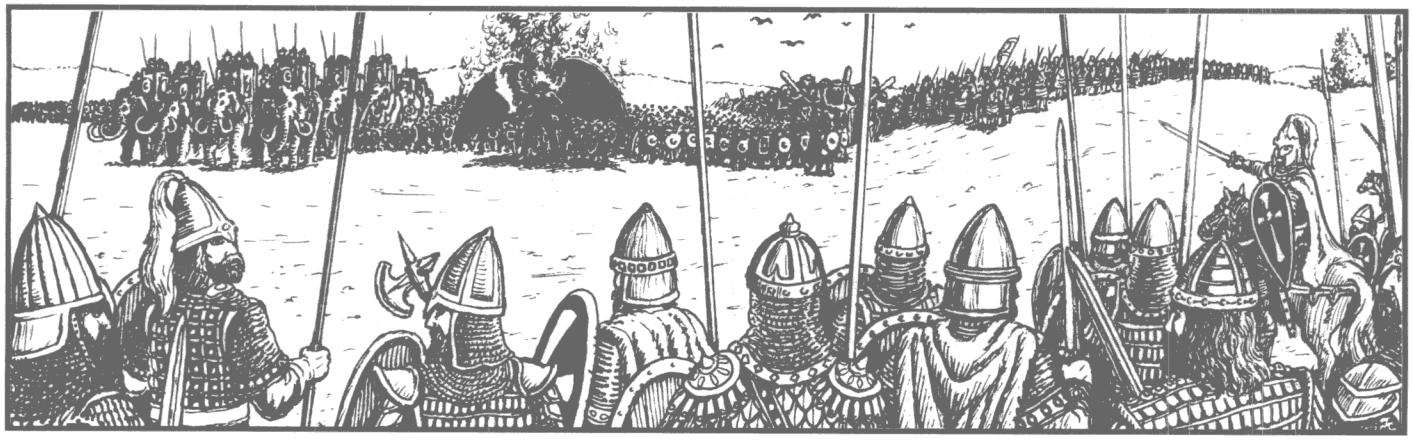
Net Mod	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
≥ 91	8e	8e	9e	10f	9e	9e	10f	10f	10f	10f	10f	10f	10f	10f	10f	10f	10f	10f	10f	10f
81 – 90	6d	7d	8e	9e	8e	8e	9e	9e	9e	9e	10f	10f	10f	10f	10f	10f	10f	10f	10f	10f
71 – 80	5c	6d	7d	8e	7d	8e	8e	9e	8e	9e	9e	10f	9e	9e	10f	10f	9e	10f	10f	10f
61 – 70	4c	5c	6d	7d	6d	7d	7d	8e	7d	8e	8e	9e	8e	8e	9e	9e	8e	9e	10f	9e
51 – 60	3c	4c	5c	6d	5c	5c	6d	7d	6d	7d	7d	8e	7d	7d	8e	8e	7d	8e	9e	8e
41 – 50	2b	3c	4c	5c	4c	4c	5c	6d	5c	5c	6d	7d	6d	6d	7d	7d	5c	6d	8e	7d
31 – 40	1b	2b	3c	4c	3c	3c	4c	5c	4c	4c	5c	6d	5c	5c	6d	6d	4c	5c	7d	6d
21 – 30	1b	1b	2b	3c	2b	2b	3c	4c	3c	4c	4c	5c	4c	5c	5c	5c	3c	4c	5c	5c
11 – 20	0b	1b	1b	2b	1b	1b	2b	3c	2b	3c	3c	4c	3c	4c	4c	4c	2b	3c	4c	4c
01 – 10	0b	0b	1b	1b	1b	1b	1b	2b	1b	2b	2b	3c	2b	3c	3c	3c	1b	2b	3c	3c
-10 to 0	0a	0b	0b	0b	0b	0b	0b	1b	0b	1b	1b	2b	1b	2b	2b	2b	1b	1b	2b	2b
-20 to -11	0a	0a	0b	0b	0b	0b	0b	0b	0b	0b	0b	1b	0b	1b	1b	1b	0b	0b	1b	1b
-30 to -21	0	0a	0a	0a	0a	0a	0a	0b	0a	0b	0b	0b	0b	0b	0b	0b	0b	0b	1b	0b
-40 to -31	0	0	0a	0a	0a	0a	0a	0a	0a	0a	0a	0b	0a	0b	0b	0b	0a	0a	0b	0b
-50 to -41	0	0	0	0	0	0	0	0a	0	0a	0a	0a	0a	0a	0a	0a	0a	0a	0b	0a
-60 to -51	0	0	0	0	0	0	0	0	0	0	0	0a	0	0a	0a	0a	0	0	0a	0a
-70 to -61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0a	0
≤ -71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

ONE-HANDED CONCUSSION WEAPON UNIT ATTACK TABLE 6.3.3

Net Mod	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
≥ 91	9e	9e	10f	10f	10f	10f	10f	10f	10f	10f	10f	10f	10f	10f	10f	10f	10f	10f	10f	10f
81 – 90	8e	8e	9e	9e	9e	9e	10f	10f	9e	10f	10f	10f	9e	10f	10f	10f	9e	10f	10f	10f
71 – 80	6d	7d	8e	9e	8e	8e	9e	10f	8e	9e	9e	10f	9e	9e	9e	10f	8e	9e	10f	9e
61 – 70	5c	6d	7d	8e	7d	7d	8e	9e	7d	8e	8e	9e	8e	8e	9e	9e	7d	8e	9e	8e
51 – 60	4c	5c	6d	7d	6d	6d	7d	8e	6d	7d	7d	8e	7d	8e	8e	8e	6d	6d	8e	7d
41 – 50	3c	4c	5c	6d	5c	5c	6d	6d	5c	6d	6d	7d	6d	7d	7d	7d	5c	5c	7d	6d
31 – 40	2b	3c	4c	5c	4c	4c	4c	5c	4c	4c	5c	6d	5c	5c	6d	6d	4c	4c	6d	5c
21 – 30	1b	2b	3c	4c	3c	3c	3c	4c	3c	3c	4c	5c	4c	4c	5c	5c	3c	3c	5c	4c
11 – 20	1b	1b	2b	3c	2b	2b	3c	3c	2b	3c	3c	4c	3c	3c	4c	4c	2b	2b	4c	3c
01 – 10	0b	1b	1b	2b	1b	1b	2b	3c	1b	2b	2b	3c	2b	3c	3c	3c	1b	1b	3c	2b
-10 to 0	0b	0b	1b	1b	1b	1b	1b	2b	1b	1b	1b	2b	1b	2b	2b	2b	1b	1b	2b	1b
-20 to -11	0a	0b	0b	0b	0b	0b	1b	1b	0b	1b	1b	1b	1b	1b	1b	2b	0b	0b	1b	1b
-30 to -21	0a	0a	0b	0b	0b	0b	0b	0b	0b	0b	0b	1b	0b	0b	1b	1b	0b	0b	1b	0b
-40 to -31	0	0a	0a	0a	0a	0a	0b	0b	0a	0b	0b	0b	0b	0b	0b	0b	0a	0a	0b	0b
-50 to -41	0	0	0a	0a	0a	0a	0a	0a	0a	0a	0a	0b	0a	0a	0b	0b	0a	0a	0b	0a
-60 to -51	0	0	0	0	0	0	0a	0a	0	0a	0a	0a	0a	0a	0a	0a	0	0	0a	0a
-70 to -61	0	0	0	0	0	0	0	0	0	0	0	0a	0	0	0a	0a	0	0	0a	0
≤ -71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TWO-HANDED WEAPON UNIT ATTACK TABLE 6.3.4

Net Mod	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
≥ 91	9e	9e	10f	10f	10f	10f	10f	10f	10f	10f	10f	10f	10f	10f	10f	10f	10f	10f	10f	10f
81 – 90	8e	8e	9e	10f	9e	10f	10f	10f	10f	10f	10f	10f	10f	10f	10f	10f	10f	10f	10f	10f
71 – 80	7d	7d	8e	9e	8e	8e	9e	9e	9e	9e	10f	10f	9e	10f	10f	10f	9e	10f	10f	10f
61 – 70	5c	6d	7d	8e	7d	7d	8e	9e	8e	9e	9e	10f	9e	9e	10f	10f	9e	9e	10f	10f
51 – 60	4c	5c	6d	7d	6d	6d	7d	8e	7d	8e	8e	9e	8e	9e	9e	9e	8e	8e	9e	9e
41 – 50	3c	4c	5c	6d	5c	5c	6d	7d	6d	7d	7d	8e	7d	8e	8e	8e	7d	7d	8e	7d
31 – 40	2b	3c	4c	5c	4c	4c	5c	6d	5c	6d	6d	7d	6d	7d	7d	7d	6d	6d	7d	6d
21 – 30	1b	2b	3c	4c	3c	3c	4c	5c	4c	5c	5c	6d	5c	6d	6d	6d	5c	5c	6d	5c
11 – 20	1b	1b	2b	3c	2b	2b	3c	4c	3c	4c	4c	5c	4c	5c	5c	5c	3c	3c	5c	4c
01 – 10	0b	1b	1b	2b	1b	1b	2b	3c	2b	3c	3c	4c	3c	4c	4c	4c	2b	2b	4c	3c
-10 to 0	0b	0b	1b	1b	1b	1b	1b	2b	1b	2b	2b	3c	2b	3c	3c	3c	1b	1b	3c	2b
-20 to -11	0a	0b	0b	1b	0b	0b	1b	1b	1b	1b	1b	2b	1b	2b	2b	2b	1b	1b	2b	1b
-30 to -21	0a	0a	0b	0b	0b	0b	0b	0b	0b	1b	1b	1b	1b	1b	1b	1b	0b	0b	1b	1b
-40 to -31	0	0a	0a	0b	0a	0a	0b	0b	0b	0b	0b	0b	0b	0b	1b	1b	0b	0b	1b	0b
-50 to -41	0	0	0a	0a	0a	0a	0a	0a	0a	0b	0b	0b	0b	0b	0b	0b	0a	0a	0b	0b
-60 to -51	0	0	0	0a	0	0	0a	0a	0a	0a	0a	0a	0a	0a	0b	0b	0a	0a	0b	0a
-70 to -61	0	0	0	0	0	0	0	0	0	0a	0a	0a	0a	0a	0a	0a	0	0	0a	0a
-80 to -71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0a	0a	0	0	0a	0
≤ -81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



POLEARM UNIT ATTACK TABLE 6.3.5

Net Mod	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
≥ 91	8e	8e	9e	10f	9e	9e	10f	10f	10f	10f	10f	10f	10f	10f	10f	10f	10f	10f	10f	10f
81 – 90	7d	7d	8e	9e	8e	8e	9e	10f	9e	10f	10f	10f	10f	10f	10f	10f	10f	10f	10f	10f
71 – 80	5c	6d	7d	8e	7d	7d	8e	9e	8e	9e	9e	10f	9e	9e	10f	10f	9e	9e	10f	10f
61 – 70	4c	5c	6d	7d	6d	6d	7d	8e	7d	8e	8e	9e	8e	9e	9e	9e	8e	8e	10f	9e
51 – 60	3c	4c	5c	6d	5c	5c	6d	7d	6d	7d	7d	8e	7d	8e	8e	8e	7d	7d	9e	8e
41 – 50	2b	3c	4c	5c	4c	4c	5c	6d	5c	6d	6d	7d	6d	7d	7d	8e	5c	6d	8e	7d
31 – 40	1b	2b	3c	4c	3c	3c	4c	5c	4c	5c	5c	6d	5c	6d	6d	6d	4c	5c	6d	5c
21 – 30	1b	1b	2b	3c	2b	2b	3c	4c	3c	4c	4c	5c	4c	5c	5c	5c	3c	4c	5c	4c
11 – 20	0b	1b	1b	2b	1b	1b	2b	3c	2b	3c	3c	4c	3c	4c	4c	4c	2b	3c	4c	3c
01 – 10	0b	0b	1b	1b	1b	1b	1b	2b	1b	2b	2b	3c	2b	3c	3c	3c	1b	2b	3c	2b
-10 to 0	0a	0b	0b	1b	0b	0b	1b	1b	1b	1b	1b	2b	1b	2b	2b	2b	1b	1b	2b	1b
-20 to -11	0a	0a	0b	0b	0b	0b	0b	0b	0b	0b	1b	1b	0b	1b	1b	1b	0b	1b	1b	1b
-30 to -21	0	0a	0a	0b	0a	0a	0b	0b	0b	0b	0b	0b	0b	0b	0b	1b	0b	0b	1b	0b
-40 to -31	0	0	0a	0a	0a	0a	0a	0a	0a	0a	0b	0b	0a	0b	0b	0b	0a	0b	0b	0b
-50 to -41	0	0	0	0a	0	0	0a	0a	0a	0a	0a	0a	0a	0a	0a	0b	0a	0a	0b	0a
-60 to -51	0	0	0	0	0	0	0	0	0	0	0a	0a	0	0a	0a	0a	0	0a	0a	0a
-70 to -61	0	0	0	0	0	0	0	0	0	0	0	0a	0	0	0	0a	0	0	0a	0
≤ -71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

MISSILE WEAPON UNIT ATTACK TABLE 6.3.6

Net Mod	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
≥ 91	8e	8e	9e	10f	10f	10f	10f	10f	10f	10f	10f	10f	10f	10f	10f	10f	10f	10f	10f	10f
81 – 90	7d	7d	8e	9e	9e	10f	10f	10f	9e	9e	9e	10f	9e	10f	10f	10f	9e	9e	10f	10f
71 – 80	6d	6d	7d	8e	8e	8e	9e	10f	8e	8e	9e	9e	9e	9e	9e	9e	8e	8e	9e	9e
61 – 70	4c	5c	6d	7d	7d	7d	8e	9e	7d	7d	8e	8e	8e	9e	9e	9e	7d	7d	8e	8e
51 – 60	3c	4c	5c	6d	6d	6d	7d	8e	6d	6d	7d	7d	7d	8e	8e	8e	6d	6d	7d	7d
41 – 50	2b	3c	4c	5c	5c	5c	6d	7d	5c	5c	6d	6d	6d	7d	7d	7d	5c	5c	6d	6d
31 – 40	2b	2b	3c	4c	4c	4c	5c	5c	4c	4c	5c	5c	5c	6d	6d	6d	4c	4c	5c	4c
21 – 30	1b	1b	2b	3c	3c	3c	4c	4c	3c	3c	4c	4c	4c	5c	5c	5c	3c	3c	4c	3c
11 – 20	1b	1b	1b	2b	2b	2b	3c	3c	2b	2b	3c	3c	3c	4c	4c	4c	2b	2b	3c	2b
01 – 10	0b	0b	1b	1b	1b	1b	2b	3c	1b	2b	2b	2b	2b	3c	3c	3c	1b	1b	2b	1b
-10 to 0	0b	0b	0b	1b	1b	1b	1b	2b	1b	1b	1b	1b	2b	2b	2b	2b	1b	1b	1b	1b
-20 to -11	0a	0a	0b	0b	0b	0b	1b	1b	0b	0b	1b	1b	1b	1b	1b	1b	0b	0b	1b	0b
-30 to -21	0a	0a	0a	0b	0b	0b	0b	0b	0b	0b	0b	0b	0b	1b	1b	1b	0b	0b	0b	0b
-40 to -31	0	0	0a	0a	0a	0a	0b	0b	0a	0a	0b	0b	0b	0b	0b	0b	0a	0a	0b	0a
-50 to -41	0	0	0	0a	0a	0a	0a	0a	0a	0a	0a	0a	0a	0b	0b	0b	0a	0a	0a	0a
-60 to -51	0	0	0	0	0	0	0a	0a	0	0	0a	0a	0a	0a	0a	0a	0	0	0a	0
-70 to -61	0	0	0	0	0	0	0	0	0	0	0	0	0	0a	0a	0a	0	0	0	0
≤ -71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

RANGE OB MOD TABLE 6.3.7

	Range in Hexes													
Weapon	1	2	3	4	Weapon	1	2	3	4	5	6	7
Bola	-10	-20	-40†	na	Composite Bow	+10	-10	-25	-40†	-50†	na	na
Dagger	-20	na	na	na	Hvy. Crossbow	+15	-10	-25	-35	-45†	-55†	-65†
Hand Axe	-15	na	na	na	Lt Crossbow	+5	-15	-30	-45	-55†	-65†	na
Javelin	-5	-25†	na	na	Long Bow	+10	-10	-20	-30	-40†	-50†	-60†
Spear	-10	-35†	na	na	Sling	+5	-20	-35	-45†	-55†	na	na
War Hammer	-25	na	na	na	Short Bow	+5	-15	-35	-45†	-55†	na	na

† — These ranges apply if optional rule 10.11 is being used.

7.0 MORALE CHECKS

During each Morale Phase, each Disordered unit, each Routed unit, and each unit with a non-zero Accumulated Morale Penalty must make a Morale Check. To make a Morale Check, roll 1–100 (open-ended) and add all applicable modifications. Then cross-index this Net Morale Roll with the unit's Morale Stat on the SG Morale Table 7.4.

Net Morale Roll =

1–100 roll (open-ended)
+ formation state modifier ..... Section 3.2.1
+ morale state modifier ..... Section 3.2.2
+ casualty state modifier ..... Section 3.2.3
+ leader modification ..... Section 3.3
+ terrain modifier ..... SG Terrain Effects Table 5.9
+ Accumulated Morale Penalty (AMP) ..... see Section 7.1
+50 ..... if the unit was not attacked during the current turn

7.1 ACCUMULATED MORALE PENALTIES

A unit receives modifications to its Accumulated Morale Penalty (AMP) as a result of attacks (see Section 6.1.5) and Morale Checks. These AMP mods are cumulative and the current total should always be indicated by placing an AMP counter on top of the affected unit. A unit's AMP may never exceed -40 and is never positive — treat values above 0 as 0 and treat values under -40 as -40.



Disordered and Routed units always have a zero AMP; instead, they have morale state modifiers of -25 and -40 respectively.

7.2 MORALE CHECK RESULTS

± # = *modification to Accumulated Morale Penalty* — If a unit is in a Normal morale state, this value is added to the unit's AMP (use the appropriate counter). If this results in a positive or zero AMP, remove any AMP counter. Any negative modifier of this type will cause a unit in a Prepared morale state to assume a Normal morale state. A unit in a Disordered or Routed morale state will ignore these results.

I = *Improved* — A Disordered unit becomes Normal. A Routed unit become Disordered. A Normal unit has its AMP reduced to 0 (i.e., remove any AMP counter).

D = *Disordered* — (See Section 3.2.2) A Prepared unit becomes Normal. A Normal unit becomes Disordered (remove any AMP counter). A Disordered unit becomes Routed. Routed units are unaffected. Any unit that was not in a Prepared Morale State must "retreat" (see Section 7.3).

R = *Routed* — (see Section 3.2.2) A Prepared unit becomes Disordered. A Normal unit becomes Routed (remove any AMP counter). A Disordered unit becomes Routed. A unit that is already Routed is Eliminated. The unit must "retreat" (see Section 7.3).

X = *Eliminated* — The unit is removed from the game. See Section 8.0 for a discussion of post-battle casualty determination. This result represents the flight of the unit's combatants from the battle **or** their surrender.

7.3 RETREATS

A unit that becomes Disordered or Routed due to a Morale Check must immediately disengage one hex as outlined in Section 5.7 — this is called a *retreat*. A unit may not retreat to a hex containing impassable terrain, another unit, or the zone of control of an enemy unit. If no retreat is possible, the unit remains where it is and must make another Morale Check.

ADVANCE AFTER A RETREAT

If a defending unit retreats, one enemy unit may advance into the vacated hex if it satisfies the following conditions:

- The advancing unit must be in Battle Order and not Disordered
- The advancing unit must have attacked the retreating unit during the preceding Melee Phase.
- The advancing unit's new rear hex must be the hex it advanced from.

An advancing unit immediately receives a +20 mod to its AMP (see Section 7.1).

SG MORALE TABLE 7.4

Modified Roll	Morale Rating 1	2	3	4	5	6	7	8	9	10
≤ -200	X	X	X	X	X	X	X	X	X	X
(-200) — (-151)	X	X	X	X	X	X	X	X	X	R
(-150) — (-101)	X	X	X	X	X	X	R	R	R	D
(-100) — (-81)	X	X	X	X	R	R	R	R	D	D
(-80) — (-61)	X	X	R	R	R	R	R	D	D	D
(-60) — (-46)	R	R	R	R	R	D	D	D	D	D
(-45) — (-31)	R	R	R	D	D	D	D	D	D	D
(-30) — (-16)	R	R	D	D	D	D	D	D	D	-30
(-15) — 0	R	D	D	D	D	D	D	D	-30	-20
01 — 10	D	D	D	D	D	D	-25	-25	-20	-10
11 — 20	D	D	D	D	-30	-25	-20	-20	-10	-5
21 — 30	D	D	D	-30	-25	-20	-15	-10	-5	0
31 — 40	D	D	-30	-25	-20	-15	-10	-5	0	+10
41 — 50	D	-30	-25	-20	-15	-10	-5	0	+10	+20
51 — 60	-30	-25	-20	-15	-10	-5	0	+10	+20	+30
61 — 70	-25	-20	-15	-10	-5	0	+10	+20	+30	I
71 — 80	-20	-15	-10	-5	0	+10	+20	+30	I	I
81 — 90	-15	-10	-5	0	+10	+20	+30	I	I	I
91 — 100	-10	-5	0	+10	+20	+30	I	I	I	I
101 — 110	-5	0	+10	+20	+30	I	I	I	I	I
111 — 120	0	+10	+20	+30	I	I	I	I	I	I
121 — 130	+10	+20	+30	I	I	I	I	I	I	I
131 — 140	+20	+30	I	I	I	I	I	I	I	I
141 — 150	+30	I	I	I	I	I	I	I	I	I
151+	I	I	I	I	I	I	I	I	I	I

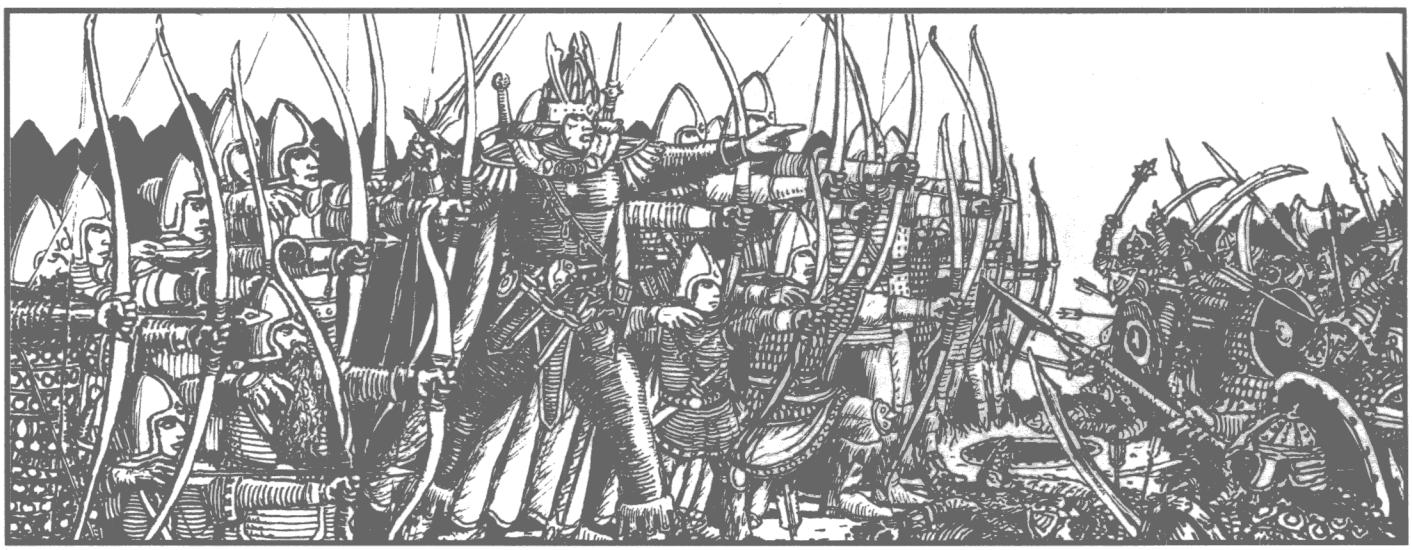
± # = *modification to Accumulated Morale Penalty* — If a unit is in a Normal morale state, this value is added to the unit's Accumulated Morale Penalty (AMP). If this results in a positive or zero AMP, remove any AMP counter. Any negative modifier of this type will cause a Prepared unit to become Normal. A Disordered or Routed unit will ignore these results.

I = *Improved* — A Disordered unit becomes Normal. A Routed unit become Disordered. A Normal unit has its AMP reduced to 0.

D = *Disordered* — A Prepared unit becomes Normal. A Normal unit becomes Disordered (remove any AMP counter). A Disordered unit becomes Routed. Routed units are unaffected. Any unit that was not in a Prepared Morale State must retreat.

R = *Routed* — A Prepared unit becomes Disordered. A Normal unit becomes Routed (remove any AMP counter). A Disordered unit becomes Routed. A unit that is already Routed is Eliminated. The unit must retreat.

X = *Eliminated* — The unit is removed from the game.



8.0 POST-BATTLE CASUALTY DETERMINATION

After the battle is over it is likely that a unit will have lost men due to Morale failure (i.e., deserters) and due to casualties. Some of these troops will rejoin the unit or will be healed and fight again.

In the Standard Game, the following procedure can be followed to determine how many lost combatants will rejoin their units (round all values up). Unrecovered casualties are assumed to be dead or wounded too seriously to return to their units.

- 50% of the casualties on the side that holds the battlefield will recover.
- 30% of the casualties on the side that does not hold the battle field will recover.
- 40% of the casualties on each side will recover if neither side holds the battlefield.
- 75% of the non-casualty combatants (i.e., deserters) in units eliminated due to Morale Checks or special rout conditions (see Section 5.4) are recovered. This is reduced to 60% for units in enemy territory and is raised to 90% for units in friendly territory.
- Recovered casualties take 1–50 days to return to action; use an average of 2% return per day **or** roll for each casualty.
- Recovered deserters take 1–10 days to return to action; use an average of 10% return per day **or** roll for each deserter.



Note: *If the Standard Game is used to resolve a battle in a FRP campaign, the GM will have to decide how to treat deserters. He should base his decisions on factors such as: whether the battle was eventually won or lost, how far from home the unit is, how harsh the leaders are, how much the troops are paid and fed, whether they are there by choice or by conscription, etc.*

He must also decide how healing will affect the recovery percentages above — good healing facilities will raise the %s, bad healing facilities will lower the %s.

Note: *A GM can refer to Sections 18.0 and 25.4 for some optional modifications that can affect these base recovery percentages.*

PC AND NPC CASUALTIES

After a role playing game battle, a GM may want to determine the fate of specific PCs and NPCs that were "lost" during the battle (see Section 10.1). First determine what recovery percentage the character falls into (see above). Then raise this percentage by adding twice the level of the character.

This *Modified Recovery %* can be used to determine the severity of the criticals to be applied to the character. These criticals can then be resolved normally. Use slash, puncture, and krush criticals; determine randomly or use whatever critical type was most prevalent during the battle.

CHARACTER CASUALTY CHART

Modified Recovery %	CHARACTER'S AT 12, 20–19	11,15 16,18	4, 8,10, 14,17	3, 6,7, 9,13	1, 2,5
Casualty Losses:					
91+	A	A	A	B	C
81–90	A	A	B	C	D
71–80	A	B	C	D	E
61–70	B	C	D	E	E, A
51–60	C	D	E	E, A	E, B
41–50	D	E	E, A	E, B	E, C
31–40	E	E, A	E, B	E, C	E, D
≤ 30	E, A	E, B	E, C	E, D	E, E
Non-casualty Losses:					
96+	A	A	A	A	A
91–95	B	B	A	A	A
81–90	C	B	B	A	A
71–80	C	C	B	B	A
61–70	D	C	C	B	B
≤ 60	D	D	C	C	B

9.0 CREATING UNITS & LEADERS

This section presents some rules of thumb for generating *War Law* statistics for groups of ***Rolemaster*** combatants. The players should mix these rules with common sense when creating units for use with *War Law*.

Note: *If a GM is using these guidelines for battles in his FRP campaign, he should make the final decisions concerning this creation process. If there is no GM involved, both players must agree on the creation process to be used.*

9.1 BREAKING INTO UNITS

Before you can define statistics for units, you must first divide your combatants into units that are composed of soldiers who have similar levels, hits, ATs, OBs, and DBs.

USING MASTER MILITARY TABLES

If you are using combatants from the *Master Military Tables* in *Middle-earth*® modules or *Shadow World*® modules, the combatants are already grouped by combat capability (i.e., level, AT, OB, etc.). Just break them into units of 80 for infantry and 40 for cavalry.

It takes fewer cavalry for a unit because each combatant is actually a combatant and its mount. However, a cavalry unit still makes the same attacks and takes the same number of casualties as any other unit (i.e., both the rider and mount may attack and become casualties).

USING A GENERAL GROUP

First break the combatants into rough groups according to AT and weapon type. Then use similar OBs and DBs to break those groups into units of 80 for infantry and 40 for cavalry.

NON-HUMANOID AND LARGE CREATURES

For non-humanoid and larger than man-sized creatures (e.g., monsters, animals, etc.), base the number of combatants per unit on the combatant's critical type or upon the size of the creature relative to a normal human. The figures on the following chart can be used.

Casualties are still recorded using the normal Unit Status Sheet (i.e., with 40 casualty boxes). This reflects the fact that large and super-large creatures are harder to kill and wound.

Note: *If a GM is being used, he may wish to base the number of combatant in a unit only on the size of the combatants involved. For example, if a 12' Giant masses the same as 8 men, it might only take 20 such Giants to make a unit.*

SG UNIT SIZE CHART

Combatant Size / Crit Type	Number of Combatants in a Unit (Infantry/Cavalry)
Tiny / —	320 / 160
Small / —	160 / 80
Medium / —	80 / 40
Medium / I, @	60 / 30
Medium / II, #	40 / 20
Large / LA	20 / 10
Huge / SL	4 / 2

Note: LA = Large, SL = Super-large. See *C&T* Section 2.0 or *C&T II* Section 2.4 for the other Crit Type codes. Cavalry includes all LA and SL creatures that operate on four legs.

THE ODD MEN OUT

If you divide up a group of combatants and have less than a full unit left over, make those combatants into a group that begins with a Casualty state of: ¾, ½, or ¼ strength. To compensate for the negative morale mods, give such a unit a special morale bonus to negate the Casualty State morale modifier (see Sections 3.2.2 and 7.0).

9.2 UNIT STATISTICS

This section presents some guidelines for determining unit statistics. If you are using Master Military Tables, determining most of a units statistics is straightforward and most of this material is not needed.

WEAPONS

To determine a unit's weapons, simply take the most prevalent weapons for the combatants involved. If the combatants are pretty evenly split between several weapon types, use one weapon and give the unit the other weapon as a secondary weapon. If half of the combatants have missile weapons and half do not, allow missile weapon attacks, but with only half normal OB.

UNIT TYPE

Just look at the type of weapon used and refer to Section 3.1.

OFFENSIVE BONUS (OB)

To determine a unit's OB, simply take average the ***RM*** OBs for the "typical" soldiers in the unit; i.e., a rough average of each combatant's largest OB. Units that carry secondary weapons may be given an OB for each weapon (e.g., bows, daggers, etc.).

DEFENSIVE BONUS (DB)

A unit's base DB is calculated by adding the typical soldier's Quickness bonus (usually 0 for a "typical" human) and any special bonuses (e.g., superior armor). Remember that the *Master Military Tables* usually give the DB with the bonus for shields included.

SHIELD BONUS

A unit has shields if most of its members have shields. If the combatants are pretty evenly split between shield users and non-shield users, half the normal shield bonus for that unit.

Note: *Some shields have different ratings for melee DB and missile DB (see AL&CL Table 8.2.5).*

ARMOR TYPE

To determine a unit's AT, simply take the most prevalent Armor Type for the combatants involved. If the combatants are pretty evenly split between several ATs, use the lower AT and give the unit an additional +10 to its DB.

MOVEMENT POINT TOTAL

The Movement Rate Chart provides some typical movement point totals for humans based upon a unit's "type."

MOVEMENT RATE CHART

Type of Unit	Movement Points
Light Infantry (ATs 1-7, 9-10, 13)	6
Heavy Infantry (ATs 8, 11-12, 14-20)	4
Light Cavalry (ATs 1-7, 9-10, 13)	14
Heavy Cavalry (ATs 8, 11-12, 14-20)	10

Alternatively, if the ***RM*** Base Movement Rate for the combatants in a unit is known, the Base Movement Rate Conversion Chart can be used. To find the movement point total for other races, determine the base rate of movement (from *C&T* or *C&T II*) in feet per 10 second round. Multiply by 12 and divide by 100, rounding or dropping fractions. A chart is provided with conversions for typical *C&T* base move rates.

BASE MOVEMENT RATE CONVERSION CHART

C&T Base Rate	Movement Point Total
30-40	4
50	6
60-70	8
80-90	10
100	12
110-120	14
130-150	16

LEVEL

Just use the average level of the combatants in the unit (round off).

MORALE RATING

Morale levels will usually vary heavily based upon the world system being used. We suggest that the Morale Rating be based upon the average level of the combatants and the race/culture of the combatants as following (round up with a maximum of 10):

Morale Rating = 1 + Experience Rating Mod +
[(Average Level x 5) ÷ (race morale modifier)]

Note: *To fit his campaign, a GM should feel free to modify the values given. Using the races presented in the Race Modifier Chart, a GM should be able to generate the modifiers for the special races in C&T II and the RMCs.*

EXPERIENCE RATING CHART

Experience Rating	Experience Rating Mod
Green	-1
Regular	+0
Veteran	+1
Elite	+2

Note: Assume the Master Military Tables have 10% Green combatants, 75% Regular, 10% Veteran, and 5% Elite.

RACE MODIFIER CHART

Race	Race Morale Modifier	Leader-ship Level Bonus	Base Leader #	Av. Lvl.	Av. Mv. Rate
Basic *RM* Races:					
Common Men	6	5	4	3	50
High Men	5	5	3	5	50
Half-elves	4	5	5	5	60
Wood Elves	6	3	5	4	70
High Elves	4	5	5	5	75
Fair Elves	4	3	5	6	80
Dwarves	5	5	4	3	50
Halflings	10	1	5	2	60
Lesser Orcs	6	2	10	2	50
Greater Orcs	5	3	8	4	60
Trolls	8	1	10	10	70
C&T Races:					
Fey Folk & Spirits	8	2	7	3	60
Cyclops & Giants	7	3	8	10	100
Ogres, Small	5	1	10	4	80
Ogres, Large	7	1	10	8	80
Titans	7	5	5	15	140
Gnolls & Gnomes	8	3	6	4	50
Goblins	7	2	10	2	45
Hobgoblins	6	3	8	2	50
Kobolds	8	2	10	1	60
Troglodytes	6	2	9	2	60
Centaurs	6	5	4	3	110
Garks	7	2	10	2	60
Hira'razhir	6	4	5	3	90
Idiyva	4	3	7	3	70
Maazhat, Warriors	2	3	8	3	60
Mermen	6	5	4	3	60
Neanderthals	6	2	9	2	50
Sea-Krals	5	3	6	2	50
Sohleugir	4	2	5	3	50
Sstoi'isslythi	5	3	5	3	60
Vulfen	4	2	8	3	70

Note: These Average Level and Average Movement Rates come from *C&T*.

9.3 LEADERS

Your force's leaders should be just that — the leaders of that side's combatants. If you know how many leaders the side has and what their ***RM*** capabilities are, just use the bonus guidelines presented below.

Otherwise, add up the total number of units on a side, then take one "5th level leader" for every multiple of the race's *Base Leader Number* (see the Race Modifier Chart). The number of the other types of leaders your side gets is (drop fractions):

# of 5th lvl leaders = # of units ÷ (race's base leader no.)

# of 7th lvl leaders = # of Type-5 leaders ÷ 3

# of 10th lvl leaders = # of Type-5 leaders ÷ 6

# of 15th lvl leaders = # of Type-5 leaders ÷ 12

# of 20th lvl leaders = # of Type-5 leaders ÷ 24

For the purposes of calculating leader bonuses, an "X level" leader has a Presence bonus of (5 + X). For example, a 15th level leader has a Presence stat bonus of 20.

Note: *A 5th level leader generated in this fashion isn't necessarily 5th level in a normal **RM** sense. Such a leader may actually have a higher **RM** level with "5th level" leadership capabilities as outlined in these guidelines.*

LEADER BONUSES

Once you know your leaders' Presences and Levels, use the following formulas to calculate their leader bonuses for use with the Standard Game (drop fractions):

Morale Bonus = Presence Stat Bonus + (level - 3) x (race's leadership level bonus - 1)

Melee Bonus = level x (race's leadership level bonus ÷ 2)

For 5th, 7th, and 10th level leaders, these bonuses apply to a unit if it is in the same hex as the leader. For 15th and 20th level leaders, these bonuses apply to a unit in the same hex as the leader and at half value (round up) to units in adjacent hexes. If more than one leader's bonus is applicable to a unit, use the bonuses of one leader only (obviously the highest level leader available).

Note: *If you use Leadership skill, ignore the guidelines above and use **half** (round up) of a leader's Leadership skill bonus for his Leader Morale Bonus. If you use Tactics skill, ignore the guidelines above and use **half** (round up) of a leader's Tactics skill bonus as his Leader Melee Bonus.*

9.4 STARTING UNIT STATES

Normally, units begin a battle in the Normal Morale State, the Full Strength Casualty State, and any formation allowed by the terrain they start in.

The battle situation may call for different starting states. For example, if one force has been resting for a day or more, certain units may start Prepared. Likewise, if units have forced marched to get to a battle, they might start the battle in a ¾ Strength Casualty State to account for stragglers.

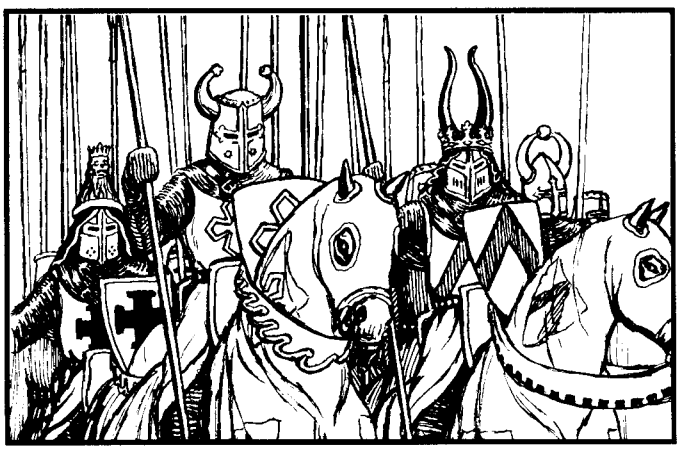
9.5 RESTRICTIONS

If both sides agree, certain units may be given restrictions based upon their situation and nature. For example, untrained Orcs or berserkers might not be allowed to operate in Battle Order or Column formation states.

10.0 STANDARD GAME OPTIONAL RULES

Each rule and guideline presented in this section is optional and should only be used if both players agree. If a GM is using this material to run battles in his campaign, the GM must decide which optional rules to use.

Note: *Some of these optional rules are intended for use with the Standard Game in FRP campaigns run by GMs. Thus, they will reference choices in terms of "GM decisions" and "both players must agree on."*



10.1 PLAYER CHARACTERS IN COMBAT

If the *WL* Standard Game is being used to resolve battles in a FRP campaign, the GM may wish to allow PCs to become involved in the combat. The GM will probably want to keep track of such PCs separately. Normally, a PC in a SG battle can operate as a leader, as a combatant in a unit, or as a spell caster. The term PC in this case can also apply to certain NPCs controlled by the GM.

PC LEADERS

A PC leader can calculate and use his leader bonuses as outlined in Sections 3.3 and 9.3. He should be represented by a leader counter and should follow all of the normal leader restrictions and rules.

PC COMBATANTS

In the *WL* SG, a PC combatant must operate as a member of a unit. A PC combatant may always choose to be on the "front line" of his unit and thus be able to attack and be attacked. A PC combatant may choose to *not* be on the "front line" of his unit as long as the unit has at least 20 combatants left **and** it is not being attacked from the rear. Otherwise, the PC is automatically on the front line of the unit. A PC may only change his front line status during his side's Preparation Phase.

PC Casualties: If a PC combatant's unit is eliminated due to a Morale Check or special rout conditions (see Section 5.4), the PC becomes a casualty. Remember, casualties include those killed, those wounded, and deserters. Refer to Section 8.0 to determine which category the PC will fall into.

If a front line PC combatant's unit takes any casualties, the % chance (roll open-ended) that the PC is a casualty (see Section 8.0) is:

[(# casualties ÷ 20) x 100] - PC's level

Note: *A GM may decide that special factors may affect this chance. He may even want to have the PC fight 6 rounds (assumes one attack every 2* ***RM*** *rounds due to unit restrictions) of normal* ***RM*** *combat with typical enemy combatants.*

PC vs PC Attacks: If two units are attacking each other and each has a front line PC combatant, the two can fight each other using the normal ***RM*** combat procedure if either of the following two conditions hold:

- Both PCs want to fight each other
- One PC wants to fight and gets a result of 91+ on a 1–100 roll

Melee Attacks: A PC front line combatant only makes one normal ***RM*** attack once each turn due to the limitations of being in a unit. However, this attack actually represents a number of regular ***RM*** attacks. The *WL* results of such an attack is determined by referring to the PC Combatant Attack Chart.

PC COMBATANT ATTACK CHART

PC Attack Result	Automatic *WL* Result	*WL* Result / % chance
Hits only	none	a / 1% per hit
A Critical	a	1 Cas / 20%
B Critical	a	1 Cas / 35%
C Critical	a	1 Cas / 50%
D Critical	a	1 Cas / 65%
E Critical	1 Cas + b	1 Cas / 10%
F, G, H, I Critical	1 Cas + b	1 Cas / 40%

Note: 'a' indicates a -5 AMP mod. 'b' indicates a -10 AMP mod. 'Cas' = a *WL* casualty. The defending unit takes the "Automatic *WL*" result 100% of the time **and** it has the given "% chance" of also taking the second "*WL* Result."

Missile Attacks: A PC combatant may make a missile attack as outlined above for melee attacks only if he is a front line combatant. Such an attack is limited by standard *RM* range factors.

PC SPELL CASTERS

If a PC wants to operate in a battle as a spell caster, he should be represented by a leader counter. He must operate as a leader in all ways, except that he doesn't normally have leader bonuses.

In order to cast an elemental spell, the PC must be in a hex without a unit **or** he must be on the front line of a unit as outlined earlier in this section. To cast non-elemental spells, a PC can be in the same hex as a unit, but he need not be on the front line. Front line PC spell casters suffer casualties as outlined earlier in this section.

A spell's range in hexes is its normal ***RM*** range divided by 100', any fractional part above 0.25 is raised to the nearest whole number. For example, a range of 100' is 1 hex, a range of 130' is 2 hexes, a range of 50' is 1 hex, but any spells with ranges of less than 25' may not be cast on units in battle.

PC VS PC FIGHTS

During a battle, two (or more) PCs and/or leaders that are not in a hex containing one or more units, can fight each other (melee, missile, spells) using the normal ***RM*** procedure. See the material earlierin this section for PC vs. PC attacks involving units. However, in addition to normal ***RM*** restrictions (i.e., range, weapons, etc.), the following conditions must be in effect:

- Both PCs must be in hexes not containing any units.
- To melee each other, both must be in the same hex.
- Normal ***RM*** restrictions must be satisfied (i.e., range, weapons, orientation, etc.)

10.2 SPELL CASTER UNITS

If both players agree they can use spell caster units consisting of 10–20 spell users each. The normal unit stats for such units can be generated as outlined in Section 9.0.

To resolve the effects of spells the players/GM can use the Refereed Game material as outlined in Sections 6.1.6 and 16.7. Alternatively, if the spell casting units are limited to directed elemental spells, attacks can be resolved as if they were missile attacks (see Section 6.2).

10.3 LEADER STAFF UNITS

For certain significant leaders, the GM or players may decide to use *leader staff units*. A leader staff unit operates like a normal unit and is made up of the leader, subordinate officers, his bodyguard, his messengers, and perhaps some more elite troops to fill the unit out. The unit statistics for such a unit should be generated normally (see Section 9.0).

In addition to normal capabilities, a staff unit will give its leader an effect range for his leader bonuses (see Section 9.3) —one hex for 5th to 12th level leaders, two hexes for 13th to 20th level leaders, and three hexes for 21+ level leaders. The leader must remain in the same hex as his staff unit to gain this benefit. A leader's bonuses will lose effectiveness due to range as indicated on the chart below:

Leader Level	Range 1	2	3
5th–12th	50% Bonuses	—	—
13th–20th	75% Bonuses	50% Bonuses	—
21th+	100% Bonuses	75% Bonuses	50% Bonuses

10.4 UNIT TYPE OB MODS

The following chart gives a melee OB modifier based on the unit types of the attacking unit and the defending unit

UNIT TYPE MELEE OB MODIFIER CHART				
	DEFENDING UNIT TYPE			
ATTACKING UNIT	Cav-alry	Pole-arm	Stan-dard	Misc.
Cavalry	+0	-10	+10	+20
Polearm	+10	+0	+0	+10
Standard	+0	+0	+0	+10
Misc.	na	na	na	na

10.5 MULTIPLE UNIT ENGAGEMENTS

In many battles, both sides will have multiple units simultaneously attacking the same unit. This section gives some optional rules that can be used to handle these situations.

UNIT RATIO OB BONUS

If two or more units melee attack the same unit on the same turn, their attacks receive a Unit Ratio OB Bonus. This bonus is equal to +10 per attacking unit above one (e.g., +10 for 2 attackers, +20 for 3 attackers, etc.).

COMBINING MELEE ATTACKS

If two or more units melee attack the same unit on the same turn, they may elect to combine their Melee OB stats and make one attack. Their combined attack has a Melee OB stat equal to the largest Melee OB *stat* involved plus half of the other Melee OB stats. All other OB modifications are applied normally, but the average modification of each type is used (e.g., the average formation state OB modifier, the average casualty state OB modifier, etc.).

10.6 DOUBLE TIME

A unit may use double time movement if the following conditions are met:

- The unit must begin and end its movement phase not in an enemy unit's ZOC. Since a unit must end its movement when entering an enemy ZOC, this means that at no point during its movement can a double timing unit be in an enemy ZOC.
- The unit may only move; it may not change formation.

A unit using double time movement has its MPs changed by a percentage determined by an open-ended roll on the Double Time Movement Chart. Round all fractions up.

Note: *If the players wish to use a faster version of this optional rule, just allow double timing units to automatically move 150% of their normal MPT.*

DOUBLE TIME MOVEMENT CHART	
Roll	% Change in Normal MPT
≤ -51	-50%
(-50) – 05	-25%
06-25	+25%
26-50	+50%
51-75	+75%
76-100	+100%
101-175	+125%
176+	+150%

10.7 LEADER CASUALTIES

Every time a unit takes casualties, there is a chance that a leader in the same hex will be a casualty. Refer to the Leader Casualty Chart for the percentage chance of each leader in the same hex becoming a casualty and being removed from the battle. Add 5% if the unit is being melee attacked from the flank and 10% if the unit is being melee attacked from the rear. Subtract 1% per level of the leader. The minimum chance after these modification is 2%.

If a leader becomes a casualty, it is assumed that the unit he is with will carry him along with it. So, if that unit survives the battle (i.e., is not eliminated due to a morale check or casualties) the leader will recover 75% of the time. However, if that unit is eliminated, the leader's recovery chance is the same as any other casualty (see Section 8.0). If both players (or a GM) agree, these percentage recovery chances may be modified by the leader's level (up to 95%).

LEADER CASUALTY CHART		
# of Casualties	Melee Attack	Spells or Missile Attack †
1	2%	4%
2	4%	8%
3	6%	12%
4	8%	16%
5	10%	20%
6	13%	24%
7	16%	28%
8	19%	32%
9	21%	36%
10+	25%	40%
† — A 4% chance per casualty.		
Modifications:		
+5% if the unit is being melee attacked from the flank		
+10% if the unit is being melee attacked from the rear		
-1% per level of the leader		

10.8 INCREASED MISSILE RANGES

The Range OB Mod Table 6.3.7 has optional increased ranges and modifications to represent long range volley "area-fire" against units. The modifications for these increased ranges are marked with the "†" symbol.

10.9 RETREAT BEFORE MELEE COMBAT

After all melee attacks have been declared (see Section 4.1), certain units/leaders may elect to retreat before attacks are resolved. A unit/leader may retreat one hex as outlined in Section 7.3 if the following conditions hold:

- If its MPT is greater than 4 plus the largest MPT of any of the units attacking it
- If there is an available hex to retreat to (see Sections 5.7 and 7.3)

Example: *A light cavalry unit with a MPT of 14 could retreat during melee combat if all attackers have MPTs of 9 or less* ***and*** *if there is an available hex to retreat to (see Sections 5.7 and 7.3).*

10.10 STACKING

Certain specially trained units may occupy the same hex at the end of movement; such units are specially trained to operate in very tight, highly coordinated formations. Historically, certain Greek phalanx formations and the Roman legions fall into this category. A GM must decide which (if any) of the military units in his world fall into this category. We suggest stacking be limited to two units.

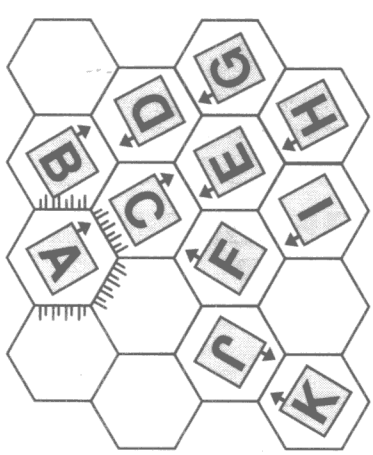
If stacking is allowed, treat the units involved separately for movement, facing, and attack purposes. If a unit attacks a hex containing two stacked units, it must attack a unit that is "facing" it. If both units are facing it or if neither unit is facing it, the attacking unit may attack either unit.

All missile attacks against a stacked unit receive a +20 OB modification.

10.11 FIRING OVER UNITS

Normally, a unit may not make a missile attack if there is another unit between the firing unit and the target unit (see Section 6.2.4). If this optional rule is used, a unit adjacent to and "up slope" from a slope hexside may fire over a unit adjacent to and "down slope" from the same slope hexside. Of course, the reverse is also true — units may fire over a unit that is adjacent to and "down slope" from the target unit.

Example: *In the diagram below, unit-A is in battle formation and has weapons with a range of 4. Unit-A can fire over units B and C at units D, E, and F (similarly, units D, E, and F can fire at unit-A). Unit-A can not fire at units G, H, and I and vice verso, because LOS is blocked by units D, E, and F. Unit-A can not fire at unit-K over unit-J because unit-J is not adjacent to unit-A.*



10.12 LEADERS AND UNIT MOVEMENT

If a GM wishes to make leaders more important in his FRP campaign, he can use this optional rule to base unit movement capabilities on the presence of leaders.

Each leader has a Movement Control Radius (MCR) that is one hex larger than his normal area of effect; e.g., a leader that normally only affects his own hex has a MCR of his hex and all adjacent hexes, a leader that normally affects his hex and adjacent hexes has a MCR of his hex, all adjacent hexes, and all hexes adjacent to the hexes adjacent to his hex, etc. See Sections 3.3, 9.3, and 10.3 for details on a leader's normal area of effect.

Any unit that is not in the MCR of a friendly leader has its MPT to 50% of normal (round up).

10.13 CHARGING

The normal SG rules assume that units perform a limited charge when engaging in melee. Players who want use more specific charging rules can use the guidelines in this section.

A unit can charge another unit (the target of the charge) during movement if it meets the following conditions:

- It may not start the Movement Phase adjacent to an enemy unit
- It must end the Movement Phase with the target unit in one of its own ZOCs
- It may not change facing during its movement
- It may only enter open terrain hexes
- It may not move up slope
- A cavalry unit may not charge a polearm unit if it would end the charge in one of the polearm unit's ZOCs

EFFECTS OF A CHARGE

For the current turn only, a unit that charges an enemy unit is affected as follows:

- Its MPT is increased by +1 (infantry) or +3 (cavalry).
- It receives a +5 (infantry) or a +10 OB mod (cavalry).
- It receives a +0 (infantry) or a -5 DB mod (cavalry).

10.14 MORALE RECOVERY

A unit can receive a +50 MC mod during the Morale Phase of its friendly Player turn if the following conditions are satisfied during the current turn:

- The unit was not attacked.
- The unit did not move, change facing, or change formation.
- The unit did not attack.
- There are no enemy units within three hexes.

This MC mod is cumulative with the normal +50 mod for not being attacked during the turn. If this optional rule is used, a routed unit stacked with a leader at the beginning of its turn does not have to move.

If both players agree, each routed unit about to move off the edge of the playing surface can be allowed to make a MC during the Movement Phase. If an 'I' result is obtained, the unit stops at the board edge and becomes unrouted but still Disordered; otherwise the unit leaves the playing surface.

10.15 DISORDERED UNIT MOVEMENT

Normally a Disordered unit may only move at half of its normal movement rate. However, if a Disordered unit moves following the movement restrictions for Routed units it may use its full movement rate. That is, a Disordered unit may use its full movement rate to move so as to get as close as possible to its "friendly edge of the playing surface" (see Section 5.4).

10.16 FORMATION MODS

In many battles the majority of the units involved will operate in Battle Order (BO) formation most of the time. To help speed play, the players may wish to add the BO modifiers from the Formations Effects Chart directly to each unit's OB and DB statistics. In this case, the formation OB and DB modifiers for a unit in BO become zero and the modifiers for the other formations become as indicated on the chart at the right:

OPTIONAL FORMATION MODS CHART

	MODIFIER FOR Melee OB	Melee DB	Missile OB	Missile DB
General Order				
Standard Units	-20	-10	+0	+10
Cavalry Units	-20	-10	+0	+10
Polearm Units	-30	-25	+0	+5
Misc. Units	-20	-10	+0	+10
Column				
Standard Units	-20	-20	-30	-20
Cavalry Units	-30	-30	-30	-20
Polearm Units	-30	-35	-30	-20
Misc. Units	-20	-20	-30	-20
Routed				
All	*	-35	*	-25

11.0 MISCELLANEOUS MATERIAL

11.1 AN EXAMPLE OF STANDARD GAME PLAY

SIDE-A'S FORCES —

One Tooth (Orc leader): A 10th lvl fighter: 27 Morale Bonus, 20 Melee Bonus, 12 Movement Point Total.

The Terrors (three light standard units): 2nd level Lesser Orcs in leather breastplates and greaves, each with a full shield and a broadsword. The three units are: Aog's Orcs, Bog's Orcs, and Cog's Orcs.

Warg Cavalry (light cavalry): 3rd level veteran Lesser Orcs in chain shirts, each with a normal shield, a broadsword, and a shortbow (with arrows). They are mounted on Wargs.

Unit Statistics	Warg Cavalry	Swordsmen Orc Units A, B, C
UT	Light Cavalry	Light Standard
OB	50	40
DB	0	0
SB	20	25
AT	13	10
MPT	14	6
Lvl	3	2
MR	4	2

SIDE-B'S FORCES —

Grimlock (Dwarven leader): A 15th lvl fighter: 68 Morale Bonus, 30 Melee Bonus, 6 Movement Point Total.

The Gore Splatters (heavy standard unit): 3rd level Dwarven veteran Axemen in chain shirts, each with a full shield, a battle axe, and a hand axe.

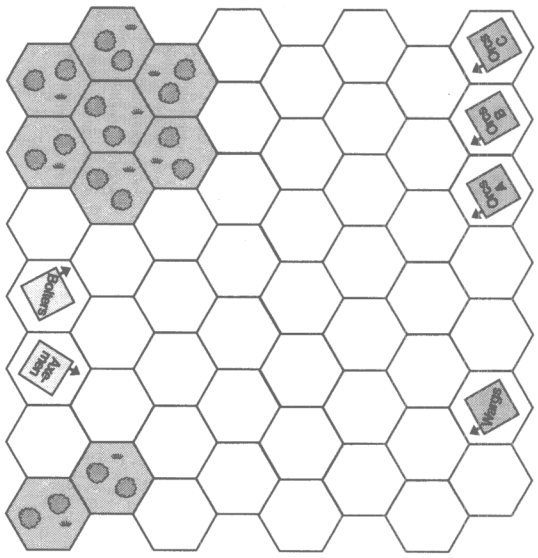
The Bolters (light standard): 3rd level Dwarven veterans in chain shirts, each with a full shield, a hand axe, and a heavy crossbow (with bolts).

Unit Statistics	Axemen	Bolters
UT	Heavy Standard	Light Standard
OB	50	50
DB	0	0
SB	25	25
AT	13	13
MPT	4	6
Lvl	3	3
MR	5	4

THE SET UP

The Dwarves are caught out in the open. Rather than be surrounded, Grimlock decides to make a stand between two stands of medium forest. He starts with his Axemen and places the Bolters on his left. The Orcs are six hexes away. One Tooth is with his Warg-unit on the right, a little away from the three Orc-unit in a line that faces the Axemen at a slight angle. All units start in Battle Order.

Note: *In this example, we only mention certain key events that happen during each turn. When total modifications are calculated, +0 modifications are not mentioned.*



GENERAL ACTION FOR THE NEXT 2 TURNS: *The Orcs advance and the Dwarves fire heavy crossbows at them.*

Side-A's Turn — Side-A's Orc-units move forward 3 hexes, their max. at 2 MPTs per clear hex while in BO formation. The Wargs move forward 5 hexes and turns one hexside clockwise.

Side-B's Turn — The Bolters fire on at Orc-unit C. Their total OB is 15: OB 50, -35 for a 4 hex range. The total DB for the Orcs is 40: +25 SB, +25 (half of their 50% parry). With a luck roll of 87, the LRR is +17. The net mod is -13 = 15-40+17. Against AT 10 on Table 6.3.6 the result is '1b'. Orc-unit C now has 1 casualty and a -10 Accumulated Morale Penalty. A 'Fired -30' marker is placed on the Bolters' counter. During the Morale Phase Orc-unit C makes a Morale Check and becomes Disordered.

GENERAL ACTION FOR THE NEXT TURN: *The Axemen throw their hand axes at Aog's charging Orcs. The Bolters release one last volley of bolts in to Bog's charging Orcs. One Tooth takes his Warg Cavalry through the woods and around to catch the Axemen in the flank. Aog's Orcs meet the Axemen head on. Bog's Orcs crash in to the Bolters, but are pushed back. Cog's Disordered Orcs only move forward a little.*

Side-A's Turn — All Orc-units go to 0-parry during the *Preparation Phase*. There is no missile fire.

During the *Movement Phase*, Orc-unit A moves forward 3 hexes and engages the Axemen. Orc-unit B moves up and engages the Bolters. Orc-unit C was Disordered last turn, so it only has half normal movement (3.2.2) and moves one hex. The Wargs use their 14 MPT to move through the woods, turn, and hit the right flank hex of the Dwarven Axemen.

During the *Defensive Missile Fire Phase*, the Bolters fire their crossbows at Orc-unit B and the Axemen throw hand axes at Orc-unit A (they can't fire at the Wargs because the Warg's aren't in one of their front hexes). The Bolters' total OB is 65: OB 50, +15 for 1 hex range. The Orcs' total DB is 25: +25 SB. For a luck roll of 47 the LRR is +0, so the net mod is 40 = 65-25+0. Against AT10 on Table 6.3.6, the result is '5c'. Orc-unit B now has 5 casualties and a -15 AMP. The Axemen's total OB is 10: OB 25, -15 for range. The Orcs' total DB is 25: +25 SB. The luck roll is 82 for a LRR of +14, so the net mod is -1 = 10-25+14. Against AT10 on Table 6.3.6 the result is '1b'. Orc-unit A now has 1 casualty and a -10 AMP. The Bolters have a 'Fired -30' counter and the Axemen have a 'Fired -10' counter.

During the *Melee Phase*, the Bolters and Orc-unit B melee. The Bolters' total OB is 45: 50 OB, +10 BO formation, -30 for having Fired, +15 for leadership (half of Grimlock's Melee Bonus because he is 15th level and is 1 hex away, see Sec. 9.3). Their total DB is 10: +10 BO formation (because of the 'Fired -30' counter they get no SB). Orc-unit B has a total OB of 50: 40 OB, +10 BO formation. Their DB is 35: +25 SB, +10 BO formation. The LRRs are +2 (57 roll) for the Bolters and +30 145 roll) for the Orcs, so the net mods are 12 = 45-35+2 for the Dwarves and 70 = 50-10+30 for the Orcs. The Bolters take a '8e' result (8 casualties, -25 AMP) and Orc-unit B takes a '3c' (3 casualties, -15 AMP).

The Axemen attack the Orc-unit A (the Wargs on their flank), and the Wargs and Orc-unit A attacks the Axemen. The Axemen's total OB is 80: 50 OB, +10 BO formation, +30 for leadership, -10 for having a Fired. Against Orc-unit A their total DB is 40: +30 SB, +10 BO formation, but against the Wargs their total DB is 10: +10 BO formation, no SB against a flank or rear attack. Orc-unit A has the same OB/DB as Orc-unit B: 50/35. The Wargs' total OB is 85: 50 OB, +10 BO formation, +10 for leadership, +15 for flank position. Their total DB is 30: +20 SB, +10 BO formation. The LRRs are +35 (167 roll) for the Axemen, -11 (22 roll) for Orc-unit A, +17 (88 roll) for the Wargs. The net mods are 80 = 80-35+35 for the Axemen, -1 = 50-40-11 for Orc-unit A, and 93 = 85-10+17 for the Wargs. The Axemen do a '9e' to Orc-unit A, but they take a '1b' from Orc-unit A and a '10f' from the Wargs.

During the *Morale Phase*, every unit except for the Wargs must make a Morale Check because of having non-zero AMPs or being Disordered. The total casualties taken so far are Axemen–11, Bolters–8, Wargs–0, and Orc-units: A-10, B–8, C–1. The chart below summarizes the MC modifiers.

Unit (# of Cas.)	Total	AMP	Spec.	Casualty/Formation/Morale
Axemen (11)	+28	-40	+68	-10 / +10 / —
Bolters (8)	+19	-25	+34	— / +10 / —
Orc-unit A (10)	-35	-35	0	-10 / +10 / —
Orc-unit B (8)	-20	-30	0	— / +10 / —
Orc-unit C (1)	+35	0	+50	— / +10 / -25

All units are in BO formation and get the +10 mod. Orc-unit C has a -25 morale mod because it is Disordered and the rest of the units have AMPs due to attack results. The Axemen and Orc-unit A have -10 casualty state morale mods because of having taken 25% casualties. Because of Grimlock's presence, the Axemen get a +68 leadership morale mod and the Bolters get a +34 mod. Finally, Orc-unit C gets a +50 mod because it was not attacked this turn.

The Axemen's net morale roll is 86 = 58 (roll) + 28. Cross-indexing this with their MR of 5 on the SG Morale Table 7.4, we get a MC result of '+10' — their AMP is reduced by 10. The Bolters roll an open-ended 143, so their net morale roll is 162 = 143 + 19. Their MC result is a 'I' — their AMP is reduced to 0 (i.e., removed).

The Orcs have some rather bad luck with their MCs. Orc-unit A rolls a 94, so its net morale roll is 59 = 94 - 35. Cross-indexing 59 with a MR of 2, we get a MC result of '-25'. That would give the unit an AMP of -60, but the unit only receives the maximum AMP of -40. Orc-unit B's net morale roll is 13 = 33(roll) - 20. Thus, its MC result is 'D'. Orc-unit C rolls a -13 (low open-ended) for a net morale roll of 23 = -13 +35 and a MC result of 'D' — because Orc-unit C is already Disordered, it is now Routed.

At the end of the *Morale Phase*, Orc-unit B must retreat one hex because it became Disordered (see Section 7.3). The Bolters may advance one hex after them and maintaining the same facing (5.7). Orc-unit C must also retreat one hex because it took a 'D' result.

GENERAL ACTION FOR THE NEXT TURN: *The Axemen pull back to face the Wargs on their flank, while the Bolters engage Orc-unit B. The Bolters cause Bog's Orcs to flee.*

Side-B's Turn — All units go to 0-parry during the *Preparation Phase*. There is no missile fire during the *Missile Fire Phase*.

At the start of the *Movement Phase*, the Axemen have the Wargs in their right flank hex and Orc-unit A in their center front hex). The Axemen disengage from Orc-unit A by moving to their rear hex for 4 MP (double MP cost for disengaging). This leaves them still in the Wargs ZOC so they have to stop even if they had more MP. However, they now have the Wargs in their front facing and are not engaged with Orc-unit A. However, Orc-unit A will get a +50 mod to its morale roll for not being attacked this turn. The Axemen could have remained in the same hex and just turned to face the Wargs but Orc-unit A would have gotten to attack. They could also have just used normal movement to leave the hex, but then both enemy units would had gotten a free -25 melee attack at -25. The Bolters do not move.

During the *Melee Phase*, the Bolters deliver a '4c' to Orc-unit B and the Orc-unit delivers a '1b' to the Bolters. The Axemen deliver a '6d' to the Wargs, but they take a '3c' in return.

During the *Morale Phase*, all of the units must make MCs.

Unit (# of Cas.)	Total	AMP	Spec.	Casualty/Formation/Morale
Axemen (14)	+28	-40	+68	-10 / +10 / —
Bolters (9)	+0	-10	0	— / +10 / —
Wargs (6)	+17	-20	+27	— / +10 / —
Orc-unit A (10)	+10	-40	+50	-10 / +10 / —
Orc-unit B (12)	-25	0	0	-10 / +10 / -25
Orc-unit C (1)	+10	0	+50	— / — / -40

Most of the morale roll mods are the same as last round. However, the Bolters no longer get a leadership mod (he's no longer adjacent). Orc-units A and C get the +50 mod because they were not attacked this round. Orc-unit C is Routed and thus gets the automatic -40 morale state mod, while Orc-unit C is Disordered and gets the -25 mod.

The Bolters' net morale roll is 20 = 20(roll) + 0 for a MC result of 'D' (AMPs removed and unit must retreat). The Axemen's net morale roll is 93 = 65(roll) + 28 for a MC result of '+20' (AMP reduced to -20). The Warg's net morale roll is 67 = 50(roll) + 7 for a MC result of '-10' (AMP to -30). Orc-unit A's net morale roll is 101 = 91(roll) + 10 for a MC result of '0' (no AMP change). Orc-unit B's net morale roll is 26 = 51(roll) - 25 for a MC result of 'D' (unit routes because it is already Disordered). Orc-unit C's net morale roll is 33 = 23(roll) + 10 for a MC result of 'D' (no change, unit already Disordered).

GENERAL ACTION FOR THE NEXT TURN: *One Tooth sees half his forces routing and his Wargs starting to become disordered. So, he orders a pull back.*

Side-B's Turn — All units go to 0-parry during the *Preparation Phase*. There is no missile fire during the *Missile Fire Phase*.

During the *Movement Phase*, Orc-units B and C move 6 hexes toward their friendly edge of the playing surface; since they're routed the MP cost for clear hexes is only. Note that they don't have to turn around since all hexes are front for a routed unit's movement purposes. Orc-unit A turns and starts to move back and the Wargs easily disengage from the Axemen for 4 MPs and use the other 10 to move off.

GENERAL ACTION FOR THE NEXT TURN: *The Orcs prove that they can run faster than the short legged Dwarves. Grimlock not wanting to split his forces call off the chase.*

11.2 SAMPLE UNIT STATISTICS

Race	UT	OB Melee	OB Missile	DB	SB	AT	Lvl	MPT	MR	Size	Special
BASIC RM RACES:											
Common Men	lt.st.	60ohe	50varies	0	25	10	3	6	4	80	—
	hv.st.	80th	60varies	0	0	16	5	4	5	80	—
	lt.pa.	60pa	30varies	0	20	10	3	6	4	80	—
	hv.pa.	80pa	40varies	0	25	16	5	4	5	80	—
	lt.cv.	60ohe	30varies	10	20/10	10	3	14	4	80	—
	hv.cv.	80ohe	40varies	10	20	16	5	10	4	80	—
High Men	As Common Men, but +5 to OBs, +1 to MRs, AT16s are AT19s.										
Half-elves	As Common Men, but +10 to OBs, +1 to MPTs, and +2 to MRs.										
Wood Elves	lt.st.	50ohe	60lb	20	20	9	4	8	4	80	—
High Elves	lt.st.	80ohe	100lb	25	25	14	5	8	7	80	—
Fair Elves	lt.st.	100ohe	100lb	35	25	18	6	9	9	80	—
Dwarves	hv.st.	60ohc	30hcb	5	30/40	16	3	4	4	80	—
Halflings	lt.st.	15ohe	40sl	40	0	1	12	6	2	110	—
Lesser Orcs	lt.st.	40ohe	40sb	5	25	8	2	6	3	90	—
Greater Orcs	hv.st.	80ohe	50sb	15	25	17	4	4	5	80	—
Trolls, Hill	lt.st.	95ohc	60ro	20	0	11	10	7	7	30	Large creatures.
Trolls, War	hv.st.	120th	70ro	25	25	16	8	8	7	15	Large creatures.
C&T RACES:											
Fey Folk & Spirits	misc.	20ohe	30sb	40	0	1	3	7	3	160	Various special powers.
Giants, Fire	lt.st.	100th	70ro	25	25	11	6	9	7	20	Large creatures.
Giants, Mountain	lt.st.	120th	90ro	35	25	12	10	14	8	5	Super-large creatures.
Ogres, Small	lt.st.	70th	–	20	0	3	4	8	5	60	Takes 'I' crits.
Ogres, Large	lt.st.	40th	–	10	0	4	8	8	7	40	Takes 'II' crits.
Titans	hv.st.	180th	100ro	15	25	18	15	16	10	4	Super-large creatures.
Gnolls & Gnomes	lt.pa.	20pa	10sp	30	0	3	4	6	4	100	GO & Routed form. only.
Goblins	lt.st.	40ohe	20sb	5	25	8	2	5	2	90	—
Hobgoblins	hv.st.	50ohe	30sb	0	25	16	2	4	3	90	—
Kobolds	lt.st.	20ohe	40sb	10	25	9	1	7	2	100	GO & Routed form. only.
Troglodytes	lt.st.	50ohc	10da	30	0	3	2	7	3	80	GO & Routed form. only.
Centaurs	lt.cv.	50pa	60cb	0	25	3	3	14	4	60	+20 melee OB if charging.
Garks	lt.st.	40ohc	20sp	20	0	3	2	7	2	90	In GO form. get an extra 20ohc attack.
Hira'razhir	lt.cv.	20pa	50cb	10	20/10	1	3	11	4	80	Can fly. GO and rout form. only.
Idiyva	lt.st.	50ohe	40cb	10	20	3	3	8	5	80	In GO form. may make two 25ohe attacks.
Maazhat, Warriors	lt.st.	70ohe	50ja	25	30/40	12	3	7	9	50	In GO form. get an extra 30ohe attack.
Mermen	lt.pa.	60pa	30sp	15	20	1	3	7	4	80	—
Neanderthals	lt.pa.	55pa	35sp	0	25	7	2	6	3	90	GO & Routed form. only.
Sea-Krals	lt.st.	50ohe	50cb	10	20	9	2	6	3	80	—
Sohleugir	lt.pa.	65pa	50sp	0	25	11	3	6	5	80	In GO form. gets an extra 30ohc attack.
Sstoi'isslythi	lt.pa.	20pa	20sb	10	0	3	3	7	4	80	Poison wp. 2x casualty & AMP results.
Vulfen	lt.pa.	50pa	40sp	10	25	3	3	8	5	80	Must assume GO formation if Disordered. In GO form. may make two 30ohe attacks.
Wargs	lt.cv.	75ohe	–	50	0	4	8	14	7	80	—

Notes: These statistics are for "regular" troops (see Section 9.2).

Weapon Abbr.: ohe = 1H-Edged; ohc = 1H-Concussion; th = 2-Handed; pa = Polearms; cb = composite bow; da = dagger; hcb = hv crossbow; ja = javelin; lb = long bow; lcb = lt crossbow; ro = rock (range mods as sb); sb = short bow; sl = sling; sp = spear.

PART III
THE REFEREED GAME

A GM should look at the Refereed Game (RG) as an extension of the standard *AL&CL* combat system that uses units (i.e., organized groups of combatants) instead of individual combatants. By using the RG turn sequence (Section 14.0), a GM can resolve large scale battles in almost exactly the same way he resolves normal ***RM*** combat. It will help to think of each unit as a single entity with certain characteristics: an OB, a DB, an AT, etc.

Compared to the Standard Game, the Refereed Game is provided for GMs who want to have more flexibility and variations when resolving large scale combat between players. The RG provides more detail, accuracy, and flexibility, while sacrificing speed of play. A GM can easily use parts of the RG with the Standard Game and vice versa. The Refereed Game also allows for the addition of a number of Optional Rules, found in Part V, to be used as deemed necessary.

Some of the RG rules are more complex and will add to playing time when used — GMs should decide which to use in each situation. Often the idea is to have fun, not to spend hours tediously referencing rules.

Note: *The general purpose of the Refereed Game is to provide GMs with a way to deal with large scale battles in much the way that he deals with small melees using Arms Law. The main difference is there may be a large disparity among the sizes of units involved in a battle — a unit of 10 scouts should be treated differently than a 1000 man phalanx.*

WL RG Battles Vs. AL&CL Battles

At the beginning of each main section of the Refereed Game, there will be a boxed section of text that provides a summary of the differences between the *WL* Refereed Game combat and normal *AL&CL* combat.

12.0 THE PLAYING ENVIRONMENT

WL RG Battles Vs. AL&CL Battles

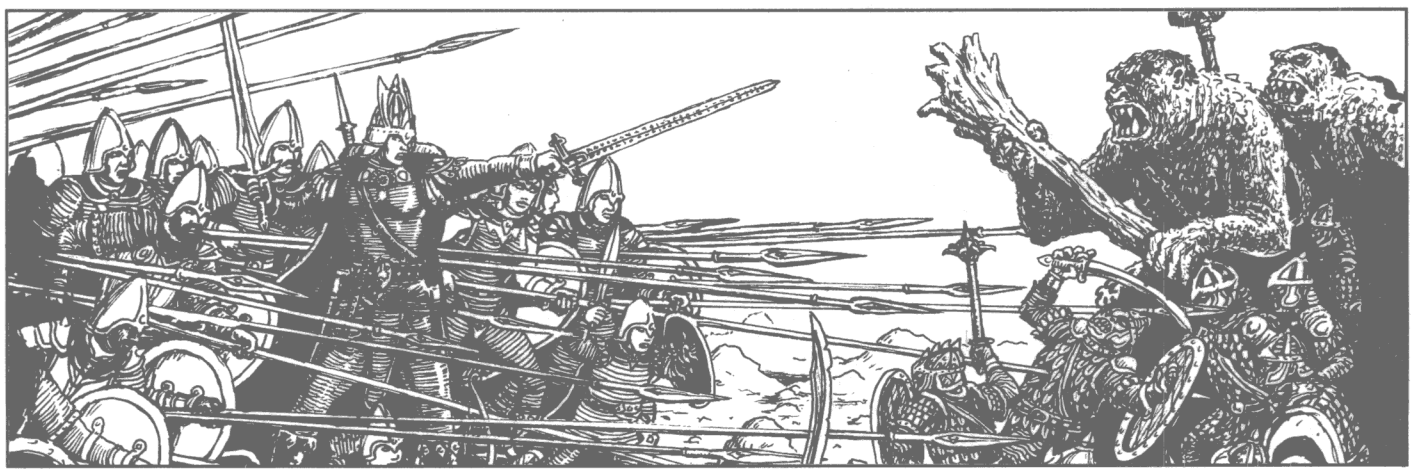
In *AL&CL* battles, the unit size and time scale are fixed; i.e., one combatant per unit and 10 second rounds. In *WL* RG battles, the unit sizes and the time scale are variable. The size of each unit must be decided before the battle using GM discretion and the material in Sections 12.1, 9.0, and Part IV. The time scale must be decided before each "turn" of play and is based on GM discretion and the size of the units involved (see Section 12.2).

For both types of battles, the GM must decide on the display system to use, the battlefield terrain, and the weather (see Sections 12.3 and 12.4).

Before starting to resolve a battle, a GM must make a number of very important decisions:

- What are the unit sizes?
- What is the time scale?
- What kind of display will be used to represent the units and the playing surface?
- What is the terrain and weather like?

These decisions will be discussed in Sections 12.1–12.4.



12.1 THE UNIT SIZES

In the Refereed Game the GM must decide on the size of each unit. The choice of unit sizes for a force should be based upon the organization of the force, the situation, the available leaders, etc. Here are some of the standard options:

- Use the Standard Game unit breakdown: each unit has 50–100 combatants. See Section 9.0 for suggestions.
- Base the standard unit size for a force on the number of available leaders: i.e., one unit for each significant leader.

  Example: *A group of 650 Orcs has one overall commander and three minor leaders. The GM could decide to break the Orcs into three 200 Orc units and a "Guard" unit of 50 of the toughest Orcs lead by the commander.*

- In a static situation or for a quick resolution, a GM can just forget about individual units, movements, and maneuvers. He can just have the two sides make contact and determine the number of attacks per turn based upon the situation and the density of the combatant forces.

  Example: *Nort the Norman is defending a bridge with 100 of his lads. The invading Aztecs throw 200 men at it. The GM reasons that only the fellows actually on the bridge are going to be able to hurt each other (assuming no missile weapons). Nort places his men so that the forward rank forms a semicircle around the near end of the bridge. When the Aztecs come across, the GM considers the width of the bridge and the density of the men, and decides that there are 4 men from edge to edge of the bridge. Nort's men, in a superior position, are able to place 6 men that can strike those coming across.*

12.2 THE TIME SCALE

It is reasonable to assume that each combatant in a 10 man unit will get an attack in a 10 second round, but not reasonable that the same is true for a 500 man unit. It takes much longer for large units to maneuver, organize, and fight.

With *War Law*, the GM is given great flexibility in how much time he allows to lapse within a *WL* combat turn. However, the length of each combat turn should reflect the size of the units involved. These will just be called "turns" or "combat turns", while the standard 60 second ***RM*** turns (see *AL&CL* Section 3.0) will be referred to as "***RM*** turns" in *War Law*.

The time interval chosen will also affect:

- The number of melee attacks a unit may make.
- The distance a unit may move (see Table T-2).
- The passage of time.
- The number of spells that may be cast.
- The number of missile attacks a unit may make.

The time intervals listed on the Time Scale Chart are suggested for most normal circumstances (this information is also included in Table T-2).

Note: *Using a fixed time scale for a battle involving units of different sizes simplifies the process of keeping track of the progress of a battle. However, it can lead to certain abnormalities because the time scale determines how often a unit must may make maneuver rolls and how often a unit must make morale checks. GMs that want a time scale procedure that relates a unit's size to its maneuver and morale check time scale should examine the Variable Time Scale guidelines in Section 25.14 of the Optional Rules.*

TIME SCALE CHART

Size of smallest unit in combat *	Time per Turn	Number of *RM* Rounds
1-10	10 seconds	1
11-20	30 seconds	3
21-50	1 minute	6
51-100	2 minute	12
101-200	4 minute	24
201-300	6 minutes	36
301-500	8 minutes	48
501-1000	10 minutes	60
1001+	15 minutes	90

* — In a static situation, use the smallest number of attacks being made. If there is a large difference in unit size use the average unit size. A large difference could be more than two degrees of size differential (e.g., '11-20' versus '101-200' and up).

Example: *As outlined in the example in Section 12.1, Nort the Norman is defending a bridge with 100 of his lads and the invading Aztecs are attacking with 200 men. The Aztecs can attack on a 4 man front against 6 defenders. Since the two groups are in a static situation, the suggested time interval is 10 seconds for each turn (only four attacks on the smaller side).*

The GM decides it will take too long to resolve the battle at this rate, so he groups 6 turns together into a new one minute combat turn. Now, each turn, the Normans get 36 = 6x6 attacks each turn, and the Aztecs get 24 = 4x6 attacks.

If this battle occurred in a situation in which both units could move and maneuver, the suggested turn length would be 2 minutes.

Note: *When increasing the time interval to resolve a combat quickly, the total number of attacks on a side should not be more than the total number of men that side has available to fight that turn.*

When choosing the time interval for small, limited conflicts, another good rule of thumb is that a unit should not be attacked more than twice as many times as it has men, unless it is surprised or surrounded, in which case the GM might allow a number of attacks up to four times the number of men. This is only common sense; there is only so much area surrounding a man and only so many opponents can occupy that area at any given time.

Example: *A company of 100 spearmen engage 10 berserk were-aardvarks. Since the smallest unit is of size 10, the appropriate column on Table T-2 is indexed, to find that the combat should probably be resolved on 10 second turns. Of course, all 100 troops are not going to get to attack the were-creatures. Using the rule of thumb above, the GM allows 20 attacks on them each turn (2 x 10 = 20). If they were completely surrounded, the GM might allow three or even four attacks per were-aardvark.*

12.3 THE DISPLAY SYSTEM

In the Refereed Game the GM must decide how to represent each unit and the playing surface. Here are some of the standard options:

- Use pencil and paper.
- Use chalk and a chalkboard.
- Use plastic hexsheets and greasepencils or erasable colored markers.

Units:

- Use the counters provided in *War Law*.
- Use miniatures.
- Use a mixture of counters, miniatures, and other markers.

Playing Surface:

- Use the display surfaces provided in *War Law* (see Section 2.3).
- Use commercially available material such as miniature trees, styrofoam hills, plastic walls, model castles, etc.
- Use a mix of the *War Law* materials, commercially available material, and your own homemade terrain features.

Measurement System:

- Hexes as provided in *War Law*.
- Non-hex playing surface with rulers used for measuring distances.

12.4 TERRAIN & WEATHER

Terrain — Terrain can be a major factor in any battle. A GM should base the battlefield terrain on the natural features of the area in which the battle takes place. See Section 2.2 and Table T-10 for some suggestions and guidelines.

Weather — Weather can have a significant impact on movement and combat. A few suggested effects are listed on Table T-11. The Unit Modifier listed is applied to OB, DB and all maneuver attempts.

13.0 UNITS AND LEADERS

> **WL RG BATTLES VS. AL&CL BATTLES**
> *AL&CL* battles have only individual combatants and no unit or specialized leaders. Thus, the material in this Section is unique to *WL* RG battles.

A unit is a group of similar combatants who move and fight together in a battle. A leader is a special combatant who can modify the morale and combat capabilities of other combatants and units. Before play begins, the GM should divide the involved forces into leaders and units (Sections 9.0 & 12.1 and Part IV).

13.1 UNIT FORMATIONS

Each unit must operate in a formation at all times. A unit's formation determines its density, the area it occupies, its movement rate, and a number of other factors. Tables T-6 and T-7 summarizes these factors.

Some formations are designed to facilitate maximum speed. These usually incur a loss of defensive capabilities. Conversely, some formations will actually hinder movement speed while enhancing a unit's defensive capabilities.

A GM must decide which formations may be used by the individual units in his world. Section 21.6 describes a number of typical formations. We suggest that most units be allowed to assume Column, Linear Defense, On Line Assault, Open Horde, and Retreat. A GM should feel free to make up his own formations based on the ones provided in *War Law* and based on the military organizations in his world.

When a unit is not in formation, or has lost its formation, it is assumed to be in "Open Horde" formation (with the exception of retreats and routs, when it is in "Retreat" formation).

Formations have an impact on combat in the form of modifiers to a unit's OB and DB ratings (see Tables T-6 and T-7).

DEFENSES FOR USE WITH ANOTHER FORMATION

There are two "defenses" that may be used with certain formations: Shield Wall and Tortoise Shell. Only one of the defenses may be used at a time and the unit must have the proper shields.

Each modifier based on a defense is added to the appropriate modifier for the base formation to obtain a total modifier that is actually used in combat.

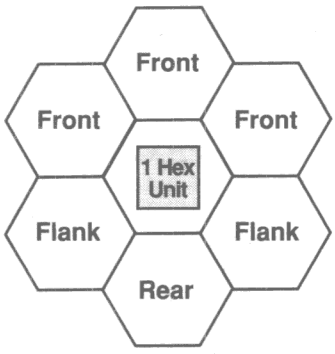
FORMATION CHECKS

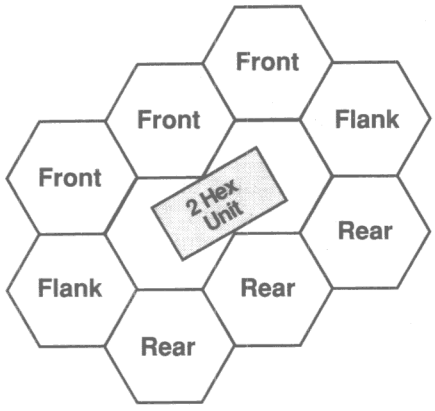
Under certain circumstances a unit will be required to make formation checks to determine if it can maintain its cohesiveness (see Section 15.4).

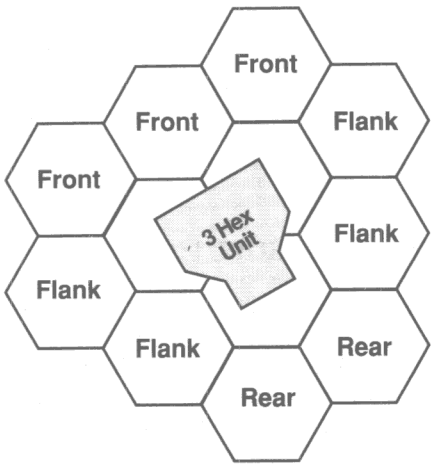
UNIT DENSITY AND AREA

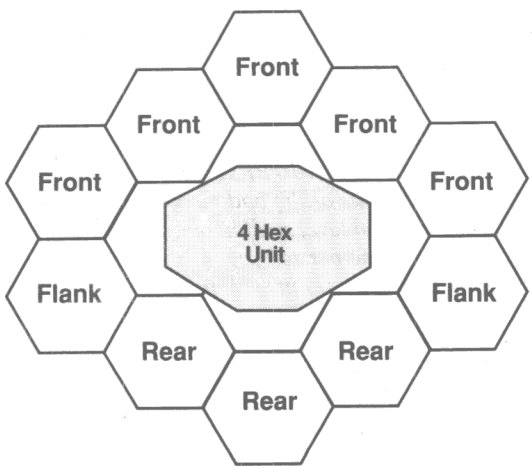
Depending on the formation of a unit, each combatant will require a certain amount of space. This number of square feet per man (or horse) is called the Density Rating, and is listed on Table T-6. The optional rules in Section 25.1 provides some more detailed techniques for handling unit density.

A GM may use this factor to determine the area occupied by each unit as a whole — just multiply the number of combatants in the unit by its Density Rating. If a hex display system is being used, round the area occupied by a unit to the nearest even number of hexes (round up). Then place units occupying more than one hex as shown in the diagram below.









UNIT FACING

A unit's front, flanks, and rear is as indicated in the diagram below — a unit is facing an enemy unit if the enemy unit is in one of its front hexes. A unit's combatants may still face enemy units in the unit's flank and rear hexes, but combat modifications for flank and rear attacks do apply (see Table T-8).

13.2 COMMAND/CONTROL

Command/Control is the term which denotes a player's ability to use his leaders to communicate with and control the combatants in the units under his command. It also reflects how well his leaders obtain input concerning the battle situation — it is important that a leader know what is going on around him.

During a battle, units must move and attempt certain maneuvers (see Section 15.0). If a unit fails a maneuver roll badly enough (see Table T-5), the result may indicate that the leader is losing control of his troops. The controlling player must then attempt to regain control by rolling on the *Command/Control* column of Table T-5 during each following Morale Phase. Some morale failure results may also require a Command/Control roll (C/C roll) (see Section 17.0 and Table T-4).

Command/Control rolls are modified by:

- The leader's Leadership Rating (LR) (see Section 22.2)
- The leader's Military Organization skill bonus (see Section 22.1).

LOSING CONTROL OF A UNIT

When a leader (i.e., its player) has lost control of a unit, the unit is restricted as follows until control is regained:

- The unit may not attempt a maneuver.
- The unit may not move.
- The unit's OB and DB are modified by -10.
- The unit's Morale Rating is lowered by 2 times its leader's LR.

These penalties remain in effect until a successful Command/Control roll is made using any leader that is in position to assume command. Only one attempt per turn during the Morale Phase is allowed.

If a subordinate leader attempts to command such a unit, a C/C roll is required on the Table T-5 with an additional -20 modifier. If a subordinate leader takes over an uncontrolled unit while the original leader is still conscious, one point is permanently deducted from the original leader's LR.

DIFFERENT RACE LEADERS

A leader in charge of a unit of a different race incurs a -25 to all Command/Control rolls. The GM may specify certain exceptions based upon unique circumstances.

14.0 SEQUENCE OF PLAY

WL RG BATTLES VS. AL&CL BATTLES

In *AL&CL* each turn consists of 10 seconds of activity, so normally each combatant takes one activity or the equivalent of one activity every round. Since a *WL* RG turn can be a number of rounds in length, each unit/leader can take a number of activities during a turn. However, the *WL* RG still requires each type of activity be resolved either in the appropriate phase or in the Opportunity Action Phase.

In addition, the *WL* RG turn sequence has two additional phases that handle activities that do not occur during the normal *AL&CL* turn sequence — the *GM Phase* for setting turn length and for stating unit/leader activities **and** the *Morale Phase* for resolving Morale Checks (see Section 17.0).

The standard ***Rolemaster*** role playing tactical combat sequence is based on a time frame of 10 second battle rounds and one minute turns (i.e., 6 rounds equal one turn). Normally, each combatant is allowed one attack roll per round, whether it be a spell, missile (bow and thrown fire), or melee.

The basic principle to keep in mind is that each action takes a percentage of a round to complete. For example, one can view a physical attack as at least a 50% activity, casting a spell as a 75% activity, preparing a spell as a 90% activity, and movement as a 0–100% activity. Thus someone that casts a spell may not make another attack.

In *War Law*, a turn can be any length of time (see Section 12.2), but the same basic ***RM*** principles still apply — each combatant or unit can only do so much activity in one 10 second period **and** only one attack is allowed every 10 seconds in a *WL turn*. A GM should keep this in mind when using the longer *turns* and the basic mechanisms in *War Law*. When in doubt, just use the standard Rolemaster "% activity" requirements for various actions and extrapolate for the extended *WL* turns.

A maximum of one attack per combatant per 10 seconds in the turn is allowed; this includes all types of attacks: spell, missile, and melee. Casting any spell counts as an attack for these purposes. The actual number of attacks will be reduced by the other activities that the unit has performed in the current turn (e.g., a missile attack is 50% activity for a 10 second period, spell preparation is a 90% activity, movement is a 1–100% activity, etc.).

14.1 THE TURN SEQUENCE

When units engage in combat, a sequence of play (i.e., a turn sequence) becomes necessary. The *War Law* Refereed Game turn sequence is based upon the standard ***Rolemaster*** turn sequence. It is divided into eleven phases which are described in detail in the following section.

1. GM Phase
2. Spell Phase
3. Spell Resolution Phase
4. Missile Phase
5. Missile Resolution Phase
6. Movement Phase
7. Opportunity Action Phase
8. Melee Phase
9. Melee Resolution Phase
10. Morale Phase

GM PHASE

During this phase the GM should decide on the length of the current combat turn. See Section 12.2 for a complete discussion on how to set the time increment for a combat turn and when to change it. Each player should make a general statement of activity for each of his units and the GM should do the same for all non-player controlled units. A GM may decide to have the players write down each unit's activity to maintain secrecy.

These "orders" should be very simple (e.g., *"make missile attacks and then advance,"* or *"move up and engage the closest enemy unit,"* or *"change to secondary weapons and retreat,"* or *"form a wedge formation and charge,"* etc.).

SPELL PHASE

All combatants/units that will cast spells during this turn must specify any pertinent information to the GM (spell type, spell target, phase of resolution, etc.). The GM should be careful to note when the spells will take effect. If a unit of spell users wants to have its combatants cast spells, normally all of its combatants must cast the same spell.

Regardless of the time scale being used, the durations, preparation times, and casting times of spells are based on normal ***Rolemaster*** 10 second rounds. Depending on the time increment being used for the turn, it is possible for a spell user to cast several spells during a *War Law* turn.

A GM should allow partial movement or maneuver for combatants/units casting or preparing spells. The extent of this partial activity should be based upon the turn's duration and the standard ***RM*** activity guidelines: *Movement/Maneuver is reduced to a maximum of 25% of normal for those who cast a spell during a **RM** 10 second round, and 10% for those who prepare a spell* (see *AL&CL* 3.0).

SPELL RESOLUTION PHASE

All spells resolved during a given phase, are resolved simultaneously, unless an exception is indicated by the system or the GM.

If a spell user (or unit) casts only one type of spell during a turn, the spells may be resolved as a group in the Spell Resolution Phase or they may be held until the Opportunity Action Phase (see Section 14.2). If a spell user (or unit) casts more than one type of spell during a turn, one type of spell is resolved in the Spell Resolution Phase and any other types of spells are resolved in the Opportunity Action Phase.

Note: *Keep track of which units take casualties during this phase. Each unit that takes casualties must make a Morale Check (see 17.1) during the Morale Phase of that turn.*

Example: *A Special Assault Unit is composed of four eighth level Magicians with only 10 PPs each remaining. Their job is to shoot Shockbolts at the bad guys during a fray. Since they can cast the 2nd level spell in one standard **RM** round, they may fire off one per ten second turn for five turns, at which point their spell points will be expended. If the battle is being waged in one minute turns, they will be able to make a total of 20 attacks in one turn if so desired. In this case, a luck roll would be made for the Magicians based on 20 attacks. The final modifier is computed, and the result is indexed on the Shockbolt Unit Attack Table. The results are applied during the Spell Resolution Phase.*

If the same unit of Magicians wants to cast 3 Shockbolts each and two Sleep V spells each during a one minute turn, the Shockbolts could be applied during the Spell Resolution Phase and the Sleep spells during the Opportunity Action Phase ***or*** *vice versa.*

MISSILE PHASE

All missile and ranged weapon attacks that will be made during this phase must be specified. Other pertinent information must also be specified: missile type, target/target area, phase of resolution, etc.

Regardless of the time scale being used, missile fire, missile preparation, and bow stringing times are based on normal ***Rolemaster*** 10 second rounds (see *AL&CL* Section 5.2.12). Depending on the time increment being used for the turn, it is possible for a unit to fire several missiles during a *War Law* turn.

A GM should allow partial movement or maneuver for combatants/units firing missiles. The extent of this partial activity should be based upon the turn's duration and the standard ***RM*** activity guidelines: *all missile firers have 50% of their activity left* (see *AL&CL* 3.0).

Each player should keep track of ammunition expended during missile fire, and should mark it off as it is expended.

Note: *For a missile unit engaged in melee combat, the GM may allow missile fire from the combatants in the unit that are not directly involved in the melee. Such fire should not be allowed against the unit being engaged in melee.*

MISSILE RESOLUTION PHASE

The missile attacks specified in the previous phase may be resolved as a group in the Missile Resolution Phase or they may be held until the Opportunity Action Phase (see Section 14.2). A given unit may also resolve some of the missile attacks in the Missile Resolution Phase and hold the rest for the Opportunity Action Phase (see Section 14.2).

All missile attacks resolved in a specific phase are resolved simultaneously, unless an exception is indicated. All results are applied immediately.

Note: *Keep track of which units take casualties during this phase. Each unit that takes casualties during a turn must make a Morale Check (see 17.1) during the Morale Phase of that turn.*

MOVEMENT PHASE

Then all movement and maneuvers are preformed simultaneously, with the GM resolving any conflicts (see Section 14.3).

In most cases, if a unit attempts a complicated in-place maneuver like reloading or changing formation, it may not move in the same turn. The GM may wish to make reasonable exceptions based upon the circumstances and the length of the combat turn. Normally, performing a maneuver or movement does not preclude the unit from making an attack during the same turn.

OPPORTUNITY ACTION PHASE

"Held" spell casting and missile fire (see Spell Resolution Phase and Missile Resolution Phase) is resolved during this phase. First, all "held" spells are resolved simultaneously and then all "held" missile attacks are resolved simultaneously.

Example: *A group of archers fire half of their weapons during the Missile Resolution Phase, and declare that they are seeking targets of opportunity with the remainder. In other words, the remaining available archers will wait to see if a target appears during the Movement Phase. The second half of the attacks must be used during the Opportunity Action Phase or they may not be made during the current turn.*

MELEE PHASE

Each unit may make melee attacks against adjacent foes (see Section 16.5).

A maximum of one attack per combatant per 10 seconds in the turn is allowed; this includes all types of attacks: spell, missile, and melee. The actual number of attacks will be reduced by the other activities that the unit has performed in the current turn (e.g., a missile attack is 50% activity for a 10 second period, a spell preparation is a 90% activity for a 10 second period, movement is a 1–100% activity for a 10 second period, etc.).

Normally, the number of melee attacks that a unit can make against a target is (truncate the result, i.e., drop any fractions):

 # Melee Attacks by a Unit =
(# of the unit's combatants in contact with the target)
x [(Turn Length in seconds ÷ 10 seconds)
– (total % activity used by other actions ÷ 100)]

Note: *The total % activity is the sum of all of the % activities on a 10 secound round basis. Thus, the total % activity can easily exceed 100% for a long WL turn.*

MELEE RESOLUTION PHASE

All melee attacks are resolved simultaneously.

Note: *Keep track of which units take casualties during this phase. Each unit that takes casualties during a turn must make a Morale Check (see 17.1) during the Morale Phase of that turn.*

MORALE PHASE

During this phase, each unit that fulfills one or both of the following conditions must make a Morale Check:

- The unit has taken casualties during this turn.
- The unit is currently engaged in melee combat (a GM may wish to forgo these MCs in certain situations).

Morale Checks are resolved simultaneously.

Command & Control rolls (see Section 13.2) are made at the end of this phase after Morale Checks are resolved.

Note: *In certain circumstances, a GM may wish to require orientation rolls during this phase (see Section 14.6).*

14.2 OPPORTUNITY ACTIONS

The turn sequence provided in Section 14.1 has a restricted form of the standard ***RM*** opportunity action and opportunity fire guidelines. If a GM decides a situation is appropriate for an expanded use of opportunity actions, he can allow certain unit actions to be delayed and resolved as outlined in *AL&CL* Section 3.2. Otherwise, opportunity actions are restricted to spell and missile attacks and may only be resolved during the Opportunity Action Phase.

14.3 MOVEMENT CONFLICTS

When two or more units attempt to perform conflicting movements or maneuvers (such as two units who are headed for the same area), the GM may choose to resolve the conflict by having the units in question make maneuver rolls (see Section 15.2). If one unit succeeds and the other fails, the result is obvious. Otherwise:

- The conflict can be considered a draw, and movement for the involved units can be terminated at the point of conflict;

or

- The GM make a decision by using a comparison of maneuver rolls (higher roll having choice of position) and common sense.

In these cases of conflicting movement, the GM will have to ultimately decide himself the outcome of the conflict. The maneuver rolls of the involved units are intended to aid him in his decision.

14.4 CANCELING ACTION

During a round, an action declared by a unit may be canceled before it would otherwise be resolved. A unit that has canceled its action may perform one of the following alternative actions:

- Melee with half of its normal OB, **or**
- Move half its normal (not running) movement, **or**
- Make a maneuver modified by -30

The alternative action chosen **must** be performed when the other actions of that type are normally resolved.

14.5 HASTE AND SPEED

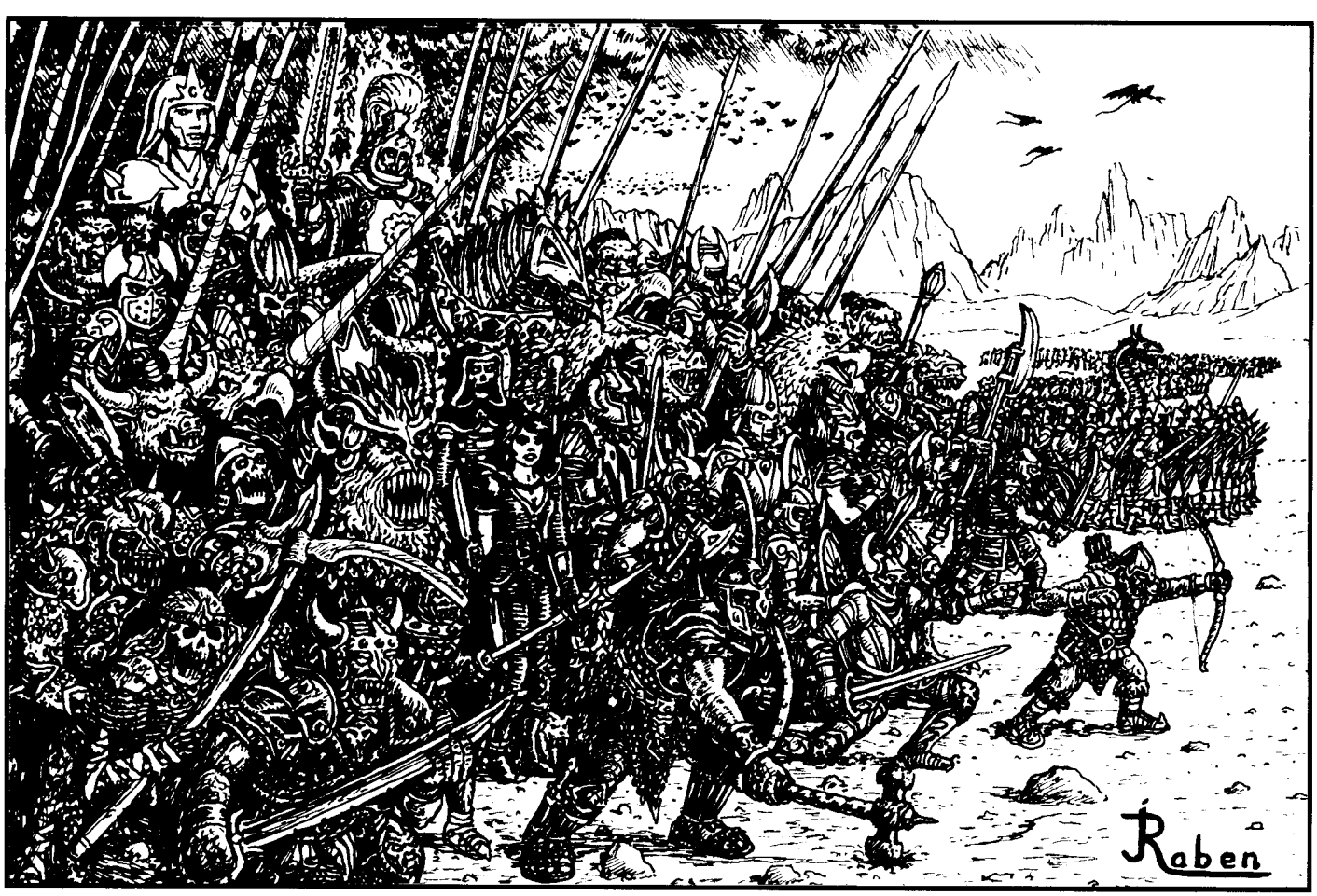
Certain spells will modify the normal turn sequence to some degree. The most common of these modifications will be *Haste* (or *Speed*). A unit whose combatants are hasted will basically have 200% normal activity for every 10 second segment of the turn, but must abide by the normal sequence restrictions. That is, whatever activity the unit takes will have to occur in the proper phase (thus, a hasted unit could not move, fight and then move again, denying opposing units the chance to strike back).

Each of a hasted unit's combatants may not attack more than twice for each 10 second segment of the combat turn. Each of a hasted unit's combatants may not cast a spell more than once for each 10 second segment of the combat turn.

14.6 ORIENTATION

In the judgment of the GM, any unit that has been under significant pressure (e.g., surprise, ambush, etc.) or that has made an unusual maneuver may be required to make an orientation roll during the Morale Phase. Such a roll can help the GM determine the unit's ability to act in the next round.

The GM should carefully decide exactly what portions of the battlefield and sequence of events each specific leader and unit would actually see. Combatants on a battlefield do not have a "bird's eye" view of the world, so unless the battle is very small, each combatant will probably not know everything that is going on around him. Orientation rolls can help a GM make these decisions.



15.0 MOVEMENT & MANEUVERS

WL RG BATTLES VS. AL&CL BATTLES

Base on their movement rates and allowed "paces", units move and maneuver in a manner very similar to individual *AL&CL* combatants. However, units must make maneuvers for certain types of movement and activity that individual combatants automatically perform — e.g., turning, backing up, stopping, changing weapons, etc.

In addition, units have special guidelines for retreating, disengaging, routing and checking formation.

During the movement phase (see Section 14.1) units and leaders may move and attempt maneuvers. In addition, units in certain situations may attempt special types of movement: disengagements, retreats, and routs.

15.1 MOVEMENT

These movement guidelines are based upon the standard ***RM*** movement rules in ***RM*** Section 7.2 of *ChL&CaL* and in *AL&CL* Section 7.2. Movement is simultaneous for all units, so the GM must decide exactly what happens (see Section 14.1 and 14.3).

Note: *If the GM knows what each unit is doing, it is not too hard to project a likely outcome for the Movement Phase.*

If a large distance separates the opposing forces, the GM may wish to increase the time increment for the *WL* turn (see Section 12.2) to allow the battle to proceed faster.

Option: A GM can use the Standard Game system and generate each unit's MPT (see Section 5.0) based upon the unit's Unit Converted Movement Rate (see Section 15.1.2).

UNIT BASE MOVEMENT RATE (15.1.1)

The *Unit Base Movement Rate* (UBMR) for a unit is equal to half of the average Base Movement Rates for the individual combatants in the unit. This reduced movement rate reflects the fact that coordinated movement by a group of individuals takes a lot of effort.

UBMR = 0.5 x (Average Combatant BMR)

A GM may increase or decrease this fraction for certain special units and situations (e.g., a unit of Elves that only operates in an open formation might have a UBMR that is 75% of their individual BMRs, while a unit of ill-trained Orcs might have a UBMR that is 40% of their individual BMRs).

A unit's UBMR can also be reduced due to the unit's formation (see Table T-6).

UNIT CONVERTED MOVEMENT RATE (15.1.2)

During a given turn, the actual movement rate used for each unit is that unit's *Unit Converted Movement Rate* (UCMR). Since *WL* turns can be of any length, a unit's UCMR is equal to its UBMR times the number of 10 second intervals in the current turn. Table T-2 provides conversions from UBMRs to UCMRs..

UCMR = UBMR x (turn length in seconds ÷ 10)

PACE (15.1.3)

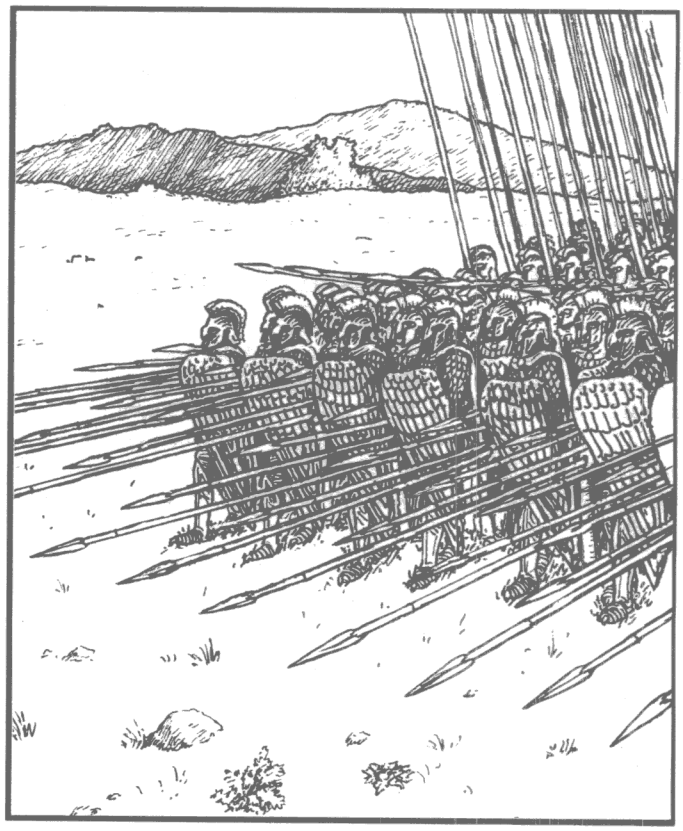
Each turn a unit must move at a set "pace." This pace determines the actual distance that the unit may move, any maneuver required (see Section 15.1.4), and exhaustion points expended (see Section 15.1.5).

UNIT PACE CHART

Pace	Pace Multiplier	Normal Maneuver Difficulty	Exhaustion Point Cost per 10 sec. round (opt)
March	x1	none	1 every 30 rnds
Forced March	x1.3	routine	1 every 18 rnds
Double Time	x1.5	easy	1 every 6 rnds
Charge	x2	light	1 every 2 rnds
Fast Run *	x3	medium	5 per rnd

* — Units with Armor Quickness Penalties of 20 or greater may not "Fast Run."

For paces other than "march", use the *AL&CL* maneuver Table 8.2.2 (see *AL&CL* Section 7.2.1). This table is duplicated as Table M-1 of *WL*. Simply determine the appropriate difficulty (from the Unit Pace Chart, or by GM assignment) and make an open-ended 1–100 roll modified by average unit Agility, appropriate skill bonuses, and the unit's leader's LR rating (see Section 22.2.1). The result is the percentage of the distance they would normally move given their rate of speed. It is possible to move faster than normal due to this process.



MOVEMENT MANEUVERS (15.1.4)

Normally, units have a front, a flank, and a rear (see Section 3.2). When a unit moves forward (i.e., in the direction its front is facing), it uses one foot of is movement rate for every foot moved.

Unlike individual combatants (i.e., characters), for any movement other than forward movement, a unit must use part of its movement rate **and** it must make a maneuver roll (see Section 15.2). Units can develop skill in performing specific movement maneuvers (see Section 21.8), but all units can perform the specific movement maneuver provided in the Movement Maneuver Chart: Turn, Wheel, and Backward Movement.

Note: *If a hex-grid is being used, each hexside or hex turned or wheeled is 60° and thus costs 60' of movement. Multi-hex units (see Section 13.1) may wheel but may not turn — wheeling one hex costs 60' of movement.*

In addition, if the GM decides that a unit is "moving under extreme pressure," he may require an extra maneuver roll or a more difficult maneuver roll every turn that the unit moves. A unit can be "under pressure" due to the presence of attackers, the weather, or some other perceived threat. This usually involves time pressure as a major factor.

Note: *If a unit is moving a long distance under pressure, the GM may wish to require a maneuver roll every hour rather than every turn.*

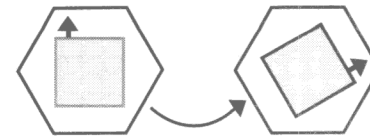
MOVEMENT MANEUVER CHART

Movement Maneuver	Maneuver Rate Cost	Difficulty
Forward Movement	1' per 1' moved	none
Turn	10' per 10° turned	routine (+30) *
Wheel	10' per 10° turned	light (+10)
Backward Movement	2' per 1' moved	medium (+0)
"Under Pressure"	normal	varies
Stop Movement §	1 rnd's movement	medium (+0)

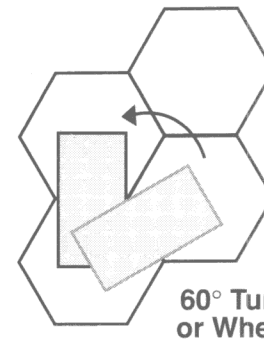
* — For most battles, assume that maneuver rolls for turns are automatically made.
§ — Stop Movement maneuvers are only required for retreating units (see Section 15.3). All maneuvers for retreating units are modified by -30, including the Stop Movement maneuver.

ENCUMBRANCE AND EXHAUSTION (15.1.5)

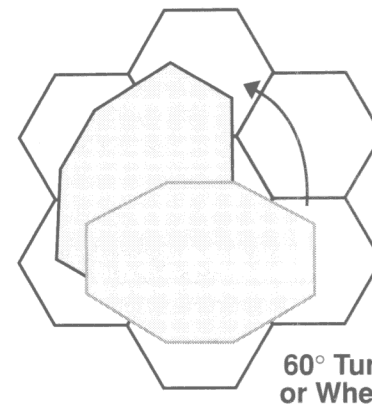
If a GM wants to he can use the standard ***RM*** encumbrance and exhaustion rules (see *AL&CL* 7.2 and ***RM*** 7.2) for units and leaders in a *WL* battle. However, this would require quite a bit of record keeping; so the use of those rules is considered to be a very optional part of the Refereed Game. The optional rules in Section 25.8 discuss exhaustion points and exhaustion point expenditure for units.



60° Turn or Wheel



60° Turn or Wheel



60° Turn or Wheel



15.2 MANEUVERS

There are many maneuvers that a unit might wish to attempt during the movement phase, some of which are:

- Movement Maneuvers (turns, wheels, backward movement)
- Changing formation
- Engaging
- Disengaging
- Command/Control rolls (see Section 13.2)
- Changing weapons
- Picking up arrows or other ammunition

ASSIGNING A DEGREE OF DIFFICULTY

When a unit wants to attempt a specific maneuver, the GM should assign a *degree of difficulty* and any special modifications he feels apply. The degree of difficulty and standard modification is chosen from those listed on Table T-5 and listed below:

Routine	+30
Easy	+20
Light	+10
Medium	+0
Hard	-10
Very Hard	-20
Extremely Hard	-30
Sheer Folly	-50
Absurd	-70

If the player controlling the unit decides not to proceed with the maneuver, he may cancel his action as described in Section 14.4. Otherwise, the combatant makes a maneuver roll. After the maneuver roll is modified by applicable bonuses and penalties (see Table T-5), the net maneuver roll is cross-indexed with the appropriate column on Table T-5 to obtain the result.

Note: *It is important to remember that certain maneuvers may be deemed impossible by the GM. The player should be advised that such a maneuver is doomed to failure.*

MANEUVER ROLL

The outcome of an attempted maneuver is resolved by making an open-ended roll, 1–100 (see Section 2.0 for a description of "rolls"). The result of this roll is the maneuver roll.

MANEUVER BONUSES AND PENALTIES

Attempted maneuvers can be affected by various factors such as leader bonuses, skills, armor, and special equipment. The sum of these bonuses and penalties is added to the maneuver roll to determine the net maneuver roll.

The standard modifiers are:

- The leader's Leadership Rating (LR)
- The unit's Discipline bonus (see Section 19.1 or use the average Self-Discipline bonus)
- Any applicable unit skill bonuses (see Section 21.0)

MOVEMENT MANEUVER RESULTS

For movement maneuvers (see Section 15.1), the net maneuver roll is cross-indexed with the degree of difficulty on *AL&CL* Table 8.2.2 (*WL* Table M-1). The result is usually self-explanatory, but a percentage result (i.e., a number) can be interpreted in several ways by the GM.

- In the case of an all-or-nothing maneuver (i.e., no partial success) a second dice roll must be made. If this second roll is equal to or less than the original percentage result, then the maneuver succeeds. Otherwise, the maneuver fails.
- If a maneuver can be partially successful, then the original percentage result is the degree of success.

OTHER MANEUVER RESULTS

If a non-movement maneuver result is 100+, the unit will perform as desired. More detailed suggested outcomes are provided on the appropriate column of Table T-5.

MANEUVER PROCEDURE SUMMARY

1) The player states the nature of his unit's maneuver.
2) The GM assigns a degree of difficulty and any special modifications to the maneuver.
3) The player decides whether or not to cancel the maneuver.
4) If he decides not to cancel the maneuver, an open-ended maneuver roll is made.
5) All applicable modifications are made to the maneuver roll.
6) The net maneuver roll is cross-indexed with the degree of difficulty on Table M-1 **or** it is applied to the appropriate column of Table T-5.

MANEUVER CHART

Maneuver	Movement Rate Cost	Standard Difficulty
Forward Movement	1' per 1' moved	none
Turn	10' per 10° turned	routine (+30) *
Wheel ‡	10' per 10° turned	light (+10)
Backward Movement †	2' per 1' moved	medium (+0)
Stop Movement §	1 rnd's movement	medium (+0)
"Under Pressure"	normal	varies
Changing formation †	200'	medium (+0)
Engaging	50'	easy (+20)
Disengaging ‡	50'	medium (+0)
Changing weapons †	100'	easy (+20)
Picking up ammunition †	300'	light (+10)
Formation maneuvers	varies	varies (Table T-6)

* — For most battles, assume that maneuver rolls for turns are automatically made.
† — Pace must be march.
‡ — Pace must be march, forced march, or double time.
§ — Stop Movement maneuvers are only required for retreating units (see Section 15.3). All maneuvers for retreating units are modified by -30, including the Stop Movement maneuver.

ENGAGEMENT

There are several types of engagement (i.e., one unit attacking another unit). Most engagements are simple: one unit melee attacks another unit. But there are also surprise engagements, missile engagements, magic, traps, etc. See Tables T-8 and T-9 for a list of some modifiers which may affect various types of engagements.

15.3 DISENGAGEMENT, RETREAT, AND ROUT

DISENGAGEMENT

Disengagement is an attempt to break off of combat with the enemy without allowing engaged enemy units to make attacks. It requires a maneuver roll using the Disengage column of Table T-5, normal modifiers, and the appropriate modifier from the chart below. Successful disengagement also requires a formation check from the disengaging unit and the unit(s) it is in contact with (see Section 15.4).

DISENGAGEMENT MODIFIERS CHART	
Disengaging unit is a cavalry unit	+10
Disengaging unit has highest movement rate	+10
Involved units have not yet engaged	+40

Note: If neither unit wants to engage, no roll is necessary. The last modifier is used for evasive maneuvers when units start a turn adjacent but are not yet engaged.

RETREAT

Retreat is a forced disengagement induced by a morale failure (see Section 17.2 and the Morale Failure Table T-4). A retreating unit will move at its base rate (see Section 15.1.2) "away from the enemy" (GM decision) until a successfully "Stop Movement" maneuver is made. A Stop Movement maneuver (medium difficulty) is only required for retreating units and may only be attempted once per Movement Phase.

A retreating unit is still under its leader's control, but just barely. There is a -30 modifier for maneuvers attempted while retreating (including the Stop Movement maneuver). If the leader does not stop the retreat within a few rounds (GM's decision, we suggest 3 or 4), it will become a *rout*.

A unit retreating automatically assumes a "Retreat" formation (see Section 21.6).

A leader may elect to order a retreat rather than suffer the effects of a morale failure result, but this decision must be made before the morale failure roll (see Section 17.3).

Note: *A GM may wish to allow certain units to attack a retreating unit as it begins to move away.*

ROUT

Rout is an unorganized retreat induced by morale failure (see Section 17.2). A leader has no effect on the movement and actions of a routed unit under his command. In certain circumstances, a leader may attempt to "rally" a routed unit, but this should be very rare and should involve a Command/Control roll with large negative modifiers (see Section 13.2).

Normally, a routed unit is out of action for the current battle. A routed unit must assume Retreat formation and move as far and as fast from enemy units as possible (GM discretion). As a routed unit disperses and runs away, its combatants often leave behind any equipment that would slow them down.

Note: *Under certain circumstances, a leader may prepare his unit so that it will not drop equipment when it flees. For example, Julius Caesar is known to have etched his soldiers' short swords with gold, so that the weapons would be precious enough that the men would not drop them.*

15.4 CHECKING FORMATION

Some formations are easier to control than others. Modifications to Maneuver and Command/Control rolls are listed on Table T-6.

When a unit is involved in combat, there is a possibility that the unit will lose the cohesiveness of its formation. There is a column on Table T-5 that is used to check for this possibility.

A unit must check formation:

- When it fails a Morale Roll
- When its casualties pass the 25% mark
- When its casualties pass the 50% mark
- When its casualties pass the 75% mark
- When it changes formation
- When it disengages
- When a unit that it is engaged with routs, retreats, or disengages

A formation check roll is modified by the unit's leader's Leadership Rating, the unit's skill bonus for operating in that formation (see Section 21.6), as well as other applicable maneuver roll modifiers.

FORMATION CHECKS DUE TO DISENGAGING UNITS

When a unit successfully disengages, retreats, or routs, all of the units involved must make formation checks. The following modifiers apply:

DISENGAGEMENT FORMATION MODIFIERS CHART	
Disengaging Unit Mods:	
Unit disengages	-20
Unit retreats	no roll, formation becomes "Retreat"
Unit routs	no roll, formation becomes "Retreat"
Mods for the Other Engaged Units:	
Foe disengages successfully	-10
Foe retreats	-20
Foe routs	-30

If the formation check result is "Formation turns into a mob..." (the last entry on Table T-5) for one of the "Other Engaged" units, the unit takes off in hot pursuit of the disengaging unit. The leader of a pursuing unit must regain control before he can issue further orders. A unit pursuing a disengaging unit in this manner must automatically assume Open Hoard formation.

Note: *Historically, William used this to his advantage at the battle of Hastings in 1066 AD. He enticed some of King Harold's troops to pursue his men with a false retreat, and then mopped them up with cavalry.*

16.0 ATTACKS

WL RG BATTLES VS. AL&CL BATTLES

Resolving an *AL&CL* attack requires an attack roll, a reference to an attack table, and, possibly, a second roll and a reference to a fumble, failure or critical table. Resolving a *WL* RG attack requires a luck roll, a reference to the luck table, and a reference to a unit attack table — there are no specific critical or fumble/failure tables. Units take damage in the form of casualties (i.e., wounded or killed combatants) and hits (i.e., pain, panic, fear, bleeding, etc.).

Both *AL&CL* and *WL* RG attacks involve OBs, DBs, and the application of various attack modifications.

If you are familiar with the standard ***Rolemaster*** attack resolution process, the *WL* process will be very easy to follow. Basically the procedure for a unit making an attack against a specific target is:

1) Determine the Number of Attacks: Determine the number of individual combatant attacks.

2) Make a Luck Roll: Make a *luck roll* to determine the effectiveness of the attacks.

3) Calculate Total Attack Mod: Add the luck roll result to the attacker's OB and subtract the target's DB; this is the *total unit attack mod* (TUAM).

4) Reference Attack Tables: Cross-index the TUAM with the target's armor type on the appropriate attack table. Certain spells will require a Resistance Roll instead of the use of an attack table.

5) Apply Results: Multiply the attack results by the number of attacks and apply those results to the target.

All attacks of the same type (i.e., melee, missile, or spell) that are made in the same phase are resolved simultaneously — there is no initiative determination process.

16.1 THE LUCK ROLL

Luck is an important factor in combat. In standard ***RM*** combat this is reflected by a 1–100 roll for each attack that each combatant makes. In *WL* combat, each unit attack represents a number of individual combatant attacks; so the attack roll result for a unit attack represents the results of a number of 1–100 rolls.

Each column of results from the Luck Table T-1 represents the statistical distribution for a number of 1–100 rolls — the larger the number of 1–100 rolls the less the average deviates from 50.5. The results from this Luck Table are used in place of 1–100 rolls for all *WL* unit attacks. The table can also be used for any other activity that the GM decides would involve a 1–100 roll from each combatant in a unit under the normal ***RM*** rules (e.g., a unit attempts to swim across a river).

THE LUCK ROLL RESULT

Whenever a Luck Roll Result (LRR) is called for, the following procedure should be followed:

(A) Decide how many 1–100 rolls (i.e., normal ***RM*** attacks) are being represented by the Luck Roll.

(B) Make an open-ended 1–100 roll, and cross-index the result with the number from step (A) on Table T-1.

(C) The result is the Luck Roll Result (LRR).

COMMON LUCK ROLL USES

There are three very common ways the LRR can be used in the *WL* Refereed Game:

1) The LRR plus the attacker's OB minus the target's DB is used to obtain attack results from the attack tables.

Example: *230 vicious wolves attack a wagon train transporting beef jerky. The GM rolls a luck roll of 96 for the wolves. Since the roll is open-ended, a second roll is required (its a 45); for a total result of 141 = 96 + 45. Checking the 151–250 column of Table T-1, the wolves will get +9 to the OB–DB difference on this attack.*

2) A GM needs to simulate a large number of modified 1–100 rolls; he can use: 50 + the modifiers + a LRR.

Example: *A unit called "The Gang" needs to break into individual combatants and swim a river. The average swimming skill bonus is 20 and the GM says it is a routine maneuver that will normally take 10 seconds. There are 45 members in The Gang, and the leader rolls a 12 for the luck roll. Cross-indexing on the Luck Table T-1 gives a LRR of -11. Thus the group's swimming maneuver is 59 = 50 - 11 + 20. Referring to the 'routine' column of the Maneuver Table M-1, we get a result of '100' and the unit makes it across the river.*

3) An average result is known for a number of identical occurrences, and the GM wants to modify the average result for luck. In this case, the LRR can be applied as a percentage change to the average result.

Example: *An average Potion of Eternal Love lasts for four hours. When 5 doses of it are imbibed by 5 unsuspecting harpies, the GM makes a roll. Checking the 1-15 column of Table T-1, a roll of 65 indicates a +4 result. Thus the potions last 4% longer than average for a total of 4 + (4 x .04) = 4.16 hrs.*

WHEN NOT TO USE LUCK ROLLS

The Luck Table should **not** be used:

- When rolling on the Morale Failure Table T-4
- When rolling for unit maneuvers
- When rolling up unit Stats

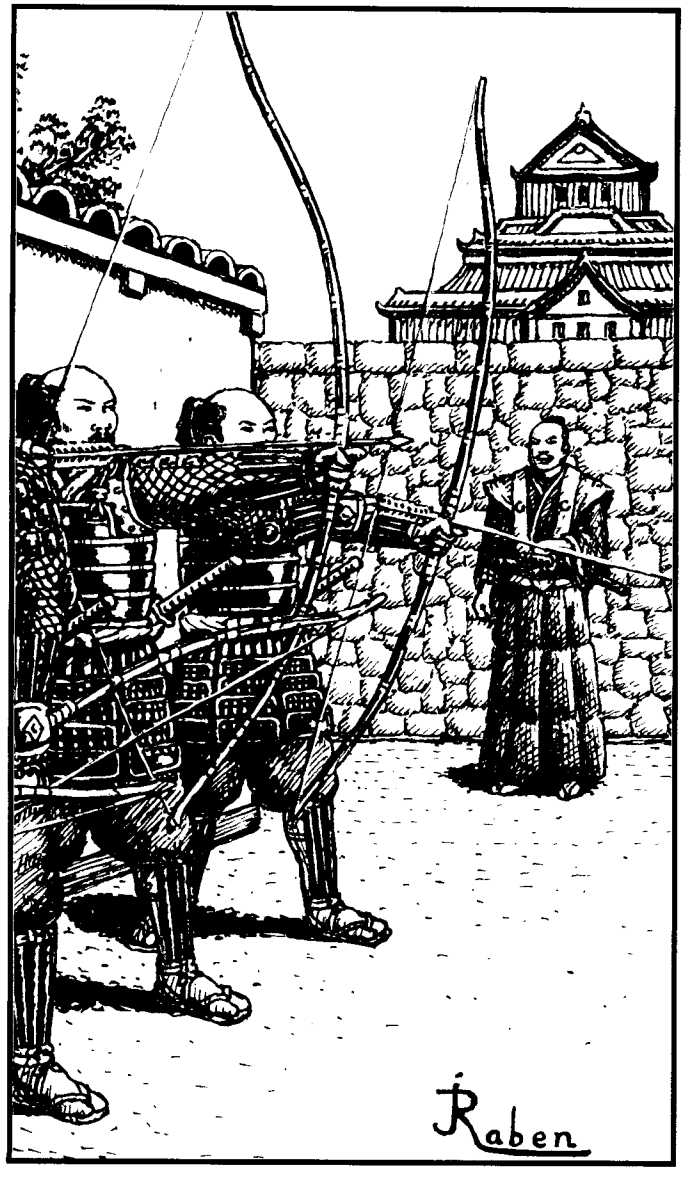
16.2 HOW TO RESOLVE ATTACKS

To resolve an attack of any sort, the GM should use the following procedure. Certain spells will require a Resistance Roll instead of the use of an attack table (see Section 16.7.2).

1) Determine the Number of Individual Attacks: Determine the number of individual combatant attacks that the attacking unit can make against the defending unit. This depends on the time scale for the turn (see Section 12.2), the contact area between the two units, and the attacker's unit density (see Section 13.1). If the number of attacks is greater than twice the number of defenders, the GM should consider using a shorter time interval.

The GM must estimate how many combatants are on each edge of a formation; this will determine how many of a unit's combatant come in contact with each target. Section 25.1 provides guidelines that can help make this process more exact (but also more time consuming).

2) Make a Luck Roll: Make a luck roll to obtain a luck roll result (LRR) as outlined in Section 16.1.



3) Calculate Total Unit Attack Mod: Add the luck roll result to the attacker's OB, subtract the target's DB, and add any other applicable modifiers (for terrain, surprise, hit point losses, etc.). This is the *total unit attack mod (TUAM)*. See Tables T-8 and T-9 for a list of modifiers).

TUAM =

LRR + Attacker's OB – Defender's DB + Misc. Mods

4) Reference Attack Tables: On the attack table for the attacking weapon or spell, cross-index the TUAM with the defender's armor type. The two results listed on the tables are *Hit Point (HPs)* and *Casualties (Cas)*.

5) Apply Results: Multiply the *Cas* result by the number of attacks to get the number of casualties inflicted upon the defending unit. If this result has a fraction, roll 1–100. If this roll is less than or equal to the fractional part times 100, add another casualty.

Multiply the *HPs* result by the number of attacks made (from step 1) and drop all fractions, then add half the number of casualties (round up) times the average Hit Points per combatant.

Example: *A unit of 20 longbowmen (lbow unit) loose arrows at a unit of 100 grunts with an AT of 13 and 3500 hit points (35 per man). The lbow unit is not engaged in melee, and each of its combatants has a rate of fire of 1 shot every 20 seconds (without taking a penalty). The GM has decided to proceed with a 60 second round, so the lbow unit will make 60 attacks on the infantry unit.*

The lbow unit rolls a luck roll of 57, which gives a LRR of +3 for 60 attacks. The lbow unit OB is 45, and the grunt unit's DB vs missiles is 21. The only miscellaneous mod is the range modifier of -20 (200 feet). So the TUAM is 7 = 3 + 45 - 21 - 20.

Referring to the Long Bow Unit Attack Table A-5.5 against AT-13 yields: HPs = 4.4 and Cas = 0.13.

• *The grunt unit takes:*

***16 casualties** = 60 x 0.13 = 15.60 — i.e., 15 casualties and a 60% chance of an additional one. The commander of the archers rolls a 42, which is less than 60 = .6 x 100, so a total of 16 casualties are inflicted.*

***544 hits** = [60 x 4.4 (fractions are dropped)] + [0.5 x 16 casualties x 35 hits per casualty]*

16.3 UNIT ATTACK TABLES

Unit attack tables (A-1.1 to A-8.7) are provided for the weapons and other attack types from *AL&CL* and for the elemental attack spells from *SL*. Mods are given in increments of 5. If an attack has a mod that is not an increment of 5, round off to the nearest increment of 5 (e.g., +11 & +12 round to +10, while +13 & +14 round to +15).

Note that each of the animal and miscellaneous unit attack tables (A-1.1 to A-2.3) has "maximum result" thresholds just like the corresponding attack tables in *AL&CL*. An attack's TUAM cannot exceed the designated threshold; instead, the maximum result allowed is used as the TUAM result.

Example: *100 Housecats (small size) attacking a unit would be limited to TUAM results below the "Small" line on the Bite Unit Attack Table A-1.2. Tigers on the other hand would qualify for results up to the "Large" line. A Dragon would have no size limitation (being Huge). See Creatures & Treasures for a comprehensive listing of creatures and their standard attack capabilities.*

16.4 EFFECTS OF DAMAGE

When a unit is attacked it takes casualties and hit points. The effects of losing combatants include decreased morale and having less combatants to fight with. These effects are explained in detail in this section and in the morale rules (see Sections 17.0).

HIT POINT DAMAGE EFFECTS

When a unit takes hit points, it loses combat effectiveness — it receives mods to its OB, all maneuvers, formation rolls, and command/control rolls.

Note a unit's OB cannot be reduced below half of normal due to this modification.

Hit Points Taken	Mod *
0–24% of Total Hits	+0
25–49% of Total Hits	-10
50–74% of Total Hits	-20
75–100% of Total Hits	-30

* — Non-cumulative.

Example: *Sancho the Dull earned his title by getting half of his of cavalry troop roasted by a Red Dragon. At the beginning of the battle, the troop had a OB of 50. After a few rounds, the unit had taken more than 50% or its total hits, a -20 mod. So its OB became 30 = 50 - 20. If the unit takes 75% casualties, its OB will only be reduced to 25 by the -30 mod — its OB cannot be reduced below half of normal due to this modification.*

At some point, a unit's Hit Points Taken may exceed its Total Hit Points (HP Total). When this happens, the GM has two options, depending on the complexity he is willing to deal with:

1) The unit surrenders or flees the field, **or**
2) The unit continues to fight, but for every additional hit point increment of 25% of its HP Total:
   - The unit accumulates an additional -10 mod
   - The unit takes 10% of its total combatants as casualties

Note: *A unit's Hit Points Taken may exceed its Total Hit Points because often the hits delivered to take out a specific combatant exceeds its individual hit point total (e.g., a 40 hp combatant might absorb 60 hits when he is dropped.)*

CASUALTY EFFECTS

As a unit takes casualties, certain modifications apply when making Morale Checks (see Section 17.1).

HEALING HIT POINTS

Standard ***RM*** healing guidelines are in effect for units. Hit Points are regained (i.e., healed) at a rate of 1 per combatant per hour of rest. If the unit is active, the rate drops to 1 every three hours. See the Unit Racial Modifiers Table T-13 for a recovery multiplier for use with other injuries.

CRITICAL RESISTANT CREATURES

Certain creatures are abnormally resistant to criticals: large creatures, super-large creatures, creatures that ignore stun and bleeding, etc. The following chart and options outline an approach for handling special critical resistance creatures.

LARGE CREATURE CRITICALS CHART

Creature Crit Type	OPTION #1 Casualty Multiplier	OPTION #2 Critical Strikes
—	1.0	normal
I	0.8	1 Cas = D
II	0.6	1 Cas = C
LA	0.1	5 Cas = LA crit
SL	0.03	10 Cas = SL crit
@	0.9	1 Cas = E
#	0.8	1 Cas = D

Note: 'Cas' stands for casualty, 'D', 'C', and 'B' refer to critical strikes on the table appropriate to the attack, 'LA' and 'SL' refer to large and super large strikes respectively, 'I', 'II', '@', and '#' refer to codes for "Crit" types from *C&T* Section 2.0.

Option 1: Multiply the number of casualties by a "casualty multiplier" to find out how many creatures actually were incapacitated. If two Crit types apply (e.g., many Undead are Crit type '#' and one of the other types), multiply normal casualty results by both applicable casualty modifiers.

Example 1: *20 Fighters attack 10 Zombies that have a Crit type of 'I#'. Their attack's normal Cas result is 4.2. So the actual Cas result is 2.69 = 4.2 x 0.8 (for 'I') x 0.8 (for '#') — 2 casualties (or 3 if the partial casualty roll is less than or equal to 69).*

Example 2: *20 Fighters have engaged a small Dragon (a Large creature). During a round of combat, the tables call for 6.26 casualties inflicted by the Fighters. To account for the fact that the Dragon is LA, this is multiplied by 0.1:*

0.63 = 6.26 x 0.1

So there is a 63% chance that the Dragon was slain this round. The fighters roll a 72, which is not less than 63, so the Dragon survives to fight another round.

Option 2: If the number of special creatures involved in the battle is small, the GM may wish to keep track of them individually, rather than as a group. In this case, hits are inflicted normally, and the casualties are converted to critical hits, according to the table above.

Example: *Using this method for the example 2 above, the 6.26 casualties inflicted by the Fighters would become (since 5 casualties = 1 'LA' critical strike):*

1.25 Large critical strikes = 6.26 ÷ 5 Cas

The leader rolls a 23 (less than 25) for the fractional result, for a total of 2 criticals on the AL Large Creatures Critical Strike Table 8.1.4.

16.5 MELEE ATTACKS

A unit may only make melee attacks against a unit that it is engaged with (i.e., adjacent to) and which it has combatants facing (see Section 13.1). The unit must be using melee weapons and it must have activity left for the current turn (see Section 14.0).

ASSIGNING MELEE ATTACKS (16.5.1)

At the beginning of the Melee Phase, each of the GM and players should state all melee attacks that their units will be making. Generally speaking, any unit that is engaged should make a melee attack. The amount of OB used to parry with should also be decided on for each unit (use standard ***RM*** guidelines). A GM may wish to use different time scales for the Melee Phase for different parts of a battle that have widely differing unit sizes.

Example: *A large battle is in progress with the smaller side numbering 1000 men. According to Table T-2, a good time scale is 10 min. At the same time, however, a small diversionary force of 15 men is engaged by a horde of angry campfollowers. This small engagement should be resolved in 10 second intervals. Thus, the small battle will probably be over long before the main event. In this example, the GM could just ignore the skirmish unless it involved PCs.*

Normally, the number of melee attacks that a unit can make against a target is (truncate the result, i.e., drop any fractions):

 # Melee Attacks by a Unit =
(# of the unit's combatants in contact with the target)
x [(Turn Length in seconds ÷ 10 seconds)
– (total % activity used by other actions ÷ 100)]

The GM must estimate how many combatants are on each edge of a formation; this will determine how many of a unit's combatant come in contact with each target. Section 25.1 provides guidelines that can help make this process more exact (but also more time consuming).

SPLIT ATTACK/DEFENSE (16.5.2)

In some cases, a unit may engage or be engaged by separate units. In this case, the GM determines how many combatants are committed to each engagement.

Sometimes splitting the unit into two sub-units is justified (with a sub-commander taking command of one of them). In any case, a unit may not make more attacks during the round than it would be allowed against one target — it must split up its available number of attacks among the targets.



UNIT SIZE DIFFERENCE (16.5.3)

When a larger unit is attacking a smaller one, an important rule of thumb is that the attacking unit should be allowed no more attacks than twice the number of combatants in the smaller unit. A unit that is outnumbered suffers significant disadvantages. For these purposes a unit's *size* is the number of combatants in the unit. After all attacks are declared, the *attack ratio* for each attack should be calculated (round down):

(attacker's size ÷ # units the attacker is attacking)
÷
(defender's size ÷ # of units attacking the defender)

This attack ratio can give the attacker OB modifications and morale roll modifications; see the Offensive Bonus Table T-8 and the Morale Table T-3.

Example: *A unit of 100 men attacks a unit of 20 men. The larger unit is allowed only 40 attacks on the smaller in normal circumstances. However, the attack ratio is 5–1, so the larger unit gets a +25 OB modification and a +50 mod to any Morale Rolls caused by this specific engagement.*

If the same 100 man unit is attacking two 20 man units, its attack ratio for each attack is 2–1: 2 (2.5 rounded down) = (100 ÷ 2) ÷ (20 ÷ 1).

The GM may allow more attacks if the unit is surrounded — possibly up to 60 or even 80 attacks.

LARGER THAN MAN-SIZED CREATURES

The guidelines above apply to units consisting of man-sized creatures. For larger than man-sized creatures, a GM may ignore the attack ratio mods **or** he may use the suggestions below as a rule of thumb for calculating a unit's size.

Type of Creature in the Unit	Multiplier for Unit Size Calculation
Mounted	x2
Large	x5
Huge or Super-Large	x20

FORMATIONS (16.5.4)

Specific formations are selected because of their particular characteristics in specific situations (e.g., defense, assault, rapid transit, etc.). See Sections 13.1 and 21.6 and Tables T-6 and T-7 for details.

A unit's formation will have effects on combat as indicated in Table T-6. There are modifiers to the attacker's missile OB and DB, as well as density ratings and maneuver modifiers. Table T-7 is a matrix that gives modifiers to OB for different combinations of various formations attacking one another (e.g. line vs wedge). Any one of these modifiers applies only to an engagement involving the appropriate two formations.

If players design their own formations, the GM must decide the values for combat modifiers. In general, they should be limited to no more that ±20.

DEFENSES USED WITH OTHER FORMATIONS

There are two "defenses" that may be used with certain formations: Shield Wall and Tortoise Shell. Only one of the defenses may be used at a time and the unit must have the proper shields.

Each modifier based on a defense is added to the appropriate modifier for the base formation to obtain a total modifier that is actually used in combat.

16.6 MISSILE ATTACKS

A unit may only make missile attacks against a unit that is within the range of its missile weapons and which it has combatants facing (see Section 13.1). The unit must be using missile weapons and it must have activity left for the current turn (see Section 14.0).

ASSIGNING MISSILE ATTACKS (16.6.1)

At the beginning of the Missile Phase, each the GM and players should state all missile attacks that their units will be making. Each player should keep track of ammunition expended during missile fire, and should mark it off as it is expended.

Note: *Normally combatants that are not in the front two ranks facing a target may not make direct missile attacks (see Section 16.6.5). However, a GM may wish to allow combatants in back ranks to make volley missile attacks (see Section 16.6.5).*

Note: *Normally units may not parry missile attacks. A GM may wish to make exceptions for special circumstances and special units.*

SPLIT ATTACKS (16.6.2)

In some cases, a unit may want to fire at more than one target. In this case, the GM determines how many men are committed to attack each target.

Note: *For a missile unit engaged in melee combat, the GM may allow missile fire from the combatants in the unit that are not directly involved the melee. Such fire should not be allowed against the unit being engaged in melee.*

RANGE (16.6.3)

There is a modification to the firing unit's OB based upon the distance from the firer to the target. These modifications range from +30 to -75 and are provided on the standard *AL* Weapon Attack Tables (*AL* 8.3.1–8.7.4).

The missile ranges given on each of the attack tables are the *maximum* ranges for which each of the given OB modifications apply. For example on the Composite Bow Attack Table (*AL* 8.5.2), attacks made at a range of 0'–10' are modified by +25, attacks at a range of 11'–100' receive no modification, attacks at 101'–200' are modified by -35, attacks at 201'–300' are modified by -60, and attacks over 300' are not allowed.

FORMATIONS (16.6.4)

A unit's formation will have effects on its missile OB and DB as indicated in Table T-6.

RATE OF FIRE (16.6.5)

A missile unit may choose to deliberately take time to carefully aim, fire, and reload **or** it can simply loose as many arrows as possible in a volley. Thus, a unit may make two types of missile attacks: *direct* missile attacks and *volley* missile attacks.

DIRECT MISSILE ATTACKS

The time and OB modifications required for units to aim, fire, and reload after making direct missile attacks are the same as required for individual combatants in *AL*. That is, a normal missile attack (aiming and firing) takes 5 seconds (a maximum of one attack per round). A GM should use the reloading guidelines in *AL* 5.2.12 or *AL* 9.4.

So for direct missile attacks, the time required is:

5 seconds + the time required for reloading
[max of 1 attack per combatant every 10 seconds]

Thus, the maximum number of direct missile attacks that a unit may make in a given *WL* turn:

# of combatants that can attack **x**
(turn length in seconds ÷ attack time in seconds *[round off]*)

Normally, unless a unit is in Open Horde formation, only combatants on the outside 1 or 2 edges/rows of the unit may make direct missile attacks — i.e., direct fire attacks may not be made if a friendly combatant is in the way. A GM may wish to make exceptions for units in loose formations; such a unit might be allowed to make direct missile attacks with the combatants in its outermost three (or even four) rows.

Example: *40 seventh level longbowmen are arranged in 4 ranks (10 men on the front line) and have 8 skill ranks with their weapon. For a long bow, 50% (5 seconds) activity is required for aiming/firing and 80% (8 seconds) activity for reloading (see AL 9.4). Thus, the normal rate of fire for direct missile attacks is 1 attack per combatant every 13 seconds. The GM rules that the front two ranks (20 men) can direct fire. A battle is being resolved using 1 minute turns, so the # of attack per combatant is 5 = 60 ÷ 13 (rounded off), so the unit will be able to direct fire:*

100 missile attacks = 20 men x 5 attacks per turn

VOLLEY MISSILE ATTACKS

To determine how many attacks a unit can make using volley missile attacks, determine how many direct missile attacks it could make and then multiply by the unit's chosen *volley rate of fire*. If a unit elects to volley fire, it receives an OB modifier as indicated on the chart below. This OB modifier and the unit's volley rate of fire are based upon the unit's skill rank with the weapon being fired.

VOLLEY RATE OF FIRE CHART

Skill Rank	Volley Rate of Fire 1x	1.5x	2x
1-6	-30 to OB	na	na
7-10	-25 to OB	-35 to OB	na
11+	-20 to OB	-30 to OB	-40 to OB

Note: *All combatants in a unit may make missile attacks if volley fire is used.*

Example: *The 40 seventh level longbowmen in the previous example can make 100 direct missile attacks in a 60 second turn. Because all 40 bowmen can make volley missile attacks, the same unit make 200 volley missile attacks with a -20 OB mod* ***or*** *300 volley missile attacks with a -30 OB mod:*

200 missile attacks = 1 ***x*** *40 men* ***x*** *5 attacks/rnd*

300 missile attacks = 1.5 ***x*** *40 men* ***x*** *5 attacks/rnd*

AREA MISSILE ATTACKS (16.6.6)

There are a variety of missile attacks that can affect all of the targets in a given area. Such attacks can be made by ballista, trebuchets, catapults, giants, large flying creatures, etc. When a unit is attacked by an area missile attack, damage is computed as follows:

1) Determine what *type of object* is being hurled at the target. The Thrown Objects Chart gives some sample objects and some attack statistics: weight, area of effect, OB, and attack size.

2) Multiply the number of objects being thrown this round by the area of effect per object (in square feet), as indicated on the Thrown Object Chart (1 lb of pebbles is one object). This is the total *area of effect* for the attack.

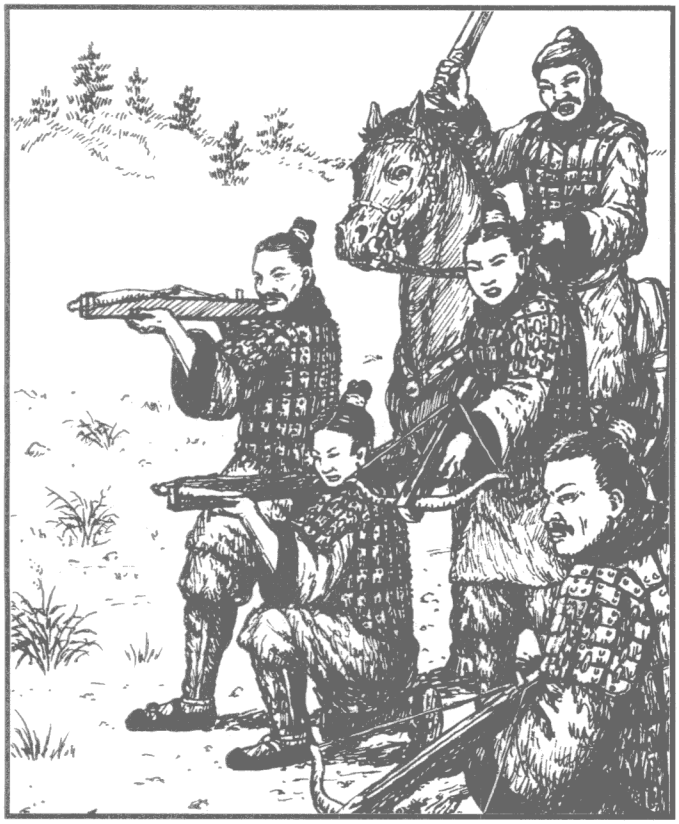
3) Using the procedure outlined in Section 16.6.7, find the *number of combatants in the area of effect* (i.e., how many are actually attacked by the missiles). The accuracy roll for this procedure should be modified by the attacker's skill, quality of the weapon, range, etc. .

4) *Resolve the attack* on the Fall/Crush Unit Attack Table A-2.1. The applicable modifiers include a luck roll result (LRR) and the attack bonus listed for the particular missile. Skill bonus is **not** added. Defenders get ordinary DBs, except that shield bonuses only apply against 1.5' or smaller rocks. Terrain may provide some cover for the defenders — GM's discretion.

The results are limited by the size of the attack (small, medium, large, or huge) as denoted on the attack table.

Note: *If the objects hurled are flammable, or have other special properties, the GM may wish to consider an elemental attack as well.*

Example: *See the end of Section 16.6.7 for a complete area missile attack example.*



THROWN OBJECTS CHART				
Type of Object	Weight (lbs)	Area of Effect *	OB	Attack Size
1 lb of pebbles	1	10	-50	small
3" rocks	1/2	25	-20	medium
7" rocks	4	75	0	medium
1' rocks	28	150	+20	large
2.5' rocks	230	300	+40	large
5' rocks	—	600	+70	huge
8' rocks	—	1000	+100	huge
light ballista	—	100	+40	huge
heavy ballista	—	200	+60	huge
trees	—	450	+30	huge

* — The area of effect is given in square feet.

AREA ATTACK EFFECTS (16.6.7)

When an attack that affects an area is made, the GM must determine its accuracy and its area of effect. He can then use this information and the *density* of the target unit to determine how many combatants are actually attacked.

1) Find the **Density Rating** of the target unit based upon its formation (see Table T-6). For the purposes of area attacks, a unit's Density Rating is increased by adding its area attack modifier (see Table T-6).

2) Find the **Unit Area** (i.e., the area that the unit occupies) by multiplying the *Density Rating (1)* by the number of men currently in the unit.

3) Find the total **Area of Effect** of the attack. See 16.6.6 for area missile attacks and Section 16.71 for area attack spells.

4) Find the **Attack Ratio** by dividing the *Area of Effect (3)* by the *Unit Area (2)*. Round down fractions. This attack ratio should be modified for circumstances based upon the unit's formation an the shape of the area of effect. For example, if a unit is in a long thin line and the area of effect is a circle/sphere, the *maximum* attack ratio is the diameter of the area of effect divided by the length of the line of combatants.

5) Make an **Accuracy Roll**: 01–100 plus any relevant modifiers (e.g., the attacker's skill bonus, defender's DB, range modifiers, weather, visibility conditions, target movement, obstacles, terrain, etc.).

6) Cross-index the *Accuracy Roll (5)* and the *Attack Ratio (4)* on the Area Attack Accuracy Chart. Multiply the result by the number of combatants in the target unit to get the number of combatants actually attacked.

7) Resolution of the attack, once the number of combatants attacked is known, depends upon what type of spell or weapon is being used. See Sections 16.6.6 and 16.7..

Note: *If an area attack has a large enough area of effect, it may be able to affect two or more units. In this case, the GM should follow the normal procedure for one unit (i.e., the primary target) and then use the results to extrapolate damage to other nearby potential targets.*

Note: *If a GM finds this procedure too cumbersome for certain situations, he may just estimate the number of combatants affected and proceed from there (skipping steps 1 to 6).*

AREA ATTACK ACCURACY CHART

	Roll	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1	2	3	4+
UM	1–2	fumble												
	3–30	miss												
	31–35	0.01	0.02	0.05	0.07	0.08	0.09	0.1	0.1	0.1	0.1	0.1	0.3	0.5
	36–40	0.02	0.03	0.04	0.05	0.05	0.1	0.1	0.1	0.1	0.1	0.2	0.4	0.6
	41–45	0.03	0.05	0.08	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.5	0.7
	46–50	0.04	0.06	0.09	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.4	0.6	0.8
	51–55	0.06	0.08	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.5	0.7	0.9
	56–60	0.08	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.4	0.5	0.6	0.8	1
	61–65	0.1	0.1	0.2	0.3	0.3	0.3	0.4	0.4	0.5	0.6	0.7	0.9	1
	66–70	0.1	0.2	0.2	0.3	0.3	0.4	0.4	0.5	0.6	0.7	0.8	1	1
	71–80	0.1	0.2	0.3	0.4	0.4	0.5	0.5	0.6	0.7	0.8	0.9	1	1
	81–90	0.1	0.2	0.3	0.4	0.5	0.6	0.6	0.7	0.8	0.9	1	1	1
	90+	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1	1	1	1

Fumble — The weapon/spell didn't perform properly. The GM should roll on the appropriate fumble table, or make a judgement call.
Miss — The target was not hit. If there are nearby units, the GM may wish to check if one of them was hit by rolling again with a -50 modifier. If the target unit or the area of effect is very large, the GM may also want to make a second attack on the target unit modified by -50.

Example: *100 of Canon's Fodders are ambushed while crossing a bridge in column. Before the leader has time to react, catapults unleash six 1' rocks at them. The catapults have previously been sighted in on the bridge (i.e., "bore-sighted," +20 to accuracy).*

- *The **Density Rating** is 12: 6 for formation plus 6 for the area attack modifier.*
- *The **Unit Area** is 1200 sq. ft.: a Density Rating of 12 x 100 combatants.*
- *The **Area of Effect** is 900 sq. ft.: 6 objects x 150 sq. ft. per object (see the Thrown Objects Chart).*
- *The **Attack Ratio** is 0.7: since 900 ÷ 1200 = 0.75, which rounds down to 0.7. However, the GM rules that because the unit is in a narrow column and the area of effect is a circle/sphere, the attack ratio is limited to 0.4.*
- *The **Accuracy Roll** is 87: a roll of 37 + modifications:*
  +20 for "bore-sighted" weapons (GM ruling)
  +25 for 5 skill ranks
  +25 for surprise
  -15 for range (GM ruling)
  -5 for target movement (GM ruling)
- *Cross-indexing 87 and 0.4 on the Area Attack Accuracy Chart, we get a result of 0.4. So, 40 combatants (= 0.4 x 100) are attacked.*

The attack is resolved as outlined in Section 16.6.6. Note that skill and range have no effect on actual attack resolution. Applicable modifiers for the attack table are:

-3 — The luck roll result for a luck roll of 38
+20 — Object type (see the Thrown Objects Chart)
-5 — shields (GM ruling)

The total modifier is 12, rounded to 10. On the Fall/Crush Unit Attack Table A-2.1, we cross-index this with the unit's AT of 14 for a result of "12.7 0.22" — 12.7 HPs and 0.22 Cas.

*Thus, the **casualties** done to the unit is: 8.8 casualties = 0.22 x 40. The GM rolls an 89 for the extra casualty, which is not 80 or less, so the Fodders actually only takes 8 casualties.*

*Thus, the **hit points** done to the unit is: 668 hits = (12.7 x 40) + (0.5 x 8 casualties x 40 average hits per combatant).*

MISSES AND FUMBLES

If a result from the Area Attack Accuracy Chart indicates a "Miss", the target was not hit. If there are nearby units, the GM may wish to check if one of them was hit by rolling again with a -50 modifier. If the target unit or the area of effect is very large, the GM may also want to make a second attack on the target unit modified by -50.

If a result from the Area Attack Accuracy Chart indicates a "Fumble", the weapon/spell didn't perform properly. The GM should roll on the appropriate fumble table, or make a judgement call.



16.7 SPELLS

Regardless of the time scale being used, the durations and casting times of spells are based on normal ***RM*** 10 second rounds. Note that depending on the time increment being used, it is possible for a spell user to cast several spells in a *WL* turn.

ELEMENTAL ATTACK SPELLS (16.7.1)

Directed elemental attacks, such as the "bolt" spells, are fired at individual combatants, and are resolved individually unless there are several Magicians casting the same spell at the same target unit. In this case, the total number of attacks can be calculated and the normal attack process can be used (see 16.2).

AREA ELEMENTAL ATTACK SPELLS

Area elemental attacks, such as the "ball" spells and dragonbreath cones, are resolved using the following procedure. This procedure is very similar to the procedure for area missile attacks outlined in Section 16.6.6 and 16.6.7.

Note: *A GM may wish to modify this procedure in certain circumstances. For example, if the GM rules that the spell(s) cast will affect everyone in a unit, the number of attacks is merely equal to the number of combatants in the target unit (i.e., the unit's size). If two fireballs were cast in the same round, and both completely enclosed the same target unit, the number of attacks would be two times the unit's size — one attack per man for each fireball.*

1) Compute the Area of Effect:

a) For spells affecting a sphere with a Radius (R) or Diameter (D) use:

Area $\approx \pi \times R^2$ **or** $\pi \div 4 \times D^2$ [$\pi \approx 3.14$; $\pi \div 4 \approx 0.785$]

b) For spells affecting a cone with a base diameter (B) and a length (L) use:

Area $\approx 0.5 \times B \times L$

Note: *See the Elemental Companion Section 12.0 for a more complete treatment of Cone Attack Spells.*

Example: *A 50 ft radius Fireball will encompass: 50 x 50 x 3.14 = 7850 sq ft.*

Example: *A 10 ft diameter "Rot Foot" spell will affect an area of: 10 x 10 x .785 = 78.5 sq ft.*

Example: *A Dragon exhales a cone of fire. The cone is 200 ft long with a base of 50 ft. The total area affected is thus: 0.5 x 50 x 200 = 5000 sq. ft.*

2) Determine How Many Combatants are Attacked:

This can be done by using the procedure outlined in Section 16.6.7 or the GM can just "eyeball" it.

Example: *A 50 ft radius Fireball is fired at Calgor's Crushers' formation. It affects an area of 7850 sq ft. The Crushers have 400 men, and are marching in column formation. Table T-6 shows the Crushers to have a Density Rating of 6 with a +6 area attack modifier for a total Density Rating of 12. The unit occupies an area of 12 x 400 = 4800 sq. ft. for area attack purposes. The Attack Ratio is 7850 ÷ 4800 = 1.64, rounded to 2.*

The Mage rolls a 43 for the accuracy of his fireball, and adds 7 for his level. The GM decides there is a -10 modifier for range, so the net Accuracy Roll is 40. Cross-indexing the Accuracy Roll and the Attack Ratio on the Area Attack Accuracy Chart, we get a result of 0.2. So the number of men attacked is 80 = 0.2 x 400.

Example: *Xanax the Magnificent casts "Earth to Pudding" beneath the boots of Aaron's Archers. The spell affects an area of 1000 sq ft, and Aaron has 100 men deployed at a Density Rating of 12. The Attack Ratio is 1000 ÷ 1200 = 0.83, which rounds to 0.8.*

Xanax rolls 56 and adds 15 for his level, but subtracts 10 because the archers are moving (GM's decision) for a total Accuracy Roll of 61. Cross-indexing 61 and 0.8 on the AAA Chart, we get a result of 0.4. So, the number of men attacked is 40 = 0.4 x 100.

The GM might now decide to use the Grapple/Grasp/Envelop/Swallow Unit Attack Table A-1.4 to see how many of the 40 are mired in the pudding (i.e., how many casualties).

3) Resolve the Attacks:

To resolve the attack, make a luck roll based on the number of attacks, add the modifiers for all pertinent conditions, and cross-index with the target unit's AT on the appropriate elemental attack table. Multiply the numbers found by the number of attacks to compute the number of hits and casualties inflicted.

Example: *Continuing the first example above, the GM determines that the Fireball attack will be resolved at:*

+7 for the caster's level
-15 for partial cover due to the Crushers' Shield Wall
+4 for the LRR from a luck roll of 70
(note that range affects accuracy, but not effect)

This gives a total "mod" of -4, rounded to -5. Indexing on the Fireball table under AT-16, we get 6.8 HPs and 0.23 Cas. So the Crushers will take 18.4 casualties = 0.23 x 80. A 22 is rolled for the fractional casualty, so there are actually 19 casualties. The hits taken by the unit are 829 = (6.8 x 80) + (0.5 x 19 x 30 average hits per combatant).

RESISTANCE ROLLS (16.7.2)

There are two types of multiple target spells that require Resistance Rolls. Fixed effect RR spells have either full effect or no effect on the target. Variable effect RR spells have an effect on the target that is based on the amount by which the target fails its RR.

A GM may wish to make separate RRs for leaders and other exceptional characters.

FIXED EFFECT RR SPELLS

Spells that normally require RRs (e.g., sleep, spells causing criticals, etc.) for **full effect** are handled as follows when cast on a unit:

1) Determine the *number of combatants within the area of effect* (AOE) of the spell (see Section 16.6.7).

2) Determine the *Resistance Roll required* to resist the effects of the spell using the rules in *Spell Law* Section 8.3.2. For this purpose, use the unit's average level for the target's level and use the average level of the spell casters for the attacker's level.

3) The number of combatants who fail the RR and take full effect is equal to:

Combatants in AOE **x** (RR required to resist ÷ 100)

If the result has a fraction an extra combatant may fail its RR. Roll 1–100 and if the result is less than (100 x fractional part) one additional combatant fails to resist.

Example: *Binbad and his troop of men are ambushed by a 6th level Evil Mentalist while transporting stolen earmuffs through the Toksic Wastes. The Mentalist casts "Forget" on Binbad's scout platoon of 20 men all of whom fall within the AOE of the spell. After the Mentalist makes his attack roll, the GM determines (using the guidelines in Spell Law) that the 3rd level scouts need a 53 to pass their RR: 58 normal - (+5) Pr stat bonus. Thus 53% of them fail the RR; a result of 10.6, so 10 casualties automatically result:*

$$10.6 = 20 \times (53 \div 100)$$

The Mentalist rolls a 46 for the extra casualty. Since 46 is less than 100 x 0.6, a total of 11 men (10+1) "forget" who they are and begin wandering away from their unit.

Option: The GM may wish to use the luck roll to vary the number of combatants that fail a RR. Just make a luck roll based on the number of combatants in the area of effect. Then add the luck roll result to the number calculated in step 3) above to get the actual percentage of combatants that fail the RR.

Example: *Referring to the example above, 53% of the combatants in the AOE fail the RR. If the luck roll option is used and a luck roll of 68 is made, the LRR is 7. So, 60% (53+7) of the combatants in the AOE fail the RR; a result of 12.0, so 12 casualties automatically result:*

$$12.0 = 20 \times (60 \div 100)$$

In this case, 12 men "forget."

VARIABLE EFFECT RR SPELLS

Some spells (and poisons) have a variable effect (e.g., "1 rnd/10 failure") based upon the severity of the target's RR failure (there is no effect if the target resists successfully). Such spells against units are resolved as follows:

1) Determine *the number of combatants that fail the RR* as outlined above for Fixed Effect RR spells..

2) Determine the *Resistance Roll required* to resist the effects of the spell using the rules in *Spell Law* Section 8.3.2.

3) A *luck roll* is made based upon the number of combatants that failed the RR.

4) The spell effect on all of the combatants that failed the RR is based on a failure amount equal to:

RR required - 50 - LRR

Example: *Malboro the 10th level Mage casts his "Nicotine Fit" spell on a band of 15 would-be robbers. The spell incapacitates up to 20 levels for "one rnd/10 failure" of the RR — the target searches desperately for a smoke. The GM decides that the thugs are an average of 2nd level, so 10 of them are subject to an RR (i.e., are in the "AOE"). The RR required is 80, so the number that would normally fail the RR is 12.0 = 15 x 80 ÷ 100. However, the spell will only affect 10 2nd level targets, so only 10 robbers fail their RRs.*

A luck roll of 38 gives a LRR of -4, so the spell effect is based upon 34 = 80 - 50 - (-4). Thus, the 10 robbers are incapacitated for 3 rounds as they light up (they're just lucky he didn't cast Carcinogen True).

SPELLS THAT INFLICT CRITICALS (16.7.3)

Some area affect spells, such as a Stun Cloud, deliver criticals.

1) Decide how many combatants are affected and the severity of the criticals as outlined in Section 16.7.2.

2) Refer to the Spell Critical Chart to determine the HPs and Cas (see Section 16.2) results.

3) The HPs and Cas results are multiplied by the number of combatants attacked to obtain the total damage that the target unit takes (see Section 16.2).

SPELL CRITICAL CHART

Critical	Hits	Casualties
A	4.8	0.35
B	6.1	0.40
C	7.4	0.45
D	8.8	0.50
E	9.0	0.55

Example: *Twelve thieves are caught in a Whirlwind (a 14th level Wind Law spell). Consulting the table above (the whirlwind inflicts 'A' criticals), they take:*

$$57\ HPs = 4.8 \times 12$$

$$4.2\ Cas = 0.35 \times 12$$

The GM rolls a 02 for the fractional casualty, so the casualty total is 5.

If the spell had involved a RR, the procedure in Section 16.7.2 would have been followed to determine how many of the 12 thieves would have been affected.

OTHER TYPES OF SPELL ATTACKS (16.7.4)

In general, to resolve a magical attack or set of attacks, against a unit, first determine the number of attacks made during the round. Next determine the average effect for each attack. Multiply this by the number of attacks to get the result.

Note: *The average result for most dice rolls can be found by adding the highest and lowest rolls for each die rolled and then dividing by two. E.g., the average for a 2d10 roll is 11 = (1+1+10+10) ÷ 2.*

Note: *The GM may wish to modify this "average" result with a luck roll.*

Example: *Ichabod the Invincible casts his special spell "Noggin Knots," which inflicts 1–4 hit points to everyone within a mile (including the caster — that's why it's not widely used), upon Garth and his Invaders. The GM reasons that all 100 of Garth's men are within the area of effect, and thus are all affected, since there is no RR for this spell. Thus the number of attacks = 100. The average result is 2.5 hit points per man. When the spell goes off, the Invaders receive 2.5 x 100 = 250 hits.*

NON-ATTACK SPELLS (16.7.5)

A GM must decide which non-attack ***RM*** spells may be used in mass combat battles. Such spells will usually affect the statistics of friendly and/or enemy units and/or the playing environment. For Example:

Prayer or Bless Spells: Increasing or decreasing the Melee and/or Morale Bonus for certain units.

Deflect Missiles: Increase the Missile DB for certain units.

Teleport and Leaving: Allows a leader to have a larger command control radius.

Sudden Light: Might halve a units movement points or decrease its DB and OB for a turn.

Haste or Speed: Would increase movement rate and OB for certain units.

Plant Control or Growth: Increasing or decreasing the movement point cost for woods terrain.

17.0 MORALE

WL RG BATTLES VS. AL&CL BATTLES

AL&CL battles do not formally involve morale for the combatants. Thus, all of the *WL* RG material is this section differs from the standard *AL&CL* guidelines.

When a unit enters combat, there are many factors which will determine how it will react. The largest determinant, aside from the destruction of the unit, is morale. Morale may be described as the psychological frame of mind a unit is in at a given moment.

To determine a unit's reaction to occurrences during battle, the unit makes *Morale Checks*. If a unit fails a Morale Check, it will usually hesitate, run away, or perform some similar action.

Often troops with little or no intelligence do not have to make morale checks (e.g., certain types of Undead, automatons, and other magically animated and controlled creatures).

17.1 MORALE CHECKS

A Morale Check (MC) is used to determine how a unit reacts in combat. Often a MC will determine if a unit will stand and fight or if it will run away.

During each Morale Phase (see Section 14.1), each unit that fulfills one or both of the following conditions must make a Morale Check:

- The unit has taken casualties during this turn.
- The unit is currently engaged in melee combat.
- A GM can require a Morale Check whenever a unit is faced with an obviously dangerous or strange situation (e.g., it is in the presence of a Dragon).

During a given Morale Phase, each unit need only make one MC even if it is in more than one of the above situation (e.g., only one for spells, one for missiles, etc.).



MAKING A MORALE CHECK

To make a Morale Check, an open-ended high roll (1–100) is made and modified by:

+ Unit's Morale Rating (normally starts at 100)
+ Half the current leader's Leadership Rating (rounded up)
+ Casualties modifier (see Table T-3)
+ Attack Ratio modifier (see Section 16.5.3 & Table T-3)
+ Experience level of the troops
+ Miscellaneous Modifiers (see Table T-3)

The modified roll is then indexed on the Morale Table T-3 to determine the result. A number result is a special MC modifier that remains in effect for one turn. A letter result is the morale failure's *severity* and indicates that the unit has failed its morale and must roll on the Morale Failure Table T-4 (see Section 17.2) unless its leader decides to attempt to retreat (see Section 17.3).

Note: *The GM may wish to make morale rolls open-ended low as well as high, but be warned that this can lead to more frequent catastrophic results.*

Example: *Bill's Conquerors have engaged a party of Ogres. He starts the battle with 200 men, and is whittled down to 98 after a few rounds. Their Discipline is 67, for a penalty of -21 for each 25% loss (see Section 17.5). There are only 65 ogres left, so Bill's boys outnumber them 3 to 2. Next Morale Phase, the unit's starting MR of 100 is modified by:*

-42 .....for casualties taken (more than 50%)
+3 .....for Bill's LR of 6
+10 .....for their 3–2 Unit Size advantage
+3 .....for the level of the men (3rd level)
-5 .....because it is raining. (as ruled by GM)
-5 .....since Ogres are fearsome (as ruled by GM)

for a total of 64 = 100 - 42 + 3 + 10 + 3 - 5 - 5. So Bill gets to add 64 to his morale roll. He rolls a dismal 04 (morale rolls are open ended high but not low) for a total of 68. Consulting Table T-4, we see that the Conquerors must roll on the 'C' column of the Morale Failure Chart. Bill must decide at this instant whether to order a retreat this round or take his chances on the chart. Being brave, he presses on, and rolls a 73 on the 'C' column. The result indicates that 80% of Bill's troops run away (78 of them), and their MR drops by 50 to 14. Now Bill is in trouble with only 20 men to fight 65 Ogres.

17.2 MORALE FAILURE

When a unit fails a Morale Check and does not retreat (see Section 17.3), a roll (1–100) must be made and cross-indexed on the Morale Failure Table T-4. The column used corresponds to the severity of the morale failure (i.e., 'A', 'B', 'C', 'D', or 'E'). The result is immediately applied.

There are various types of results on the Morale Failure Table T-4. Some guidelines are provided below:

Unit at -# for ß rounds — This indicates that the unit's OB, Maneuver rolls, and MCs are modified by -# for a number of rounds equal to ß. Such penalties may never drop a unit's DB below zero.

Unit at -# — This indicates that the unit has a -# penalty as described above until the battle is over.

Unit may make no maneuvers for ß rnds — This indicates that the unit can attempt no maneuvers other than forward movement (see Section 15.2) for ß rounds. Such a unit can still attack attack/defend normally, make command/control rolls, and make Formation maintenance rolls.

#% of unit deserts — This indicates that #% of the combatants who are currently in the unit become casualties due to rout and scatter.

#% desertion per round — This indicates that Morale and Orientation Phase, #% of the combatants who are currently in the unit rout and scatter; i.e., they become "casualties." These effects are cumulative (e.g., 25% = 10% + 15% desertion per round). This process will halt if the unit retreats, or forces another unit to retreat, or if the leader makes a successful Command/Control roll (see Section 13.2).

Unit retreats — This indicates that the unit is barely under control, and is moving away from the enemy. See Section 15.3 for details.

-# MR — This indicates that the unit's Morale Rating is lowered by -# the remainder of the battle. Such effects are cumulative.

Unit routs — This indicates that the leader no longer has any hope of getting his troops to fight effectively in this battle. See Section 15.3 for details.

Leader takes 'x' Critical — This indicates that the leader of the unit takes an appropriate 'x' severity critical (as determined by the GM).

Unit takes #% losses — This indicates that #% of the combatants who are currently in the unit are casualties due to wounds.

#% of unit surrenders — This indicates that #% of the combatants who are currently in the unit are casualties due to surrender. Their fate depends largely upon the character of the enemy. In some cases, surrender would be highly unlikely (e.g., Orcs vs Elves), and these results should be treated as desertions instead.

Unit fights to the death — This indicates that the combatants in the unit are berserk for the remainder of the battle. They will take no further orders (i.e., they will attack the closest enemy unit) **and** they are no longer required to take Morale Checks. The GM may wish to allow a C/C attempt by the leader to change this, but any such roll should be modified by at least -50.

Leader ineffective — This indicates that the leader's Leadership Rating will have no effect on the unit, and he may not issue further orders for the time period specified.

There are other results on the chart which are self-explanatory. If the GM feels that a particular result is not reasonable in a situation, he should alter it. Normally, modifications on the chart are cumulative.

17.3 ORDERING A RETREAT

A leader may elect to order a retreat rather than suffer the effects of a morale failure result, but this decision must be made before the morale failure roll (see Section 17.3). Once it has been determined that a unit has failed a Morale Check, the unit may attempt to retreat (see Section 15.3) rather than take the results of a roll on the Morale Failure Table T-4.

Such a retreat attempt requires a 'medium' maneuver resolved on the General maneuver column of the Maneuver and Command/Control Table T-5. He may add all the normal modifiers, including the unit's Retreat skill bonus (see Section 21.8. In addition such a roll is modified by:

Morale Failure Severity	Retreat Maneuver Mod
A	-5
B	-10
C	-15
D	-20
E	-25

If successful, the unit retreats as outlined in Section 15.3 and no morale failure roll is required. If the attempt to retreat fails, the required morale failure roll is resolved normally **and** the unit may make no further maneuvers or C/C attempts this round.



17.4 LEADERS AND MORALE

Whenever a leader is in effective command of his unit, one half his Leadership Rating (LR) is added to the unit's Morale Rating (round up). This is the leader's morale "LR bonus." A leader ceases to be in control of a unit if:

- He dies or is incapacitated
- Such a result is stated on the Morale Failure Table T-5
- He loses control while attempting a maneuver

Whenever one of the above conditions occurs, the leader's LR bonus is no longer added to the MR of the unit. In addition, if the leader is dead or incapacitated, his LR bonus is permanently subtracted from the MR of the unit (note that this could actually improve morale if the leader is very bad!).

Another leader can take charge of a leaderless unit by making a successful Command/Control roll. In this case, the new leader's LR bonus is added to the unit's MR. A leaderless unit may continue to function by using "informal" or "inherent" leaders. These leaders are combatants who exert influence over their peers either through coercion or charisma (e.g., veteran NCOs). A leaderless unit's LR is one third of the ex-leader's LR (round up). This special LR is used for modifying maneuver rolls, but it is not used for morale checks. In other words, the informal leaders do not help offset the negative modifier applied because of the commander's demise.

Example: *Joe has a severe heart attack in the middle of a fray. His Leadership Rating is +12, so his morale LR bonus is +6, and his unit's current MR is 100 + 6 = 106. After Joe's unfortunate pains, the unit's Morale Rating permanently drops by 6 (i.e. 100 - 6 = 94). If Joe Jr., with a +4 LR, manages to take command, the MR will be 94 + 2 = 96, and the unit may attempt maneuvers with a +4 LR mod. If no subordinate leader is successful in assuming command, the informal leaders may attempt to take over with a special LR of 12 ÷ 3 = 4. The unit's Morale Rating remains at 94, and the unit may attempt maneuvers at +4.*

If several leaders in succession are eliminated, a unit's MR will suffer multiple negative modifications. After a battle and after a period of reorganization and retraining, a GM may wish to gradually eliminate these negative MR mods due leader loss.



17.5 DISCIPLINE AND MORALE

As casualties are taken, a unit's MR will decrease at a rate determined by its Discipline stat (see 19.1). For each casualty increment equal to 25% of the original size of the unit, the unit's MR is reduced by an amount given on the Discipline and Morale Chart.

DISCIPLINE AND MORALE CHART

Discipline Stat	Incremental Mod to Morale Rating
101+	-2
100	-4
98-99	-6
95-98	-8
90-94	-10
86-89	-13
80-85	-15
76-79	-17
70-75	-19
66-69	-21
60-65	-23
50-59	-25
40-49	-30
30-39	-35
20-29	-40
10-19	-45
1-9	-50

Example: *A band of 50 highly trained Gurgla are ambushed by a tribe of pygmies. The Gurgla's have a Dis of 95, so when they have taken 25% casualties (i.e. when there are 37 or less men left), their MR drops by 8. When they have taken 50% casualties (25 men or less), their MR drops by another 8, and so on.*

17.6 MAGIC AND MORALE

Magic not only inflicts casualties and hits, but it can also affect morale. The GM should apply negative modifiers for magic used against the unit and positive modifiers for magic used for the unit. However, such modifications are temporary at best.

A good rule of thumb is to use the level of the spell cast as a morale modifier. Obviously, in order for such modifiers to apply, the unit would have to see the effect of the spell, and the spell would have to have some kind of effect on combat — e.g., summoning 1000 butterflies isn't likely to impress the troops.

18.0 POST-BATTLE CASUALTY RESOLUTION

To determine which casualties a unit recovers after a battle, refer to Section 8.0. The recovery percentages given in Section 8.0 may be modified by the unit's Survivability stat bonus (see Section 19.1), by the results of a Luck Roll, and by +20% for casualties caused by Grapple attacks (i.e., attacks using Table A-1.4). The optional rules in Section 25.4 provide further modifications based on the ATs of the casualties.

These modifications may never increase a recovery percentage above 90%.

PART IV — UNITS AND UNIT GENERATION

In this part of the *War Law* rules are provided for the generation and maintenance of a *unit* led by a single individual who can be either a Player Character (PC) or Non-Player Character (NPC). By extension, the unit becomes an entity in and of itself, much as any individual character. Each such unit is given particular characteristics and is allowed to accrue experience levels and acquired skills.

This part of *War Law* will use and reference the rules and concepts in *Character Law* and will assume that the reader/user has read and understood the standard ***RM*** character creation and skill development process.

This part of *WL* presents a standard set of rules. A GM should feel free to expand this treatment with any of the optional rules and guidelines from ***RM*** and the *RMCs* (e.g., similar skills, alternative stat generation methods, etc.).

19.0 UNIT CAPABILITIES

Just as for *ChL* characters, *WL* units have certain attributes and capabilities called stats and bonuses. These rules will refer to a unit's stats as just that, stats. However, all unit bonuses and non-stat capabilities will be called the unit's characteristics (e.g., OB, DB, Hit Points, etc.).

STANDARD RM STATS

The *WL* guidelines assume that the standard ***RM*** stats for a unit (i.e., Co, Re, St, Qu, etc.) are 41–59 and thus each has a stat bonus of zero. There are two reasons for these assumptions:

- The average ***RM*** stat value for a unit will tend to be 50 (or 60) as the number of combatants in the unit increases. This assumes the combatants in the unit are average individuals.
- Since a unit is a group of combatants that must operate in close cooperation, the actions of the unit are limited by the capabilities (i.e., stats) of each of its combatants. For example, a very Quick character in a unit would be limited by the natural restrictions of being in a unit and by the lack of Quickness of his compatriots.

Note: *For a given unit, a GM may wish to allow non-zero stat bonuses for certain standard* ***RM*** *stats. This would most often occur if circumstances indicate higher or lower than normal mental or physical attributes for all of the combatants in that unit.*

UNIT STATS

WL uses four *unit stats* — Discipline, Survivability, Ferocity, and Endurance. These stats represent the mental and physical attributes of a unit that are dependent upon the unit as a whole. Unit stats are generated by a non open-ended 1–100 dice roll (see *ChL* 2.0). Unit stats can affect combat, skill development, and unit survivability. Each of the various unit stats is described in Section 19.2.

Unit stat bonuses are modified by race stat bonus modifiers as indicated on Table T-13 in an identical fashion to the way individual character stat bonuses are modified for race (see *ChL* Section 6.2).

TEMPORARY AND POTENTIAL UNIT STATS

Each stat has two values (1–100): a potential value and a temporary value. The potential value reflects the highest value that the unit's stat can obtain. The temporary value represents the stat's current value. Thus, each unit has a set of "temporary" stats and a set of "potentials".

During play, the temporary stats can rise due to unit advancement and other factors, and fall due to casualties, desertion, etc. However, potentials rarely change. Of course, the temporary value for a given stat may never be higher than its potential.

Temporary and potential stats are generated and handled exactly as in *ChL*, with the exception that when a unit loses 50% or more of its troops, the temporary stats must be rerolled. If 75% or more of the unit is lost, both temporary and potential stats must be rerolled.

UNIT STAT BONUSES

Since *WL* assumes that normal ***RM*** stat bonuses for units are zero, the only normal stat bonus used is the Ferocity stat bonus for melee OBs. However, a GM may wish to allow a unit with extraordinary stat(s) to include stat bonuses in its skill bonuses. For this purpose the normally applicable ***RM*** stats are given for each skill listed in Section 21.0.

Option: If a GM wishes, he can use a unit's Discipline unit stat instead Self-Discipline for applicable stat bonuses. Similarly, he can use Endurance instead of Constitution.

NON-STAT UNIT CHARACTERISTICS

All unit bonuses and non-stat capabilities are called the unit's characteristics (e.g., OB, DB, Hit Points, etc.). These characteristics are based upon the unit's stats, skills, level, leaders, equipment, and other circumstances. Each of the various unit characteristics is described in Section 19.2.

19.1 UNIT STATS

DISCIPLINE (Dis)

Discipline is a measure of a unit's ability to apply itself to a task of some sort. It can affect a unit's maneuvers and it determines how fast a unit's morale will deteriorate as casualties are taken (see Section 17.5).

SURVIVABILITY (Sur)

Survivability is a measure of the susceptibility of a unit's combatants to death from wounds and hardship. When a unit enters combat, it is going to take casualties. However, not every combatant who becomes a casualty has died. A casualty can be caused by death, wounds, or desertion (see Section 18.0).

FEROCITY (Fer)

Ferocity is a measure of a unit's courage, and sometimes its stupidity. It also takes into account the physical size and strength of a particular race. A unit's Ferocity stat bonus is part of every unit's *melee* OBs.

Note: *If the GM is using a creature's OB stat from C&T, the racial stat bonus for Fer should* ***not*** *be used. It has already been figured into the OB for the creatures. The Fer bonus to OB is used only if you are generating a unit from scratch, in which case you ignore the OB given in C&T—the unit's OB will be determined by how many skill ranks it has in a weapon, and its Fer stat modifier. The strength modifiers for particular races have already been built into Fer, as well, so they are* ***not*** *applied in addition to it.*

As a rule of thumb, if a GM wishes to compute the racial Fer bonus for a particular creature, do the following:

a) *find the creature's OB in C&T*

b) *based on the creature's listed level, compute what its OB would be if it had 2 skill ranks for its OB each level (include zero level)*

c) *subtract b) from a). This is the racial Fer modifier.*

ENDURANCE (End)

Endurance is a measure of how much long-term physical abuse a unit can take: how far it can march, how long it can go without eating, etc. End determines the number of exhaustion points available to the unit. For a fully rested unit, the number of exhaustion points equals its End. The End stat also determines how quickly a unit will recover during a rest if the optional Exhaustion Point rules are being used (see Section 25.8).



19.2 CHARACTERISTICS

MORALE RATING (MR)

A unit's Morale Rating is a measure of its psychological well being. Normally, a unit's MR is 100 when it is formed, but it may vary as a unit sees action in battles and campaigns. A unit's MR is most often used during Morale Checks (see Section 17.1).

A unit's MR is also affected by the number of casualties the unit has taken. For every 25% decrease in size, a certain amount is deducted from a unit's MR (see Section 17.5). If the optional rules in Section 25.8 are used, there is a -10 modifier to the MR for each 25% decrease in exhaustion points.

Example: *Joseph's Jokers (50 members) have been attacked by a giant. In the giant's boulder assault, they have taken 13 casualties, or 26% of their number. They have a Dis of 80, which means they now lose 15 points from their MR (see Section 17.5). Additionally, if the optional rules in Section 25.8 are being used, they have been marching for 3 days and had already depleted 50% of their exhaustion points (-20 pts to MR). This is a total decrease to morale of 40, leaving them with a MR of 60.*

OFFENSIVE BONUS (OB)

A unit's OB is a measure of the unit's proficiency with attacking using its particular weapons. Initially a unit's OB with a specific weapon is an average of the appropriate OBs of the combatants of the unit *plus* the unit's Ferocity stat bonus. Subsequent increases in a unit's OB are based upon unit skill development of the Characteristic Skills: Primary Weapon and Secondary Weapon (see Section 21.10).

A unit's OB operates in the same manner as an individual character's OB. Normally, it is a modifier to an attack that may alternatively be applied in part or whole as a parry (see Section 16.0).

DEFENSIVE BONUS (DB)

The DB is a measure of the unit's ability to defend itself while engaged in combat. There are two types of DB — Melee and Missile. Melee DB subtracts from an attacker's OB during melee and Missile DB subtracts from an incoming missile attack's OB (see Sections 16.0).

A unit's DB operates the same as an individual character's DB. Normally, it is a modifier for any attack against the unit. A unit's DB can be augmented by shields, defensive positions, acquired skills, spells, or by a portion of the target's OB. DB is decreased by hits, adverse terrain, overcrowded conditions, surprise, or circumstances as determined by the GM. The average DB for various creatures can be found in *C&T*.

Important Note: *After all modifications (including addition of some of a unit's OB, if desired), a unit's DB may not be less than zero. Treat negative values as if they were zero.*

ARMOR TYPE (AT)

AT is the *AL* armor type common to most of the troops in the unit. If a unit includes mixed ATs, the GM may wish to average combat results for the mix, or he may choose to alternate the AT used each turn.

HIT POINT TOTAL (HPT)

A unit's Hit Point Total characteristic is a measure of how much physical abuse the unit can absorb before it can no longer function. A unit's HPT is the combined total hits of all individuals which comprise a unit. Section 16.4 outlines what happens as a unit takes hits.

For large units, the GM may wish to determine the average number of hits per man and multiply by the number of men to get the unit's HPT. This may be easily determined by consulting *ChL* Table 15.5.3.

SIZE (Sz)

A unit's Size is equal to the total number of combatants in the unit at a given time. As this characteristic increases or decreases, other characteristics may be proportionally affected (e.g., HPT, MR, etc.). A GM should always keep track of the original Size of each unit.

CASUALTIES (Cas)

Casualties is equal to the number of the unit's combatants who are either killed, incapacitated, or fled from battle. Hence, casualties are subtracted from the current size of the unit and will adversely affect the unit's HPT and MR.

LEADERSHIP RATING (LR)

A unit's LR is actually a measure of the effectiveness of the leader in command of the unit (see Section 22.0). LR affects various significant aspects of play (see Sections 13.2, 15.0, and 17.0).

EXPERIENCE LEVEL (EL)

This is the average experience level of all combatants in the unit. This characteristic is used for resistance rolls, skill acquisition, etc. Experience Points (EPs) and Experience Levels for units are handled just like for characters in *ChL*. The Experience Point vs. Level Table T-16 provides the standard EPs to EL break points.

A unit gains EPs through combat and training. Every time the unit enters combat, it experiences certain things which enhances its ability to survive subsequent encounters. The Experience Point Table T-17 provides a breakdown of some common actions and the EPs associated with them. GMs may arbitrate other EP assignments, basing their judgements on these values.

UNIT BASE MOVEMENT RATE (UBMR)

A unit's UBMR is the distance a unit may move, measured in feet, during a ten second round. See Section 15.1 for a complete description of how this stat is calculated and used.

PRIMARY WEAPON (PW)

This is the weapon the unit primarily uses when it first enters combat.

Example: *The primary weapon of a troop of cavalry might be a mounted lance.*

SECONDARY WEAPON (SW)

This is the unit's weapon that can be used in special situations or as a "back up." A unit can have several secondary weapons.

Example: *Longbowmen would need other weapons, like short swords, for hand-to-hand fighting.*

DEVELOPMENT POINTS (DPs)

A unit's DPs represents its ability to acquire and develop skills. A unit's DPs are derived from its unit stats just as a character's DPs are derived from its development stats. Table T-12 provides the correspondence between unit stats and DPs — a unit's DPs is the sum of the DPs for each of its unit stats.

RACE

The race of the combatants in a unit will have an effect on their fighting styles, weapons, armor, tactics, and physical fighting ability (based upon the GM's world setting). Table T-13 provides race abilities (i.e., stat bonus mods and unit recovery multipliers) for the standard *ChL* and *C&T* races. Other applicable abilities (RR mods, type of hit die, etc.) can be found in *ChL* Table 15.5.1 and *C&T* Table 6.3.

The GM may wish to limit certain races in other ways (troglodytes may not know many formations, for instance). *C&T* provides additional information on the AT, DB, attack forms, etc. of various races.

EXTRAORDINARY ABILITIES

Unusual beings or monsters may have extraordinary abilities. For example, Undead units should not be subject to Morale Checks, but their formations might be disrupted by a High Priest's spells.

One of the most common extraordinary abilities is special resistance to critical strikes; e.g., for large creatures, super-large creatures, creatures that ignore stun, etc. Section 16.4 outlines how such creatures modify normal unit Casualty damage.



20.0 UNIT TYPES

War Law provides fifteen major unit types and some additional subclassifications; these are the equivalent of *ChL* professions. Some are combat units and some are organizational, logistical, or administrative units. The descriptions below should be modified by a GM to match his world system. A GM may wish to exclude certain types that are not appropriate for his game **or** to restrict certain unit types to certain societies or cultures.

20.1 SUPPORT UNIT TYPES

Many of the unit types provided in *WL* are provided for what are called *support units*. These units perform specific functions within a military organization and are not normally directly involved in combat. This section provides a description of each unit type and a list of the unit type's basic skills (see Section 21.1).

A GM can generate these units as outlined in Section 23.0. However, a GM may want to ignore these formal procedures and just assume that these units can automatically perform activities involving their basic skills (see Section 21.1). A GM may also wish to assign a +10–50 bonus for two or three other General skills (see Section 21.6) directly related to their specialty (e.g., siege engineering and mechanition skill for an Engineer unit).

This means that the GM will not have to go to the effort of performing the formal recruitment, skill development, experience point recording, and level advancement procedures. It should still be required that characters raising and controlling such units still expend the time, effort, and money that would be required to recruit and maintain those units.

Because some support units may be heavily involved in battles or the events leading up to battles, a GM may wish to fully generate some support units and to just approximate others.

SUPPORT UNIT TYPES

Administration Units	Medical Units
Animal Handler Units	Signal Units
Armorer Units	Supply Units
Cook Units	Transportation Units

ADMINISTRATION UNITS

These units fill the need to maintain paperwork such as unit rosters, payroll, inventory, order processing, etc. They are a valuable asset to an organized army but are really rather useless as fighters.

An Administration unit will enhance a military force's administrative effectiveness and will give a +10 bonus to all logistical actions. In order to utilize this bonus, the Administration unit must have one combatant for every 10 combatants in the force. For every 10% below this requisite number, the +10 bonus is reduced by one.

Basic Skills: Billeting, Campsite Preparation, Diplomacy, Document Generation/Recognition, Falsification, Languages, Record Maintenance — see Section 21.1.

Related General Skills: Messenger, Propaganda — see Section 21.6.

ANIMAL HANDLER UNITS

These units specialize in the care, training, and use of animals. They may range from horse tenders to war dog handlers to dealing with some other exotic form of creature. They can be very useful if used correctly.

Basic Skills (one animal type): Feeding, Harnessing, Taming, Move Animals — see Section 21.1.

Related General Skills: Animal Handling, Animal Healing, Animal Training, Beast Mastery, Driving, Loading — see Section 21.6.

ARMORER UNITS

These are the units that maintain the armor and weapons of an army. Their equipment and workshops are rather cumbersome, so you can bet they are not often found on the front line.

An Armorer unit will reduce the recovery time for casualties by 10% (see Section 8.0). In order to utilize this bonus, the Armorer unit must have one combatant for every 100 combatants in the force. For every 10% below this requisite number, the 10% reduction is reduced by one.

Basic Skills: Appraisal, Armor Evaluation, Fletching, Forging, Heraldry, Smithing, Weapon Evaluation — see Section 21.1.

Related General Skills: Mechanition, Mining, Trap Building — see Section 21.6.

COOK UNITS

The way to get to a soldier's heart is through his stomach. Cooks should be provided for and paid. Usually, they can fight, but are not very good at complex maneuvers. A good ratio for cooks to other combatants is 1 to 50.

Basic Skills: Cookery, Kitchen Area Preparation, Loading — see Section 21.1.

Related General Skills: Foraging, Scrounging — see Section 21.6.

MEDICAL UNITS

These units may be composed of medics, regular doctors, Lay Healers, or Healers. They can be very important on a battlefield, but they will usually not fight unless threatened personally. A good ratio for medical personnel to other combatants is 1 to 30.

Basic Skills: Basic Care, Hospital — see Section 21.1.

Related General Skills: Diagnosis, First Aid, Second Aid, Surgery — see Section 21.6.

SIGNAL UNITS

These are the communications experts of the army. They are skilled in the use of flags, hand and arm signals, smoke, written messages, and just bearing messages. Signal troops can be very important to an organized army.

Basic Skills: Message Memorization, Fire Signals, Flag Signals, Hand and Arm Signals, Light Signals, Sound Signals — see Section 21.1.

Related General Skills: Distance Running, Direction Senses, Messenger, Riding, Signaling — see Section 21.6.

SUPPLY UNITS

These units are the purchasing agents and distribution centers of an army. They are usually skilled in the processing of procurement, foraging, and scrounging.

Basic Skills: Bartering, Convoy Movement, Foraging, Languages, Loading, Move Discreetly, Scrounging — see Section 21.1.

Related General Skills: Direction Senses, Driving, Fauna Lore, Flora Lore, Region Lore — see Section 21.6.

TRANSPORTATION UNITS

These units specialize in moving large numbers of troops and/or supplies from point to point. Most large armies would find it difficult to make any kind of major move without these units.

Basic Skills: Boat Handling, Driving, Harnessing — see Section 21.1.

Related General Skills: Animal Handling, Navigation, Loading, Region Lore, Rowing, Sailing — see Section 21.6.

20.2 COMBAT UNIT TYPES

The unit types presented in this section are usually directly involved in battles and thus should be fully generated as outlined in Section 23.0. This section provides a description of each unit type and a list of the unit type's basic skills (see Section 21.1). In addition to the basic skills listed, each of the combat unit types also has the four standard movement skills as basic skills (see Section 21.1): Change Facing, Fall into Formation, Start Movement, Stop Movement.

COMBAT UNIT TYPES

Cavalry Units
Engineer Units
Infantry Units
Intelligence Units
Naval Units
Scout Units
Special Units

CAVALRY UNITS

In many societies, these units consist of combatants that are the most prestigious persons in an army — they usually buy their own mounts and pay their own retainers. Historically, if longbows, crossbows, or pikes are not being used, these units can be the masters of the battlefield. There are basically four types of cavalry: Auxiliary, Regular, Light, and Heavy:

> **Note:** *Cavalry should not be limited to horses. If a creature may be ridden and controlled, it will probably make a mount for a cavalry unit.*

Auxiliary — These combatants are sometimes hired by a Lord or even pressed into service. They are normally equipped and fed by the Lord, and frequently standards are poor. Typical auxiliaries have a lower morale and are trained to minimum standards.

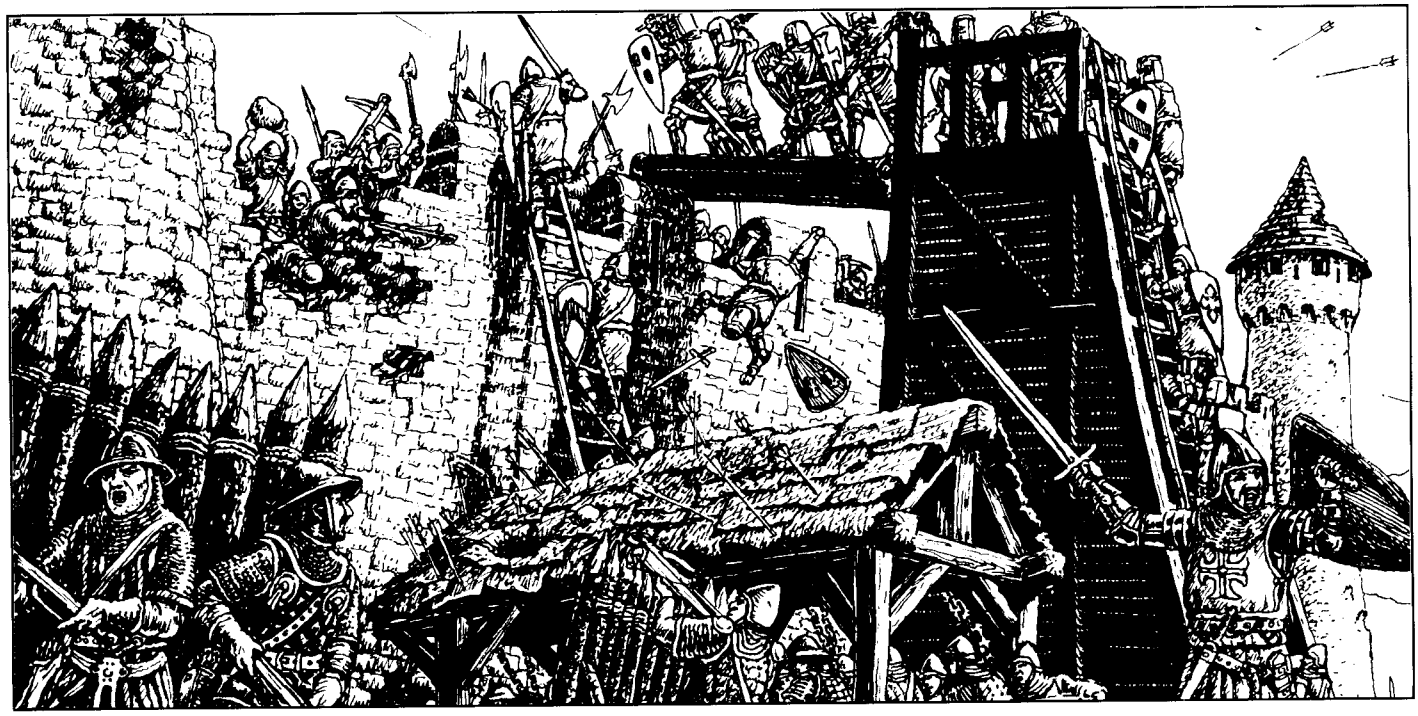
Regular — These are usually men of means who have pledged themselves to the service of their Lord. They often supply their own mounts, armor, weapons, retainers, and sometimes their own food. Regulars are trained professionals but the variety of armor and weapons can be dependent on the wealth of the individual combatant.

Light — Light Cavalry are combatants with armor selected from the rigid and soft leather types. They are usually armed with lance or perhaps a short bow. Light Cavalry can be in the regular employment of a Lord, but they may also be composed of the local militia. Mounted Scouts are usually classified as Light Cavalry.

Heavy — Heavy Cavalry use heavier armor types, usually chain and plate. They use a wide variety of weapons. Their horses are bred for strength and endurance. These soldiers are usually hired and equipped by a Lord.

Basic Skills: Four Standard Movement Skills, Campsite Preparation, Equipment Maintenance, Fill in the Ranks, Mount/Dismount — see Section 21.1.

Related General Skills: Animal Handling, Characteristic Skills, Combat Skills, Formation Skills, Maneuver Skills, Riding — see Section 21.6.



ENGINEER UNITS

These units are also known as "sappers." However, depending upon the technology level of their society, they are not limited to digging or tunnel construction. Engineers are useful for construction of bridges, barricades, fortifications, walls, etc. They also construct and operate important siege machines.

Basic Skills: Four Standard Movement Skills, Campsite Preparation, Survey, Dig, Destroy Building — see Section 21.1.

Related General Skills: Characteristic Skills, Combat Skills, Engineering, Maneuver Skills, Mechanition, Mining, Riding, Siege Engineering, Trap Building — see Section 21.6.

INFANTRY UNITS

These units are the backbone of any army, and can be used as cannon fodder, shock troops, or in the main thrust of any operation. There are five basic types of infantry units: Light, Heavy, Auxiliary/Levy, Regular, and Missile.

Auxiliary/Levy — These are usually soldiers pressed into service by their Lord. Professionally, they are farmers and craftsmen and are very poorly trained. They are lightly armed, sometimes even as crudely as with pitchforks and hay rakes. They are normally unarmored, undisciplined, and have a low morale.

Regulars — These are soldiers who are in the service of a Lord on a full time basis, while most of those in Light and Heavy infantry are drafted or pressed into service, Regulars are volunteers or professional soldiers on permanent employment to a Lord, King, or mercenary unit. They are usually armed and armored as best their employer can afford. Their morale is high and they are usually loyal, well trained, and look down on most other infantry as being inferior.

Light Infantry—They are lightly armed, lightly armored, and carry very little equipment. They are susceptible to supply problems. Scouts, javelin throwers, and basic swordsmen may be classified as light infantry. In some societies, light infantry consists of the smallest, speediest combatants available.

Heavy Infantry — They carry much of what they need on their backs and are thus able to sustain themselves for several days without resupply. From the ranks of the heavy infantry come the pikemen, spearmen, axmen, halberders, etc. In some societies, heavy infantry consists of the largest, hardiest, and strongest combatants available.

Missile — These could really be classified as light infantry except that their primary weapons are missile types: bows, slings, javelins or throwing spears. Because of this, they are very dependent on resupply to keep a useful number of missiles on hand. They are usually armed with longswords or handaxes as Secondary Weapons. They are usually armored in nothing heavier than leather breastplates and greaves. Because of their vulnerability while firing their weapons, an archer or slinger will often have an assistant who ensures a good supply of ammunition, holds a shield for the archer, and gives range and deviation corrections if possible.

Archers are often placed in positions where they are protected by palisades, mantlets, trenches, parapets, arrow slits, angled sharpened stakes, etc.

Basic Skills: Four Standard Movement Skills, Campsite Preparation, Drop/Retrieve Packs, Equipment Maintenance, Fill in the Ranks — see Section 21.1.

Related General Skills: Characteristic Skills, Combat Skills, Formation Skills, Maneuver Skills — see Section 21.6.

INTELLIGENCE UNITS

These units are the information processors of an army. A commander should look to his Intelligence unit for recommendations concerning probable enemy action, weather patterns, peculiarities of a region, etc.

Basic Skills: Four Standard Movement Skills, Move Discreetly, Surveillance — see Section 21.1.

Related General Skills: Characteristic Skills, Combat Skills, Interrogation, Maneuver Skills, Messenger, Propaganda, Region Lore — see Section 21.6.

NAVAL UNITS

Naval units ply the waterways and seas of the world. They may be used to transport troops and supplies or as a power in their own right. Of course, Naval Marines are very useful in amphibious operations. Marines are often noted for their ferocity and courage.

Basic Skills (* Marine units only)**:** Four Standard Movement Skills, Boat Handling, Equipment Maintenance *, Fill in the Ranks * — see Section 21.1.

Related General Skills: Characteristic Skills, Combat Skills, Diving, Formation Skills*, Maneuver Skills, Navigation, Rope Mastery, Rowing, Sailing, Sail Making — see Section 21.6.

SCOUT UNITS

These are the information gatherers of most armies. They may be either mounted or dismounted. They are usually very well informed about the area they operate in and are often used as guides for various units. Scouts are heavily trained in the skills of stealth and subterfuge. Though their primary mission is not to engage the enemy, they will not always run from a fight if confronted. They are also useful for providing early warning of enemy activities.

Basic Skills: Four Standard Movement Skills, Move Discreetly, Surveillance — see Section 21.1.

Related General Skills: Camouflage, Characteristic Skills, Combat Skills, Distance Running, Direction Senses, Guide, Maneuver Skills, Region Lore, Sense Ambush, Tracking — see Section 21.6.

SPECIAL UNITS

These units will not usually fit into a particular "unit type." They may be composed of soldiers from most any branch of the military, spell users, extraordinary creatures, etc. They are usually formed for the execution of a specific mission or to augment a particular unit. A GM should modify the standard DP costs given in Table T-14 to match each specific special unit.

Basic Skills: Four Standard Movement Skills, special skills specifically designed for the specific unit — see Section 21.1.

Related General Skills: Characteristic Skills, Combat Skills, Maneuver Skills, skills appropriate for the specific unit — see Section 21.6.

21.0 UNIT SKILLS

This section presents a representative set of skills for units. To mold this set of skills to his game, a GM should feel free to remove inappropriate skills **and** to add other appropriate skills from *ChL* and the *Rolemaster Companions*.

Many of the skills may at first seem strange to develop on a unit level rather than an individual character level. However, these unit skills represent skill based upon cooperative efforts of a number of individuals. For such cooperation-based unit skills, a GM may wish to use a skill bonus equal to the unit skill bonus *plus* the average skill bonus of the same skill for the individual combatants in the unit.

Example: *A unit's Tracking skill might represent the abilities of a unit of individual trackers spreading out to locate and follow tracks over a larger area than an individual character could cover. So, if such a unit were tracking a target, it would use its unit Tracking skill bonus plus the average Tracking skill bonuses of its individual members.*

Similarly, a unit's Surveillance skill might represent the abilities of a unit to follow and watch a target by rotating the individual watchers directly following the target and by sending advance watchers to wait along the anticipate route of a target.

A unit's Smithing skill might represent the fact that a group of smiths working on a cooperative basis can be more effective than the same smiths each working separately.

Note: ***RM*** *stats are listed for each skill for optional purposes only (see Section 19.0) and are not normally used for WL skill bonuses.*

DEVELOPING SKILLS

An untrained unit is no more than a mob with weapons and armor. Over time, a unit will acquire certain skills in varying degrees of proficiency, much like an individual. To simulate this, a unit can develop *WL* unit skills through the use of Development Points (DPs) just as characters develop skills in the standard *ChL* rules. These DPs represent time spent practicing and drilling using a particular skill or maneuver.

Each time a unit accumulates enough experience to advance a level (see Section 19.2 and Table T-16), it may develop *WL* unit skills using the normal *ChL* skill development process (see *ChL* Section 3.2). The number of DPs available for each unit is determined by its unit stats as indicated on the Stat Bonus Table T-12. See the Unit Development Point Table T-14 for the specific unit type DP cost for each *WL* unit skill.

A GM may require players to pre-allocate their skill development for skills to be developed during the next experience level in the same way that characters develop skills in *ChL*.

SKILL RANK BONUSES

Skill Rank bonuses are identical to those in *ChL*. The bonus is -25 if the rank is 0 and +5 if the rank is 1. The bonus increases by 5 for each of ranks 2 to 10, by 2 for each of ranks 11 to 20, by 1 for each of ranks 21 to 30, and by +0.5 for each rank above 30. See *ChL* Table 15.2.2 for a summary of the skill rank bonuses.

Example: *The Jokers have a skill rank of 5 in the maneuver skill "Wheel." Hence, when they attempt the maneuver, they will add 25 to their maneuver roll.*

21.1 BASIC SKILLS

Each type of unit has a group of "basic" skills that it learns during its "basic training" (see Section 23.2). This set of basic skills is different for each unit type (see Section 20.0).

Normally, any straight-forward action that requires the use of one of a unit's basic skills will automatically succeed unless the GM rules that special circumstances require a maneuver roll. For such a roll, give the unit a +50 bonus plus any applicable stat bonuses, normal skill rank bonuses, and other normal modifications.

A unit can develop a specific basic skill by using the normal skill development process with a DP cost of 3/8. However, skill developed for a basic skill is treated as a normal skill unless the unit spends the training time normally required for initial unit formation (see Section 23.2.2).

SUPPORT UNITS (21.1.1)

The basic skills given for these unit types assumes that they perform non-combat roles in a military force. Thus, they do not have the four standard movement skills as basic skills: Change Facing, Fall into Formation, Start Movement, and Stop Movement. If a support unit finds itself in a combat situation that requires it to move as a unit, it should assume the Open Horde formation **and** a GM can do one of the following:

- Assume no training in the four standard movement skills and give the standard -25 skill rank bonus
- Assume minimal training and give the unit a +5 skill bonus with each of those skills. Then such a unit would be required to make a moving maneuver roll (see Section 15.0) whenever one of those maneuvers is attempted.

For support units that actually develop their skills, skill with each of the four standard movement skills can be developed at a DP cost of 3/8.

Administration Units — Billeting, Campsite Preparation, Diplomacy, Document Generation/Recognition, Falsification, Languages, Record Maintenance

Animal Handler Units *(these basic skills are usually limited to one type of animal)* — Feeding, Harnessing, Taming, Move Animals

Armorer Units — Appraisal, Armor Evaluation, Fletching, Forging, Heraldry, Smithing, Weapon Evaluation

Cook Units — Cookery, Kitchen Area Preparation, Loading

Medical Units — Basic Care, Hospital

Signal Units — Message Memorization, Fire Signals, Flag Signals, Hand and Arm Signals, Light Signals, Sound Signals

Supply Units — Bartering, Convoy Movement, Foraging, Languages, Loading, Move Discreetly, Scrounging

Transportation Units — Boat Handling, Driving, Harnessing

COMBAT UNITS (21.1.2)

Each of the combat unit types has the four standard movement skills as basic skills: Fall into Formation, Start Movement, Change Facing, Stop Movement.

Cavalry Units — Four Standard Movement Skills, Campsite Preparation, Equipment Maintenance, Fill in the Ranks, Mount/Dismount

Engineer Units — Four Standard Movement Skills, Campsite Preparation, Survey, Dig, Destroy Building

Infantry Units — Four Standard Movement Skills, Campsite Preparation, Drop/Retrieve Packs, Equipment Maintenance, Fill in the Ranks

Intelligence Units — Four Standard Movement Skills, Move Discreetly, Surveillance

Naval Units *(* Marine units only)* — Four Standard Movement Skills, Boat Handling, Equipment Maintenance *, Fill in the Ranks *

Scout Units — Four Standard Movement Skills, Move Discreetly, Surveillance

Special Units — Four Standard Movement Skills, Special skills for each unit

THE SKILLS

Each skill falls into one of six categories:

Basic Skills ..... Section 21.1.3
Formations Skills ..... Section 21.2
Characteristic Skills ..... Section 21.3
Maneuver Skills ..... Section 21.4
Combat Skills ..... Section 21.5
General Skills ..... Section 21.6

BASIC SKILLS

Appraisal
Bartering
Billeting
Campsite Preparation
Convoy Movement
Destroy Building
Diplomacy
Driving
Equipment Maintenance
Falsification
Fill in the Ranks
Flag Signals
Foraging
Hand and Arm Signals
Heraldry
Kitchen Area Preparation
Light Signals
Message Memorization
Move Animals
Record Maintenance
Smithing
Start Movement
Surveillance
Taming
Armor Evaluation
Basic Care
Boat Handling
Change Facing
Cookery
Dig
Document Gen./Recognition
Drop/Retrieve Packs
Fall into Formation
Feeding
Fire Signals
Fletching
Forging
Harnessing
Hospital
Languages
Loading
Mount/Dismount
Move Discreetly
Scrounging
Sound Signals
Stop Movement
Survey
Weapon Evaluation

FORMATION SKILLS

Chequered
Line
Retreat
Square
Column
Open Horde
Shield Wall *
Tortoise Shell *
Legion Battle
Phalanx
Spear
Wedge

* — *Defenses for Use With Another Formation*

CHARACTERISTIC SKILLS

Frenzy
Martial Arts
Primary Weapon
General Perception
Missile Artillery
Secondary Weapon
Grappling Hooks
Physical Training

MANEUVER SKILLS

Assume Hasty Ambush
Climbing
Evade
React to an Ambush
Retreat
Scale Walls
Stalk
Assume Quick Defense
Disengage
Rappelling
React to Artillery
Riding
Sprinting
Wheel

COMBAT SKILLS

Ambush
Divided Defense
Frontal Assault
React to a Melee Attack
Blitz
Envelop
Hammer & Anvil
Divided Assault
Flank Assault
Pincer
Rear Assault

GENERAL SKILLS

Animal Handling
Beast Mastery
Direction Senses
Driving
First Aid
Guide
Loading
Mining
Region Lore
Sail Making
Second Aid
Signaling
Tactics
Weather Watching
Animal Healing
Camouflage
Distance Running
Engineering
Flora Lore
Hostile Environments
Mechanition
Navigation
Rope Mastery
Sailing
Sense Ambush
Surgery
Tracking
Xeno Lores
Animal Training
Diagnosis
Diving
Fauna Lore
Foraging
Interrogation
Messenger
Propaganda
Rowing
Scrounging
Siege Engineering
Surveillance
Trap Building

BASIC SKILL DESCRIPTIONS (21.1.3)

Appraisal (In/Re) — Bonus for determining or estimating the value of an object or goods other than Armor or Weapons.

Armor Evaluation (In/Re) — Bonus for determining the value and quality of armor.

Bartering (Em/Re) — The ability to trade when money is not available or acceptable.

Basic Care (Em/SD) — The ability to provide the most basic treatment of minor wounds and fatigue. Allows the setting of broken bones, stopping minor bleeding, and the relief for minor injuries. This is the basic skill equivalent of First Aid.

Billeting (Re/Me) — This is the ability to operate a system of housing for large numbers of troops.

Boat Handling (St/SD) — Allows a unit to perform basic small boat handling maneuvers: embarking/debarking, basic sailing, basic rowing, stowing equipment, and docking.

Campsite Preparation (In/Me) — The understanding of the priorities of work concerned with the preparation of a campsite. This includes knowledge of erecting tents and other temporary shelters, how to best stockade live stock, how to prepare rudimentary defensive measures, position supplies, and other activities associated with a military bivouac.

Change Facing (Dis & SD/Ag) — Allows the unit to turn to face to the left, to the right, and to the rear. It also allows simple variations on these three basic facing changes.

Convoy Movement (Me/In) — Ability to organize the smooth operation of a convoy. Each driver/operator knows where he is to be within the convoy, the proper spacing between vehicles, and the signals necessary for communication between the vehicles.

Cookery (In/Re) — Bonus for detecting bad food, or preparing/neutralizing dangerous herbs and food ingredients. Includes poison preparations as well as normal cooking. The following is a partial list of cookery skills:

- Baking: Preparation of breads, cakes, pies, etc.
- Brewing: Making ale, beer, cider, malt or mead beverages.
- Curing: Salting or preserving of food.
- Distilling: Making of alcohol.
- Poisoner: Poison manufacture.
- Winery: Making of wines.

Destroy Building (Re/St) — Allows the unit to tear down simple wooden buildings (and similar structures) in a reasonable amount of time. Includes the setting of fires for the purposes of destroying buildings and wooded areas.

Dig (St/Ag) — Ability to dig ditches, pits, trenches, tunnels, etc. Also includes the clearing of bushes and trees.

Diplomacy (Pr/In) — This is the ability to operate successfully in a complex, bureaucratic foreign environment, such as a foreign royal court or any other large foreign government structure. Tact, negotiation, and deceit are all facets of diplomacy used for the conducting of relations between nations. The GM may require that Diplomacy be developed separately for each situation in which a unit may find itself.

Document Generation/Recognition (Me/Re) — The ability to generate documents with the knowledge of their basic characteristics, their various or singular use, and who requires their usage.

Driving — See Section 21.6.

Drop/Retrieve Packs (Dis & SD/Ag) — Allows a unit to drop their packs (i.e., non-combat equipment) in an orderly fashion so that it can be easily retrieved at a later time. During battle, the last thing a soldier wants is to be carrying a clumsy pack, so most such equipment is dropped prior to combat.

Equipment Maintenance (Me/In) — If equipment is used, and often even when it is not, it needs to be cleaned, oiled, and looked after. This skill covers everything from sharpening a sword to patching up a tent.

Fall into Formation (Dis & SD/Ag) — Ability to assume any formation in which the unit has at least one skill rank of formation skill (see Section 21.2).

Falsification (SD/Re) — This is the ability to create false but believable writings, illustrations, or records from scratch. This skill is used to falsify bank records and accounts, to change testimony records to misrepresent the facts, to reproduce official documents, to copy works of art, etc. In fact, this skill can be used for the duplication of almost anything that is already in existence or for the reproduction of a successful style, technique, procedure, process, trade mark, or copyright. This ability is sometimes used to reproduce official currency (coined or paper monies), stocks, and bonds.

Feeding (Em/Pr) — Ability to properly feed and care for animals.

Fill in the Ranks (Dis & SD/Ag) — When losses occur during battle, this skill allows the combatants in a unit to move up and fill in gaps in the front line of their unit.

Fire Signals (Me/SD) — Ability to read and encode messages through a complex series of differently colored fires, variations in fire consistency, variations in the shape of light from the fire, etc.

Flag Signals (Me/SD) — Ability to read and encode messages using flags with different colors and symbols by holding the flags in different positions and/or waving them at certain intervals.

Fletching (Ag/SD) — Bonus for making an arrow out of available wood, metal, paper, and/or feathers. Note: With this skill, sophisticated types of special purpose arrows may be crafted (such as hunting, armor piercing, message, fowling, poison bearing, etc.).

Foraging — See Section 21.6.

Forging (St/Ag) — The ability to create, maintain, and control forge fires. Allows an armorer unit to build a fire to the proper temperature specifications required to properly work metal.

Hand and Arm Signals (Me/SD) — Ability to read and encode messages using movements and positions or certain body parts, primarily the arms and legs and things held in the hands.

Harnessing (Em/Pr) — Ability to properly place restraining and control devices on animals.

Heraldry (Me/Re) — Bonus for designing or recognizing a particular heraldic crest (coat-of-arms). The Heraldry of different cultures must be developed separately.

Hospital (Me/In) — Allows a unit to set up a field hospital. This is usually includes a few tents, cots, water supply, lighting, etc.

Kitchen Area Preparation (Me/In) — Allows the unit to prepare a proper cooking area. This includes erecting tentage, other temporary shelters, how to stockade live stock, how to position supplies, how to lay out rudimentary defensive positions, etc.

Languages (—) The ability to read, write, and speak a particular language. An average administration unit is able to comprehend one language up to a skill rank of eight. It is also able to comprehend (rank 3–6) at least three other languages common to the unit's place of origin. An average supply unit will be able to speak, read, and write (to rank 5) at least two languages common to its place of origin.

Light Signals (Me/SD) — Ability to read and encode messages using glass or a highly polished piece of metal to reflect light in a given direction.

Loading (Em/Re) — See Section 21.6.

Message Memorization (Me/SD) — The ability to remember and repeat a short message.

Mount/Dismount (Ag/Em) — Ability for a unit to mount and dismount in an organized manner.

Move Animals (Em/Pr) — Ability to transport animals from one place to another. They should be restrained in some way.

Move Discreetly (Dis & In/Re) — This skill enables a unit to operate in an area without immediately calling undue attention to itself. This skill should always require a maneuver roll if the unit is operating outside of its place of origin.

Record Maintenance (Me/Re) — The knowledge of a filing system which allows easy storage and retrieval of documents. The system may be according to document name, subject, number, or any other form of document identification.

Scrounging — See Section 21.6.

Smithing (St/Ag) — Bonus for working with normal metals to create or repair desired objects. Bonus for oven or kiln building and doubling effects of fires. The GM may permit a unit to use half bonuses for similar skills. The following is a partial listing of smithing crafts:

- Armorer: Making of iron or steel armor.
- Blacksmith: Making of small iron wares, such as horse shoes, etc.
- Bronze Smith: Working and casting of bronze.
- Copper Smith: Working and casting of copper.
- Etcher: Decorating of metals.
- Fire Starting: Starting of fires.
- Foundry: Casting, rolling, cutting and spinning of iron.
- Gold Smith: Working of gold into ornamental and functional items.
- Iron Smith: Making of iron wares.
- Silver Smith: Working of silver into ornamental and functional items.
- Tin Smith: Working of tin into ornamental and functional item.
- Tooler: Making of metal tools.
- Weapon Smith: Making of iron or steel weapons.

Sound Signals (Me/SD) — Ability to understand and encode messages using a set of sounds.

Start Movement (Dis & SD/Ag) — Applies when the unit marches forward. Normally, moving forward does not require a maneuver roll; so this skill bonus only applies when the unit is "under pressure" (see Section 15.1 and 15.2).

Stop Movement (Dis & SD/Ag) — Applies when the unit stops marching. Normally, stopping does not require a maneuver roll; so this skill bonus only applies when the unit is "under pressure" (see Section 15.1 and 15.2).

Surveillance — See Section 21.6.

Survey (Re/Me) — Ability to make simple maps based upon the local geography. Includes the ability to measure distances accurately. Detailed surveys may take large amounts of time.

Taming (Em/In) — Ability to properly train newly acquired animals to obey simple, standard commands. The animals should be of the type already handled by the unit and should already have received some training.

Weapon Evaluation (In/Re) — Bonus for determining the value and quality of a weapon.

21.2 FORMATION SKILLS

These skills allow a unit to assume and maintain a particular formation. During a battle, a unit that is not in one of these formations is assumed to be operating in Open Horde formation. Each unit is assumed to be automatically able to assume and maintain an Open Horde formation and has a Open Horde skill rank of 1.

Formations are essential to the successful deployment and control of any unit. Formation skill bonuses are used for unit maneuvers (see Section 15.2). Normally, a unit's *Dis* stat bonus applies to the unit's total formation skill bonus. A GM may wish to allow an additional bonus for units whose combatants have unusually high SD/Ag stats.

Column (Dis & SD/Ag) — Basically, a Column formation is an organization of combatants into tight rows moving in a single direction, but the formation can "snake" its way along to follow the path of least resistance to movement (e.g., a path, a road, a stream bed, etc.). Normally, the number of rows is greater than the number of combatants in a row. This formation is used primarily for movement, i.e., marching into a battle position.

Chequered (Dis & SD/Ag) — This formation is made of several units or sub-units that are staggered as shown in the formation diagram. This formation is very effective against units which are using the "Open Horde" method of attack. This formation is best when augmented with light cavalry deploying from the flanks and archers or slingers to the rear. It is also possible to trap enemy units between the rows of Squares, although this would be a hard maneuver.

Legion Battle (Dis & SD/Ag) — This formation is a close order march formation which relies on the soldier's training in battle drill and defensive formations. It is quite effective against non-formation using units, but requires an exceptional amount of discipline and training.

Line (Dis & SD/Ag) — The most commonly used formation, the troops are arranged in ranks (i.e., also called rows or lines). There may be any number of ranks in a Line formation, but normally the number of ranks does not exceed the number of combatants in a rank. Of course, the regularity of the ranks, their lengths, and other characteristics will depend quite a bit on the terrain it is placed on.

Open Horde (Dis & SD/Ag) — This is really just a large mob of people running across an open area screaming and waving their swords about. This method of attack is all right if your foe is using the same tactics. However, if your foe has even a modicum of tactical expertise and has an organized front to present to you, you will have a very bad day. Table T-6 lists the density of this formation at 50 feet per man, but this may vary greatly due to terrain and speed of the unit. A unit that is in no other formation is assumed to be in Open Horde by default.

Phalanx (Dis & SD/Ag) — The Phalanx is a very interesting formation. It is a more-than-maximum density formation. The idea is to arm each soldier with a long (4 to 5 ft), cylindrical shield and a very long (up to 20 ft) spear. Each man stands shoulder to shoulder and front to back with spears leveled to the fore and shields overlapping. The result is a nearly impenetrable shield wall that is as prickly as a cactus. This formation is very slow and ponderous, but if it used properly, it can be quite effective. It should be noted, however, that as the terrain becomes more and more rough, the Phalanx becomes less and less effective, eventually becoming impossible to control or maneuver.

Retreat (Dis & SD/Ag) — This is the "formation" that must be assumed by a retreating or routing unit (see Section 15.3). As soon as the unit stops retreating, it assumes Open Hoard formation. A unit that disengages (as opposed to retreating or routing) retains its original formation (see Section 15.3).

The density of this formation is listed as 100 square feet per man, but generally its density will depend on the terrain it occupies, the unit's original density, and how long it has been retreating/routing.

If it is necessary to find the density of a retreating unit, take the original density of the unit and double it each round the unit has been retreating. Once a retreating unit's density rating becomes greater than 150, it becomes a routing unit. This usually takes 3–4 rounds, during which time the leader has the opportunity to halt the troops by attempting a Stop Retreat maneuver (see Sections 15.2 and 15.3).

If it is necessary to find the density of a routing unit, take the original density of the unit and triple it each for each turn that the unit has been routed.

The "Retreat" skill (see Section 21.4) affects retreat attempts during movement phase or during the morale phase after morale failure (see Sections 15.3 and 17.3).

Spear (Dis & SD/Ag) — This is a combination of the Line (or Square) and Wedge formations. As may be expected, the lead combatants are in a Wedge (usually light infantry or cavalry) and it is usually followed by units of heavy infantry or more cavalry. It is very effective when used to penetrate and exploit a linear defense.

Square (Dis & SD/Ag) — The Square is a purely defensive formation. A unit in Square formation may not move. A Square can defend itself on all sides simultaneously. A Square consists of ranks (normally four ranks) of combatants forming an outward facing square, usually with a large hole in the middle.

A Square is especially vulnerable to missile attacks, unless it is used with a Shield Wall or a Tortoise Shell. All manner of weapons may be used with this formation: spears, pikes, swords, pilum, etc. If using pole arms, a unit in this formation is very effective against cavalry.

Wedge (Dis & SD/Ag) — The Wedge is a modified Line formation; the middle of the line is bent forward to form a wedge. The formation may be either solid or hollow. If used as a marching formation (it is an excellent formation for small units moving through hostile territory because of its maneuverability), it is often hollow. As an assault formation, it is often solid and maybe used in conjunction with other units as explained in the Spear formation. It is excellent for meeting unorganized resistance, either in the assault or defense, and is usually no more difficult to control than the Line formation.

DEFENSES FOR USE WITH ANOTHER FORMATION

There are two "defenses" that may be used with certain formations: Shield Wall and Tortoise Shell. Only one of the defenses may be used at a time and the unit must have the proper shields.

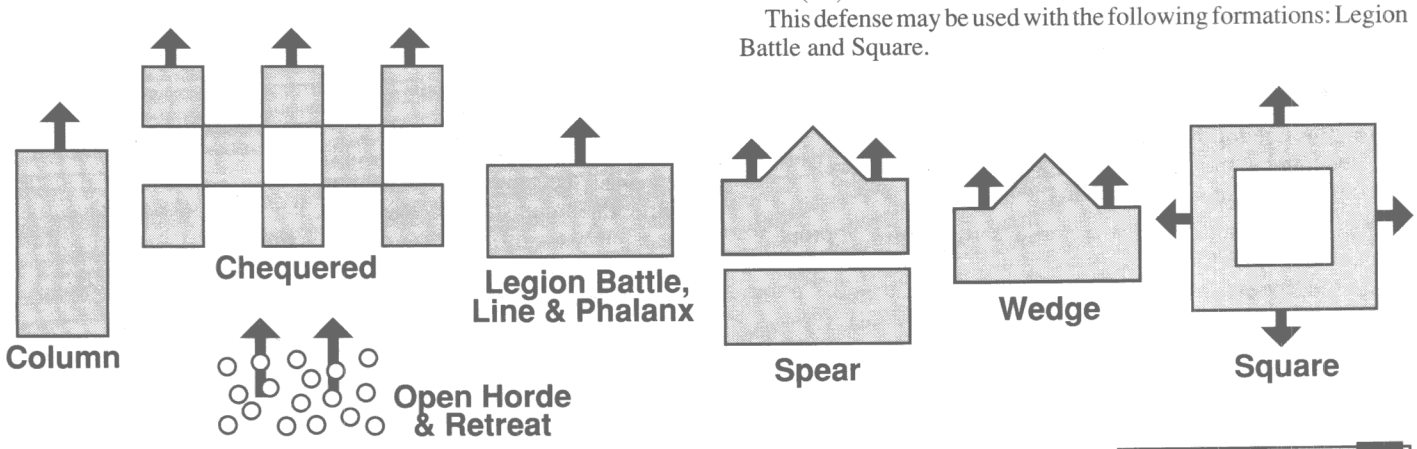
Each modifier based on a defense is added to the appropriate modifier for the base formation to obtain a total modifier that is actually used in combat. When such a defense is used, use the defense's Density Rating (see Table T-6) instead of the formation's Density Rating.

Shield Wall (Dis & SD/Ag) — A Shield Wall defense is made possible when long full shields are carried by each man in the front line, and perhaps by every man in the formation. The shields are overlapped and may be linked together by using a "tongue and groove" effect. This Shield Wall provides greater resistance to penetration either by infantry or cavalry. The grounded end of the shield may be pointed and steel capped so that it may be thrust into the ground for use in the defense.

This defense may be used with the following formations: Legion Battle, Line, Spear, Square, and Wedge.

Tortoise Shell (Dis & SD/Ag) — This defense is similar to the Shield Wall defense except that the combatants in the middle also hold interlocking shields above their heads. This is exceptionally effective against missile fire of any sort. It is also a partial defense against falling objects (+10) and burning oil poured from the castle walls (+5).

This defense may be used with the following formations: Legion Battle and Square.



21.3 CHARACTERISTIC SKILLS

The skill bonus for an OB skill affects one or more of the unit's characteristics and/or abilities that are primary skills in standard ***RM***, e.g., OBs, Hit Point Total, general perception, etc.

Frenzy (Em/SD) — Bonus to attempt to go into a state of single-minded, unpredictable rage which results in an additional +30 to the OB, the ability to take twice normal concussion damage and the ability to deliver double the concussion hit damage. While in frenzy, a unit has no DB other than the armor bonus, gets no shield bonus, and cannot parry. A frenzied unit is in Open Horde formation. Preparation for frenzy takes one round.

To become unfrenzied, the unit's leader must make a command and control roll as if he had lost complete control of the unit. If that is successful, the unit must make a successful maneuver roll (modified by this skill bonus) to return to a normal state of mind.

While frenzied, the unit will continue to fight until there are no more units within 400', at which time both the Command /Control and maneuver rolls to bring the unit to a normal state are modified at +30. If there is a unit within 400', the unit may attempt (with a perception roll modified by -30) to distinguish friend from foe.

If the Section 25.8 optional rules are used, Exhaustion Points (EhPs) are consumed at half the normal rate while frenzied. If the unit uses all its EhPs while frenzied, however, it will immediately assume a normal state and be subject to penalties as though it had used twice as many EhPs as it originally possessed. Additionally, the unit will require four times normal rest to regain its lost EhPs.

General Perception (In/In/Re) — Allows a character or unit to gain a better idea of its location in relation to surrounding units during combat (see Section 14.1). See *ChL* Section 3.6 and *RMCII* Section 7.0 for more detailed descriptions.

Grappling Hooks (Ag) — Bonus when throwing a grappling hook and making it catch as intended. Normally, a hook can be thrown up to 20 feet horizontally and 10 feet vertically for every +5 of the grappling skill rank bonus (Strength mods apply).

Martial Arts (varies) — Martial Arts (MA) skills affect the average combatant OB for unarmed combat. MA skills can be developed for units just as they are for characters in *ChL* (see *ChL* Section 3.8). Normally, units utilizing Martial Arts can only assume Open Horde formation.

Missile Artillery (In/Ag) — This skill bonus is part of the total combat OB applied when using catapults, trebuchets, or ballistae, or other missile artillery (see Section 16.6.6). Each weapon must be learned as a separate skill. One third similar skill bonus may be used on all unlearned artillery types.

Physical Training (Co) — This skill is applied to the unit in two manners. First, Physical Training (PT) skill ranks are used to enhance a unit's Hit Point Total (see Section 19.2). When a unit advances an experience level, its HPT is increased by:

[(hit die size for the unit's race ÷ 2) + 0.5]
x the number of PT skill ranks developed for the level
x the number of combatants in the unit

If the GM wishes, he can use a luck roll on the appropriate column to modify this.

Second, for every PT skill rank attained, the unit adds 5 points to its EhP total (see the optional rules in Section 25.8).

Primary Weapon (varies) — This is the unit's proficiency with its primary weapon. This bonus is applied to the unit's average combatant OB.

Secondary Weapon (varies) — This is the unit's proficiency with its secondary weapon. This bonus is applied to the unit's average combatant OB. A unit can have several secondary weapons and secondary weapon OBs.

21.3 MANEUVER SKILLS

A skill bonus for a maneuver skill applies to both maneuver rolls (see Section 15.2) and Command/Control rolls (see Section 13.2) involving that specific maneuver. Some skills involving changing a unit's facing are included in this section, but they are only applicable if a unit is changing facing while moving.

Assume Hasty Ambush (SD/Ag) — The use of this skill involves a unit quickly moving to conceal itself and set up an Ambush.

Assume Quick Defense (SD/Ag) — The use of this skill involves a unit quickly moving to defend behind or in any cover it can find.

Climbing (Ag) — This is a bonus for any climbing maneuver, from climbing sheer faces (absurd), through mountain climbing (very hard), to climbing ladders (easy). The normal climbing rate for walls with adequate hand holds is 10'/rnd as a "medium" maneuver.

Disengage (SD/Ag) — This skill involves a unit breaking off combat with an enemy unit (see Section 15.3).

Evade (SD/Ag) — If a unit attempts to avoid combat with a unit attempting to "engage" it (see Section 15.2), it may use its Evade skill bonus.

Rappelling (Ag) — Bonus to rapidly descend from a height. If the rappelling roll is unsuccessful, the combatants in the unit have a chance of falling. Rappelling rate is equal to the individual combatants' normal movement rates, with the chance of success reduced for extra speed as follows: walk +0, fast walk/jog -10, run -20, fast run/sprint -30, fast sprint -40, dash -50.

React to an Ambush (SD/Ag) — The use of this skill involves a unit being ambushed. The ambushed unit may use this skill to either attempt a withdrawal or to conduct a hasty attack and try to push through the ambush.

React to Artillery (SD/Ag) — The use of this skill involves a unit being attacked by with artillery (i.e., usually missile or spell attacks). This skill's bonus can be used if the unit charges at full speed for any available cover and/or concealment.

Retreat (SD/Ag) — This skill involves the orderly withdrawal of the unit from the battlefield. This skill is used when a unit tries to start a retreat and when it tries to stop a retreat (see Sections 15.3 and 17.0). It is also important when a unit tries to maintain its integrity to resist turning a retreat into a rout.

Riding (Em/Ag) — A single skill rank is necessary to keep from constantly falling off the animal being ridden. Higher skill ranks enhance the chance of retaining control of the animal under difficult circumstances. Riding skill ranks must be developed separately for different animals, but similar skill can be used for similar animals. See *ChL* Section 13.1.3 for mounted combat guidelines.

Scale Walls (SD/Ag) — This maneuver may be conducted in one of three ways: with ladders, with siege engines, or without assistance. In any case, the process is tenuous and dangerous for the climbers, especially since they are vulnerable to attack from above.

Sprinting (Qu) — Bonus increase to a unit's speed when conducting a 'fast run' or slower movement (see Section 15.1).

Stalk (Ag/SD) — Stalking is the ability to move using silence, camouflage, terrain, and shadows to conceal the unit's presence.

Wheel (SD/Ag) — Allows the unit to wheel itself in increments of 90° to either the left or right (see Section 15.1). This maneuver can be performed while the unit is moving at a normal rate of movement. If performed while the unit is stationary, this maneuver involves the basic skill: Change Facing (see Section 21.1).

21.5 COMBAT SKILLS

A skill bonus for a combat skill applies to both maneuver rolls (see Section 15.2) and Command/Control rolls (see Section 13.2) involving that specific maneuver.

> **Note:** *If a maneuver requires the use of a combat skill by more than one unit (e.g., Blitz and Hammer & Anvil), use the average skill bonus for all of the units involved. Some of these skills will not be appropriate for every campaign setting (e.g., Blitz, Hammer & Anvil).*

Ambush (SD/Ag) — The use of this skill is used when attacking an enemy from concealment and/or by surprise. It is most effective when used in a defile of some sort, in heavily vegetated terrain, or in rough terrain.

Blitz (SD/Ag) — The use of this skill involves a concentrated attack on one point of a defensive line. It usually follows several probing assaults which ascertain the weakest point in a defensive line. A unit can then concentrate as many combatants as possible on the weak point and hopefully force a penetration. After a successful blitz, a unit may then spread out quickly behind the defensive line before the enemy can react. A GM should only allow the use of this skill when the battle conditions make it a reasonable possibility.

Divided Assault (SD/Ag) — The use of this skill involves a unit splitting into more than one part to attack more than one portion of a defensive line or position simultaneously. Any part of the unit which the leader does not accompany operates with a -5 modification to all of its rolls.

Divided Defense (SD/Ag) — The use of this skill involves a unit splitting into more than one part to defend more than one portion of a defensive line or position simultaneously. Any part of the unit which the leader does not accompany operates with a -5 modification to all of its rolls.

Envelop (SD/Ag) — This maneuver allows a unit to attempt to surround an enemy unit. The enveloping unit must be at least 75% larger than its target and its combatants must have room to move around the target's flanks and rear.

Flank Assault (SD/Ag) — The use of this skill involves a unit attacking an enemy unit on either its right or its left flank. The attacking unit must be in a situation allowing it to move to the enemy unit's flank. If such a maneuver is successful, the attacking unit gains a bonus of +10 for all rolls until the enemy is able to turn itself.

Frontal Assault (SD/Ag) — The most basic offensive maneuver. The unit moves against the enemy at a double time from a distance of about 100 feet. Then the final 25 feet of so is closed at a charge.

Hammer & Anvil (SD/Ag) — With this maneuver, the unit will set up a line of defense (the Anvil) and drive the enemy into it with an attack (the Hammer). In this manner the enemy is attacked on two sides and, theoretically, crushed between the two forces. This skill is used to coordinate between the two attacking forces (i.e., the anvil and the hammer).

Pincer (SD/Ag) — This maneuver allows a unit to attempt simultaneous attacks on both the enemy unit's flanks. The pincering unit must be at least 25% larger than its target and its combatants must have room to move around the target's flanks.

React to a Melee Attack (SD/Ag) — The use of this skill involves a unit launching a hasty attack against an enemy unit that is about to attack it in melee. Usually, the attack must be very simple; e.g., a rush at the enemy or a simple engagement.

Rear Assault (SD/Ag) — The use of this skill involves a unit attacking an enemy unit on its rear. The attacking unit must be in a situation allowing it to move to the enemy unit's rear. If such a maneuver is successful, the attacking unit gains a bonus of +15 for all rolls until the enemy is able to turn itself.

21.6 GENERAL SKILLS

These skills are not normally essential to a unit's performance in battle. However, they are often important for a unit's functions outside of battle — especially for support units (see Section 20.1).

Animal Handling (Em/Pr) — Bonus for the care and feeding of animals including bedding, hobbling, etc. Developed separately for each type of animal (e.g., horses, hunting birds, etc.).

Animal Healing (Em/Re) — Bonus for administering medical aid to injured animals. Allows one to stabilize or repair light wounds and illnesses. Successful static maneuver can stop (or reduce) up to 5 hits/rnd bleeding.



Animal Training (Em/In) — Bonus for training a particular type of animal, such as Birds of Prey, Dogs, Bears, Big Cats, etc. Successful use of this skill normally ends up taming the animal.

Beast Mastery (Em/Pr) — Bonus for simple communication with and if possible, the mastering of an animal. Each specific type of animal is developed separately. The animals that are controlled by use of this skill do not have to be trained or tame. The animal will only do what is within its capabilities. If a maneuver using this skill fails, the animal will revert back to its basic tendencies.

Camouflage (Re/In) — Bonus for hiding or concealment by using the natural attributes of the surrounding environment.

Diagnosis (In/Re) — Bonus for determining medical condition of a type of creature. Skill must be learned for a particular race or type of creature. Similar skill may be used for those races that are genetically close to the race specialized in. One must pick the skill in either general diagnosis, or diagnosis of a specific race. General diagnosis skill of 30+ allows certification of simple medical practice on most races (use of field equipment and healing drugs). Diagnosis skill for a specific race of 30+ is required for surgical certification (and reasonable competence).

Direction Senses (In/Re) — Bonus for determining which way is north or any specific direction, such as "HOME", without the aid of navigational instruments. Skill is useful in determining direction while underground, during the darkest night without stars, moon, or other night lights.

Distance Running (Co) — Bonus is added to the unit's base Exhaustion Points to determine its total EhP for movement purposes (see the optional rules in Section 25.8).

Diving (SD/Ag) — Bonus for controlled falling maneuvers.

Driving (Ag/Qu) — As in the Riding skill, skill ranks in driving must be developed separately for different types of vehicles. Vehicles are objects such as wagons, carts, sleighs, etc. that are pulled by animals. One skill rank allows basic understanding of the controls; subsequent ranks reflect increased ability and quickness in maneuvers.

Engineering (Re/Me) — Bonus for knowing major facts about engineering of the appropriate technical level known to the culture. This applies to procedures and applications such as building walls, digging tunnels, constructing dwellings, etc.

Fauna Lore (Me/Re) — Bonus for recognizing and identifying the major animal forms within a specific area, region and climate. This skill may be developed as in-depth for a specific area, as general education in fauna/zoological types, or for great detail on the characteristics and habits of a particular animal species. The skill type must be chosen when skill is first developed. Several different regions/climates may be developed simultaneously, provided that research materials are available.

First Aid (SD/Em) — Bonus for applications of emergency aid or treatment (limited to type of creature), such as attempts to halt or slow bleeding or damaging deterioration. It is suggested that, provided with the proper tools or bandages, the use of first aid can stop up to 5 hits/rnd of damage on an individual combatant without resorting to a tourniquet. Used normally in the field without the benefits of proper medical facilities or elaborate equipment. For every two skill ranks that a unit possesses of this skill, its Sur stat bonus is increased by +1.

Flora Lore (Me/Re) — Bonus for recognizing and identifying the major plant forms within a specific area, region and climate. May be developed as in-depth for a specific area, as general education in flora/botanical types, or for great detail on the characteristics and habits of a particular plant species. The skill type must be chosen when the skill is first developed. Several different regions/climates may be developed simultaneously, provided that research materials are available.

Foraging (In/Me) — Bonus chance of finding a local source of potable water or edible plants and animals. Includes basic food acquisition such as gathering or fishing. The following is a partial listing of foraging skills:

- Clamming: Finding and digging clams from beaches.
- Fishing: Capture of fish using hook and line, spear or net.
- Hunting: Finding and killing or capturing of game animals for food or sport.

Guide (Me/Re) — The ability to know an area well enough to choose likely camping sites, resources, available cover, dangerous regions, and routes of advance for an army.

Hostile Environments (Ag/SD) — The bonus for this skill is taken as the percentage of the character's offensive, defensive, or maneuver bonus available in the particular environment. Conditions must be developed separately. Each one must be learned as a separate skill. The following is a partial listing of Hostile environments:

- Arctic Regions: North and South poles, tundra, etc.
- Extremely Powerful Gravity.
- Fire Planes: Dimension that is based on fire.
- Underwater: Either fresh or salt water.
- Vacuum: Outer space, airless, etc.

Interrogation (Re/Ag) — Bonus for extracting information from intelligent sources. This may or may not include causing discomfort to the targets, though a +25 bonus is received if the targets are discomforted. However, if the targets are discomforted and the "interrogation roll" is negative, the targets may suffer major injury or death. In such a case, the targets should roll RRs vs level 10, using SD/Co as a modifier to determine the extent of the injury. This skill not only applies to torture but also includes the ability to piece together scattered fragments of information received.

Loading (Em/Re) — Bonus for packing loads and loading materials on pack animals. Loading must be learned as a separate skill for each type of animal that the individual uses as a pack animal. Similar skill may be counted for similar animals.

Mechanition (Re/Ag) — Bonus for building and using a machine that already exists (including siege weapons). It will be necessary to have the appropriate skills to build the machine (e.g., woodworking, crafting, etc.). Each type of machine must be learned as a separate skill.

Messenger (Me/Co) — The ability to convey a message, word for word, from one person to another. The accuracy of the message content deteriorates at a rate of 10%/hr. But the skill bonus will reduce this deterioration (e.g., a +20 skill bonus will negate a 20% loss of accuracy).

Mining (Re/In) — Bonus for assessing the possibilities of mining in an area, and supervising the creation and running of the mine. Each type of mining process must be learned as a separate skill. The following is a partial listing of mining processes:

- Dredging: Scrapings of material off the bottom of a river, ocean, etc.
- Open Pit: Removal of top ground layers to extract materials.
- Quarry: Removal of earth materials in block form.
- Tunneling: Making of underground passages to extract materials.
- Undermining: The digging of tunnels under fortifications in such a manner as to cause the fortifications to collapse due to the lack of stable foundation.

Navigation (Re/In) — Bonus for determining proper directions and distances when using a map in conjunction with various directional aids, such as a compass, a landmark, or stars. This includes the concept of orienteering, and is applicable on land, water or the stars. Skill must be developed separately for each planet or dimension it is to be used on.

Propaganda (In/Em) — Influencing others through indirect means, rather than direct speech. Includes such methods ranging from starting rumors to designing large media campaigns.

Region Lore (Me/Re) — Bonus for knowing the ins and outs of an area or region. Each different type of region must be developed as a separate skill (e.g., mountain zone, jungle zone, large city, etc.)

Rope Mastery (Me/Ag) — Proficiency in knot recognition, knot-tying, braiding, and splicing, or when throwing a line. Allows one half skill ranks in grappling hook (i.e., it's a similar skill).

Rowing (St/SD) — Bonus for self-powered boat maneuvers, including rowing, poling, etc.

Sail Making (Re/Ag) — Bonus for making and repairing sails.

Sailing (Ag/In) — Bonus for sailing maneuvers.

Scrounging (In/Re) — Bonus to locate a particular needed item, part or ingredient. This skill is normally used in an urban setting.

Second Aid (SD/Em/In) — Bonus for performing minor surgery which includes sewing wounds closed, removing diseased or mangled limbs, bone setting and any other simple or minor surgery operation. For every skill rank that a unit possesses of this skill, its Sur stat bonus is increased by +2. A unit's skill rank in Second Aid can never exceed or equal its First Aid skill rank.

Sense Ambush (In/Re) — Bonus to detect active traps and/or ambushes. Range is 10' per skill rank.

Siege Engineering (Re/In) — Allows the user knowledge of all aspects of a siege. This skill provides a bonus to understanding the proper and best position of siege engines, determining weaker portions of a wall (for siege engine assault and/or sapping), basic engineering knowledge for building ramps, digging trenches and horse traps (for opposing cavalry), etc.

Signaling (Me/SD) — Bonus when using any form of signal communications. This skill is a specialized form of linguistics and linguistics guidelines apply.

Surgery (SD/Em/In) — Bonus for performing major surgery, which includes performing exploratory surgery, organ transplants, acupuncture, and organ and limb repairs. This skill must be developed separately for exploratory, organ transplants, limb repair, organ repair, etc. Use of this skill requires simple equipment (e.g., scalpel, anesthesia, etc.). For every skill rank that a unit possesses of this skill, its Sur stat bonus is increased by +5. A unit's skill rank in Surgery can never exceed or equal its Second Aid skill rank.

Surveillance (In/SD) — Bonus for keeping watch over a person, place, object, or activity. Also includes the ability to determine the best approach and technique for a particular tactical situation as far a terrain is concerned.

Tactics (Re/In) — Bonus for perceiving and planning appropriate and effective strategy in a tactical military situation. Various tactical situations must be developed separately. The part of a tactics skill roll over 100 is a negative modifier applied to someone trying to figure out the tactics being used.

A unit with Tactics skill is usually some form of a staff unit for a high level officer (i.e., leader). The unit's Tactics skill bonus can be used to give that officer a bonus to his Tactics skill bonus. In a situation calling for the use of Tactics skill, roll open-ended (1–100) and add the unit's Tactics skill bonus. The officer's Tactics bonus is increased by the amount that the modified roll is over 100 for that situation only.

The following is a partial listing of types of tactics:

- Aerial: Fighter and bomber tactics (operational).
- Battle Field: Cavalry and infantry tactics (operational).
- Naval: Ship and boat tactics (operational).
- Sabotage: Underground/behind enemy lines tactics.
- Siege: Reduction of fortified position tactics.
- Small Unit: Conflict between small groups.
- Strategic: Overall campaign tactical picture.

Tracking (In/Re) — Bonus for tracking maneuvers and for following a trail left by someone or something such as foot prints, broken branches, crushed grass, hanging pieces of cloth, etc.

Trap Building (Re/In) — Bonus for making traps out of available resources. Bonus of trap-makers may subtract from any detection rolls, depending on location, care and time in construction and trap type.

Weather Watching (In/Em) — Bonus to determine local weather for the next 24 hours.

Xeno Lores (Varies) — Bonus for attempting to learn and use information about extra-dimensional beings and places. The very nature of the "Xenos" makes it harder to understand the underlying principals that make their worlds what they are. The xeno-lore cost of development is added to the normal DP cost of the extra-dimensional skill being learned.

Example: *Basic Mathematics cost 2/6 for the No Profession and if attempting to learn Xeno Lore Basic Mathematics the cost would be 2/6 + 6. Due to the fact that the No Profession has only cost development for 1 skill rank per level he can only learn one skill rank of Xeno Lore Basic Mathematics and the development cost would be 8 = 2 + 6.*

A Bard wishes to learn the racial history of a Xeno Lore based being. Normally the cost would be 1/6 but the xeno-lore cost development is 3/5, so the cost development would be 4/11 (1 + 3 = 4 and 6 + 5 = 11).

If the skill cost is 2/* then treat this as a skill cost of 2/2 for the purposes of learning Xeno based skills. Each area must be learned as a separate skill and research material must be available. See *RMCII* Section 7.0 for more details, more options, and a partial list of xeno-lore skills.

22.0 LEADERS AND COMMAND STRUCTURE

Units are commanded by *leaders* that are normal ***RM*** characters: PCs and/or NPCs. So, standard ***RM*** rules and guidelines are used to generate leaders. In addition, there are several leader *characteristics* that GMs and players should calculate and keep track of: Pr/Em average (always round up), Leadership Rating, Recruitment Potential, and Command Potential. All of these characteristics can be derived from the new skill, Recruitment, and the standard ***RM*** stats and skills.

A GM will find that it helps to define the personality and goals of a leader. It is also important that the PC advance experience levels separately from the unit and that the unit be treated as a separate entity for considerations of experience gains, injuries, deaths, etc.

22.1 SKILLS

These skills are especially important for the activities for leaders as described in *War Law*. Except for the Recruitment skill, DP costs for these skill are given in *ChL* and *RMCII*. DP costs and level bonuses (if used) for Recruitment are the same as the DP costs for Leadership.

Leadership (Pr/Re) — Bonus to inspire and command others to follow you, and to make others believe that you are competent to lead and that you know what you are doing. This includes the ability to raise the morale of those you command.

In *WL*, a leader's Leadership skill rank is added to his Pr/Em stat average when calculating his Leadership Rating to use when commanding units (see Section 22.2.1).

Military Organization (Pr/Re) — Bonus for actions involving the organization of a military force. Includes knowledge of how to billet and supply a unit, posting of watch, running of patrols, etc.

In *WL*, a leader's Military Organization skill bonus is used to modify Command/Control rolls (see Section 13.2). In addition, a leader's Military Organization skill rank is added to his Pr/Em stat average when calculating his Command Potential (see Section 22.2.3).

The following is a partial listing of types of military organization:

- Aerial Forces: Air cavalry, aerial assault forces, etc.
- Ground Forces: Infantry, cavalry, and other similar units.
- Marine Forces: Marine units and other similar units.
- Naval Forces: Sea, ocean, or other similar water type units.

Recruitment (Pr/Em) — This skill involves finding, recruiting, and raising troops by various means: enticement, appeals to patriotism, by force, by force of character, etc.

In *WL*, a leader's Recruitment skill rank is added to his Pr/Em stat average when calculating his Command Potential (see Section 22.2.2).

Tactics (Re/In) — Bonus for perceiving and planning appropriate and effective strategy in a tactical military situation. Various tactical situations must be developed separately. The part of a tactics skill roll over 100 is a negative modifier applied to someone trying to figure out the tactics being used.

A leader's Tactics skill bonus can be temporarily modified by the assistance of a unit with Tactics skill (usually some form of a staff unit). The unit's Tactics skill bonus can be used to give that officer a bonus to his Tactics skill bonus. In a situation calling for the use of Tactics skill, roll open-ended (1–100) and add the unit's Tactics skill bonus. The officer's Tactics bonus is increased by the amount that the modified roll is over 100 for that situation only.

The following is a partial listing of types of tactics:

- Aerial: Fighter and bomber tactics (operational).
- Battle Field: Cavalry and infantry tactics (operational).
- Naval: Ship and boat tactics (operational).
- Sabotage: Underground/behind enemy lines tactics.
- Siege: Reduction of fortified position tactics.
- Small Unit: Conflict between small groups.
- Strategic: Overall campaign tactical picture.

22.2 CHARACTERISTICS

There are three leader *characteristics* that GMs and players should keep track of: Leadership Rating, Recruitment Potential, and Command Potential. These characteristics can be derived from standard ***RM*** stats and skills (see Sections 22.2.1–22.2.3), and by using the Leader Characteristics Table T-15.

Example: *A leader has a Pr/Em average of 65 and has 5 Leadership skill ranks, 7 Recruitment skill ranks, and 5 skills in Military Organization. He is 6th level, so his Leadership Characteristics are:*

LR = 6 x .6 = 3.6 (round up to 4)
RP = 6 x 13 = 78
CP = 6 x 4 = 24

LEADERSHIP RATING (LR) (22.2.1)

A Leadership Rating is a measure of a leader's effectiveness in directly commanding troops. To determine a leader's LR:

- Add his Pr/Em stat average to his Leadership skill rank (not skill bonus) and cross-index the result with the LR column on the Leader Characteristics Table T-15
- Then, multiply the result by the leader's experience level (round up)

Note: *Spells such as "Aura" may also temporarily affect LR, as determined by the GM.*

LR CHANGES

By far the most important characteristic that a leader has is his Leadership Rating. This number reflects his ability to get troops to follow him into combat. Men will have confidence in a leader with a high LR. A leader's LR can change in several ways:

1) Because of a Pr stat change or a Em stat change.
2) Because of a Leadership skill rank increase.
3) Because of a change in his reputation.

The third case can be caused by two of the results on the Maneuver and Command/Control Table T-5. These results only apply if the unit is in combat with a foe that poses a reasonable challenge (mugging old ladies is unlikely to build one's reputation). There are a couple of such results on the Morale Failure Table T-4 as well. In addition to these, the GM may wish to use the following guidelines to change a leader's LR based upon his reputation (it is easier to destroy a reputation than build one!):

Situation	Mod to LR
Defeat Superior Foe with 25% or less losses	+1
Suffer 50% or more losses	-1
Suffer 75% or more losses	-2
Subordinate takes over while leader is unwounded	-1

These modifications to LR are applied after the leaders LR is calculated based on experience and skill. Since these modifications represent how the troops feel about the leader, if he relocates to an area where the troops have not heard of him, these bonuses should revert to zero.

RECRUITMENT POTENTIAL (RP) (22.2.2)

Recruitment Potential is a measure of a leader's effectiveness in recruiting troops. To determine a leader's RP:

- Add his Pr/Em stat average to his Recruitment skill rank (not skill bonus) and cross-index the result with the RP column on the Leader Characteristics Table T-15
- Then, multiply the result by the leader's experience level

Note: *Spells such as "Aura" may also temporarily affect RP, as determined by the GM.*

The number of troops and subordinate leaders that a leader may attempt to privately recruit is determined by his RP. This assumes he is not using conscription. If he is an officer in an organized army, the RP is not used for anything. Basically, each man or leader that is recruited "costs" a certain portion of a leader's RP. This cost is 1 RP per level of the recruit, Thus to recruit a first level fighter would cost 1 RP but a tenth level fighter would cost 10 RPs. See Section 23.0 for details on the recruitment procedure.

COMMAND POTENTIAL (CP) (22.2.3)

Command Potential is a measure of a leader's effectiveness in commanding troops. To determine a leader's CP:

- Add his Pr/Em stat average to his Military Organization skill rank (not skill bonus) and cross-index the result with the CP column on the Leader Characteristics Table T-15
- Then, multiply the result by the leader's experience level

Every leader has a limitation on the number of men he can effectively command. This number will usually be smaller than the number of troops he can recruit. Of course, the nature and expertise of the troops and his subordinate leaders will affect this. Generally speaking, the commander of a unit need only command his subordinate leaders, plus any staff, runners, and bodyguards. Each subordinate leader is then responsible for those troops directly under them.

Basically, each combatant or leader that is commanded "costs" a certain portion of a leader's CP. This cost is:

- For each non-leader combatant directly commanded: 1 CP (not one per level as is RP)
- For each leader directly commanded 0.5 times that leader's CP. For these purposes, a leader is a combatant that is commanding other combatants.

See Section 23.0 for details on this command structure.

Note: *The term "command" refers to troops under the direct control of a leader.*

22.3 GENERIC LEADERS

The GM may not wish to generate complete Stats for each leader in an army, so a table of "generic" leaders is provided below. The chart assumes that at each level the leader has developed one skill rank of leadership, one skill rank of military organization and one skill rank of recruitment.

GENERIC LEADERS CHART

Leader's Level	Pr/Em Average	Leadership Rating	Recruitment Potential	Command Potential
3	50	0	27	9
	60	1	30	9
	70	2	39	12
	80	4	48	15
	90	5	75	24
5	50	0	45	15
	60	2	55	15
	70	5	70	20
	80	7	85	24
	90	9	145	50
7	50	0	63	21
	60	3	77	21
	70	7	98	28
	80	11	126	42
	90	13	203	70
10	50	2	100	30
	60	6	120	40
	70	12	150	50
	80	16	190	70
	90	21	460	150
15	50	6	165	45
	60	15	210	60
	70	21	255	90
	80	27	435	150
	90	36	1050	300
20	50	12	240	80
	60	24	300	100
	70	32	380	140
	80	42	920	300
	90	52	1900	500

23.0 UNIT GENERATION AND ADVANCEMENT

Generating a unit is dependent upon a number of factors: command structure, the leader's characteristics, the area of recruitment, and the availability of subordinate leaders. These factors and the unit generation and advancement process are described in this section.

If a GM decides that circumstances will allow a leader to take command of an existing unit, unit generation isn't even necessary.

23.1 COMMAND STRUCTURE

The specific organization of a large group of combatants plays a large role in determining the flexibility of the unit. Every leader has a limitation on the number of men he can effectively command. This number will usually be smaller than the number of troops he can recruit. Of course, the nature and expertise of the troops and his subordinate leaders will affect this. Generally speaking, the commander of a unit need only command his subordinate leaders, plus any staff, runners, and bodyguards. Each subordinate leader is then responsible for those troops directly under him.

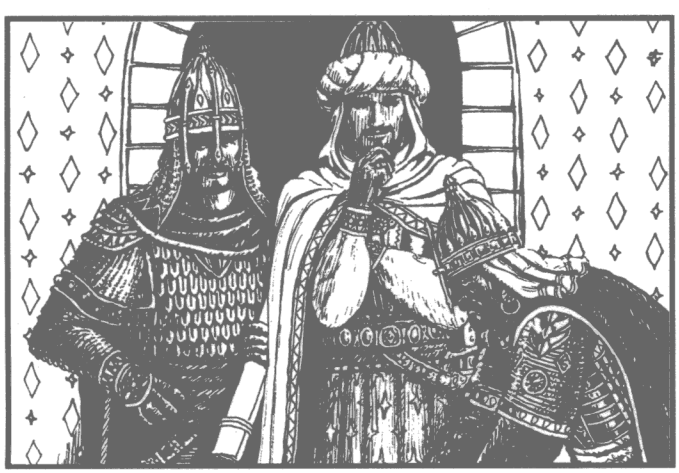
COMMAND POTENTIAL COSTS (23.1.1)

Basically, each combatant or leader that is commanded "costs" a certain portion of a leader's CP. This cost is:

- For each non-leader combatant commanded: 1 CP (not one per level as is RP)
- For each leader directly commanded 0.5 times that leader's CP. For these purposes, a leader is a combatant that is commanding other combatants.

If a leader exceeds his CP, his LR receives a penalty of -0.5 times the amount that his CP is exceeded (round up).

Each subordinate leader has a number of CPs that limits how many combatants and leaders he can command without penalty. If a subordinate leader exceeds his CP limit, half of the LR penalty (round up) is passed up to the leader commanding him **and** half of that penalty is passed on to the leader (if any) above him. This continues until the LR penalty reaches the unit leader. If any leader has unused CPs, they can be used to negate LR penalties passed up from subordinate leaders.



Example: *Joe has a CP of 48 and commands 18 combatants and Big Bill with a CP of 60. This requires CPs equal to half of Big Bill's CP and 1 CP for each combatant — a total of 48, so Joe has no LR penalty. However, if Joe commands 28 combatants instead of 18, he will suffer a -5 (= -0.5 x 10) penalty.*

In this command structure, Big Bill can command up to 60 combatants directly with no penalty. However, if he commands 80, his LR penalty will be -10 (= -0.5 x 20), and half of that (-5) will be passed on to his leader, Joe.

COMMAND LAYERS (23.1.2)

The number of Command Layers (CLs) that a leader's unit has is equal to the *maximum* number of subordinate leaders between the leader and any one combatant in the command structure. Thus, a CL 1 unit has a leader who only commands subordinate leaders that command combatants and not other leaders. A CL 2 unit would have a leader who commanded at least one subordinate leader who commanded another subordinate leader.

Based upon his military organization skill ranks, a leader is limited as to how many *command layers* (CL) his unit can have without a substantial penalty to his LR. The Command Layer Chart provides these limitations.

Each subordinate leader is also limited as to how many CLs he can have under his leadership. If a subordinate leader exceeds this limit, half of the LR penalty is passed up to the leader commanding him **and** half of that penalty is passed on to the subordinate leader (if any) above him. This continues until the LR penalty reaches the unit leader.

COMMAND LAYER CHART

Military Organization Skill Rank (SR)	Maximum Non-penalty Layers	LR Penalty Per Extra Layer
0	0	-20
1-10	1	-20
11-20	2	-20
21-30	3	-20
31-40	4	-20
41-50	5	-20
51+	6 + (1 per 10 ranks)	-20

Example: *Joe commands a unit and has three subordinate leaders: Big Bill, Smash, and Ugly Mug. Joe has a military organization skill rank of 6. If he commands his three subordinates directly, the CL of his unit is 1 and his LR doesn't get a penalty. However, if Joe commands Big Bill and Smash while Big Bill then commands Ugly Mug, the unit's CL is 2 and Joe's LR suffers a -20 penalty. Similarly, if Joe commands Big Bill and Big Bill commands Smash and Smash commands Ugly Mug, the unit's CL is 3 and Joe's LR penalty is -40. All of this assumes each subordinate leader commands individual combatants.*

DIRECT COMBATANT COMMAND (23.1.3)

In general, the more the unit is broken down into sub-units (i.e., combatants commanded by a subordinate leader), the more easily maneuvers can be accomplished, especially when not in a rigid formation. This is simulated in the *WL* system by applying a penalty for unwieldy command structures.

The table below gives modifications that apply to maneuver and command/control rolls made by a unit. The left column is the maximum number of troops that any one leader in the unit directly commands.

COMMAND STRUCTURE CHART

Max. # Combatants by a Leader	LR PENALTY No Formation	LR PENALTY In Formation
1-10	+10	+15
11-50	0	+5
51-100	-10	0
101-200	-20	0
201-500	-30	-5
501-1000	-40	-10
1001+	-50	-20

Note — "No Formation" refers to Open Horde and Retreat formations. "In Formation" refers to all others.

Example: *Garth the Invader has 1500 troops at his disposal. If he commands them all himself (assuming he has sufficient CP), his maneuver and control rolls would be at -50 when not in formation. If he gives 500 each to 3 subordinate leaders, the penalty drops to -30. If each of his subordinates have their own subordinate leaders to take care of 100 troops each, the penalty drops to -10. Remember that such delegations are subject to the restrictions of each leader's CP.*

LEADERSHIP RATING PENALTIES (23.1.4)

The Leadership Rating of a leader can be decreased due to his unit's command structure when:

- He exceeds his Command Potential (see Section 23.1.1)
- His unit has too many command layers (see Section 23.1.2)
- He or one of his subordinates is directly commanding too many combatants (see Section 23.1.3)

Note: *This sort of thing is unfortunately common in military systems where leaders are not necessarily chosen for their ability.*

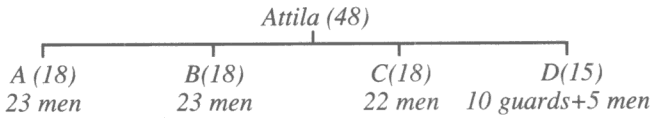
Example: *Attila No Fun is assembling an army. He is 8th level and has a Pr/Em average of 84 = (78 + 90) ÷ 2. Last year he attended a seminar on Looting, Burning, and Pillaging and obtained one skill rank in Leadership; he also has 2 skill ranks in Recruitment and 3 in Military Organization. From Table T-15, we see that his characteristics are:*

LR = 1.4 x 8 = 11.2 (rounded up to 11).
RP = 17 x 8 = 136
CP = 6 x 8 = 48

His GM informs Attila that he has more than 136 levels of available recruits (see Section 23.2.1), so he chooses to spend his RP in the following way:

3 x 6th lvl leaders ..... cost 18 RP (6 each)
1 x 5th lvl leaders ..... cost 5 RP (5 each)
10 x 4th lvl men (personal guards) ... cost 40 RP (4 each)
73 x 1st lvl men (combatants) ..... cost 73 RP (1 each)
***Total cost:** 136 RP*

Thus Attila's band consists of 87 men. He only has a CP of 48, so he cannot effectively give orders to all 87 at once, but this is what subordinate leaders are for. The 6th level leaders have a CP of 18 each and the 5th level leader has a CP of 15. Attila organizes his men as follows (CPs are in parenthesis, leaders A, B, and C are 6th level, leader D is 5th level):



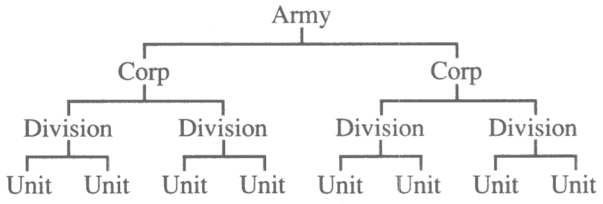
The total CP cost to Attila is 34.5 = 9 + 9 + 9 + 7.5, which is rounded up to 35. Leaders A, B, and C are exceeding their ability by a total of 14 CP, half of which are passed on to Attila. If Attila had no unused CPs, this would reduce his LR by 7. However, Attila has 13 unused CPs, so his LR remains as 11.

In addition, no leader commands more than 50 combatants, so the unit receives a LR bonus of +5 when in formation (see Section 23.1.3).

STRATEGIC COMMAND (23.1.5)

A GM can apply this same command structure to larger military organizations. Just have "division commanders" whose direct subordinate leaders are actually the leaders of units that operate independently on a tactical level. A GM may even have "corp commanders" whose direct subordinate leaders are division commanders **and** "army commanders" whose direct subordinate leaders are corp commanders.

Note: *Army, Corp, and Division are not medieval terms and are only used to describe command structure concepts.*



23.2 GENERATING A UNIT

The following steps need to be followed to generate a unit.

1) Get a Unit Leader — Develop a leader or use a character that already exists. Particularly important are his: level, Pr stat, Em stat, Leadership skill rank, Military Organization skill rank, Tactics skill rank, and Recruitment skill rank. These factors can be used to calculate his Leadership Rating, Command Potential and Recruiting Potential. See Section 22.0 for more details.

2) Recruit Subordinate Leaders and Combatants — It is up to the GM as to how successful the leader is in recruiting troops. His world system will determine what they demand for payment. A suggestion is to first roughly decide on the command structure desired and how many subordinate leaders it will require. Subordinate leaders should usually be the first ones sought out so that they can help with recruitment.

See Section 23.2.1 for a sample recruiting system. A GM can use this as a template for a recruiting system for his world.

3) Determine the Command Structure — Each combatant and subordinate leader must be assigned to the command of the leader or to one the other subordinate leaders. See Section 23.1 for a complete discussion on how to arrange this command structure.

4) Calculate Average Combatant Characteristics — It is up to the GM to determine certain average characteristics for the combatants in the unit: OB, DB, Hits, and Experience Level. The Generic Unit Table T-25, *ChL* Table 15.5.3, and *C&T* may be of assistance in this, but these may be modified by the GM.



5) Generate the Unit Stats — Roll 1–100 for each of the Unit Stats: Discipline, Survivability, Ferocity, and Endurance (see Section 19.1). The bonuses for these stats can be modified by racial stat bonuses given in Table T-13. A GM can use any of the normal stat generation optional rules (see *ChL*) for unit stat generation. Alternatively, a GM can decide to base each stat on: 50 + a luck roll result (based on the number of combatants in the unit). In some cases, the GM may wish to determine these Stats himself.

6) Chose a Unit Type — Just choose one of the unit types outlined in Section 20.0 or a unit type defined by the GM.

7) Develop the Unit's Level 0 Skills — Total the unit's DPs (use its unit stats and Table T-12) and then perform level 0 unit skill development as outlined in *ChL* Section 3.2. Remember a unit develops the unit skills outlined in Section 21.0 based upon its unit development point costs given in Table T-14. Keep track of the skill ranks developed for possible use when the unit takes casualties (see Section 23.4).

8) Develop the Unit's Level 1 Skills — Perform level 1 unit skill development as outlined in *ChL* Section 3.2. Keep track of the skill ranks developed for possible use when the unit takes casualties (see Section 23.4).

9) Determine Total Bonuses and Characteristics — All of the unit's skill bonuses and characteristics (see 19.2) should be calculated and recorded.

10) Allocate DPs for the Next Level — A unit should allocate its DPs for its next level. A GM may wish to skip this step and allow units to allocate DPs when they actually advance a level.

11) Outfit the Unit (if necessary) — A unit can be equipped at any point during the generation process (GM discretion).

RECRUITING (23.2.1)

This section presents a sample recruiting system. A GM can use this as a template for creating a recruiting system for his world. To determine how many recruits are available to a leader, refer to the Recruiting Chart using the leaders Recruitment skill bonus (see Section 22.1). A leader's RP determines his "maximum" recruiting area. Alternatively, he may choose to recruit in any lesser area.

The area that a leader decides to recruit in will determine how much time recruitment will take **and** the available *recruitment levels* (i.e., the number of levels of personnel willing to join up). In the given area, a leader may attempt to recruit as many combatants and subordinate leaders as he wants as long as the sum of their levels does not exceed the available recruitment levels indicated for his chosen recruiting area.

RECRUITING ATTEMPTS

A leader may automatically recruit (i.e., no maneuver roll) a combatant or subordinate leader whose level is less than or equal to half of his own level. Normally, this is not a specific individual, but rather a combatant/leader of a certain level.

If a combatant/leader's level is greater than half of the recruiting leader's level, the recruiting leader must make a successful static maneuver (i.e., roll 101+) to recruit the combatant/leader. This roll is modified by the recruiter's Recruitment skill bonus and by -25 for every level that the combatant/leader's level exceeds the recruiting leader's level. Even if a leader fails his maneuver roll to recruit a combatant/leader, his available recruitment levels are still reduced by the combatant/leader's level.

Note: *If a recruiter spends less than the required time, a GM may wish to allow the recruiting of a proportional part of the available levels.*

RECRUITING CHART					
Recruitment Skill Bonus	Maximum Area Affected *	Average Time Required	AVAILABLE RECRUITMENT LEVELS Sparse Population	Moderate Population	Dense Population
≤ 0	None	None	0	0	0
1 – 25	Town	5 days	5	30	80
26 – 50	Regional Countryside	10 days	20	90	200
51 – 75	Open City	20 days	100	400	1500
76 – 100	Territory †	1 month	500	1800	8000
101 – 130	Province †	6 months	2000	12000	40000
131+	Country †	1 + years	10000	50000	100000

Note: This chart is not used for levies and press gangs.

* — A leader's RP determines his "maximum" recruiting area. Alternatively, he may choose to recruit in any lesser area.

† — Most leaders will not approach these recruiting limits, but if a number of leaders are operating in an area, these limits may come into play.

SUBORDINATE LEADERS

If a subordinate leader is recruited, his characteristics can be generated as follows:

- Roll his Pr and Em stats (or use an average of 60)
- Determine his LR, RP, and CP by referring to the Generic Leaders Chart in Section 22.3

Example: *An 8th level leader, Munty, has a Recruitment skill bonus of 55 and wants to recruit combatants for a unit. He could recruit in an open city, but decides instead to recruit in the regional countryside. The GM informs him that the area has a moderate population, so that he may have 90 available levels of recruits if he spends 10 days recruiting. Munty decides he wants to try and recruit 3rd, 5th, and 10th level subordinate leaders and as many 1st and 2nd level combatants as possible.*

He tries to recruit the 10th level leader first, rolls a 80; but since he adds his Recruitment skill bonus of 55 and -50 (for the level difference), the result of 85 is not enough to succeed. However, it still costs him 10 of his 90 available levels.

Since Munty failed to recruit a 10th level leader, he realizes that he will need another subordinate leader. So he tries for a 6th level, a 5th level, and a 3rd level leader. He doesn't need to roll for the 3rd level leader (3rd level is less than half of 8th level). He rolls a 78 and a 63 for static maneuvers to recruit the 5th level and the 6th level, and his 55 Recruiting means that he is successful. This costs him 14 = 3+5+6 of his 80 remaining recruiting levels, so he has 66 left. Munty can now recruit any combination of 1st and 2nd level combatants whose levels total up to 66.

TRAINING TIME (23.2.2)

When a unit is first formed, it requites an intensive training period to turn it into a cohesive fighting force. After this training is complete, the unit may operate as a unit and it may use the skills it has developed.

The time required to train a unit is based on the type of soldier. We present some sample times below

Type	Time
Professional Soldiers	6 wks
Peasants	9 wks
Slaves	14 wks



UNIT GENERATION EXAMPLE (23.2.3)

This is a step-by-step example of the unit generation process outlined at the beginning of Section 23.2.

Example: *(1) Joseph Finster, an 8th level Rogue, wants to form a fighting group. He sends out a call far and wide. He has an Empathy of 80 and a Presence of 79 for an average of 79.5. Round up the fraction and Joe has a Pr/Em average of 80. He has 6 skill ranks in Leadership, 5 skill ranks in Recruitment, 6 skill ranks of Military Organization (MO). This gives him a Leadership Rating of 11.2 rounded to 11, a Recruitment Potential of 136, and a Command Potential of 48.*

(2) He wants to form a light infantry unit with as many combatants as he can handle. He would like to organize the force by delegating one-third of the force to each of three subordinate leaders.

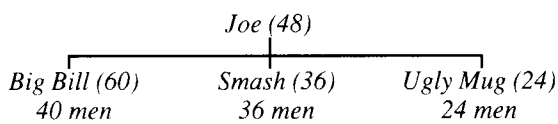
[This example assumes that the GM determines available recruits himself and doesn't use the recruiting system outlined in Section 23.2.1.]

With these goals in mind, Joe sets about recruiting his subordinate leaders. He posts signs in the usual places, and contacts some old buddies. The GM rolls the dice a few times, and decides that 12 NPCs apply for jobs. Assuming that he can make his Recruitment static maneuver rolls, Joe hires:

Big Bill .....6th level.....60 CP
Smash .....6th level.....36 CP
Ugly Mug .....4th level.....24 CP

After a couple of weeks (GM decides), Joe has also recruited 100 1st level troops with his subordinate leaders' help. Joe decides this is enough (note that Joe cannot get recruits based on the subordinate leaders' RPs). He has spent 6+6+4=16 RP on leaders, and 100 on troops, for a total of 116. He could recruit 20 additional levels of men, if he wanted to take the time.

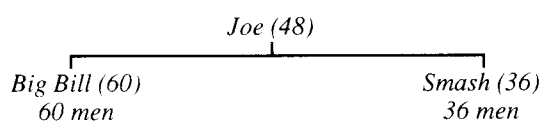
(3) Joe thinks about organizing the unit as depicted below (the CPs of leaders are in parenthesis):



Joe has arranged his unit so that no subordinate leader is commanding more troops than he is able to. Unfortunately, CP costs are 60 = 30+18+12 for the leaders, which is 12 more than Joe has, so 6 would be deducted from his LR.

Joe decided not to place Ugly Mug under Big Bill's command, because Joe only has a MO skill rank of 6 and would suffer a -20 LR penalty for a two layer command structure (see Section 23.1.2). If Joe had a MO skill rank of 11, he could place Ugly Mug under Big Bill's command, only use 48 = 30+18 CPs, and would suffer no LR penalty.

Joe decides his best option is to get rid of Ugly Mug and four combatants. Joe's unit ends up with the following command structure:



The maximum number of combatants a leader is responsible for is 60, so Joe will get a +0 to his LR when the unit is in formation and a -10 when it is not in formation (see Section 23.1.3).

(4) & (11) When a survey is conducted of the men (GM rolls and decides), Joe finds that most have weapon skill with spear and handaxe (average OBs of 35 and 25 respectively). He decides that the spear will be their primary weapon and the handaxe their secondary. He also decides that they will wear some sort of armor and shield. He purchases chain shirts for the whole lot — "Nutin' but the best for my boys" — and normal shields. DB for the unit is 5 (the unit average) plus 20 for the shields for a total DB of 25. From ChL Table 15.5.3, we see an average 1st level Fighter has 25 hits, so the unit's Hit Point Total starts at 2400 = 96x25.

(5) Temporary Unit Stats are rolled now and the GM says Potentials can be rolled later if necessary:

Dis = 54
Sur = 64
Fer = 32
End = 97

(6) Joe decides on a unit type: Light Infantry (see Section 20.0).

(7) & (8) After an intense training program (see Section 23.2.2) the GM decides to let the group of combatants "become a unit," and allows them to develop level skills. The unit's basic skills (see Sections 20.2 and 21.1) are the Four Standard Movement Skills, Campsite Preparation, Drop/Retrieve Packs, Equipment Maintenance, Fill in the Ranks.

Looking on Table T-12, we see that he unit has 25.9 DPs = 5.5+6.3+4.6 +9.4, rounded to 26 DPs per level. They get to develop skills twice: once for the "zero" level, and once for 1st level (this could require several more weeks of training). Subsequent skill development can only occur after the unit has enough experience to advance a level.

"ZERO" LEVEL DEVELOPMENT:

Skill	*Ranks Developed*	*DP*
Line (formation)	*1*	*2*
Column (formation)	*1*	*3*
Divided Defense	*1*	*2*
Evade	*1*	*3*
React to a Melee Attack	*1*	*3*
Primary Weapon, Spear	*2*	*5*
Secondary Weapon, Handaxe	*1*	*1*
Physical Training	*2*	*4*
Disengage	*1*	*3*
		Total *— 26*

1ST LEVEL DEVELOPMENT:

Skill	*Ranks Developed*	*DP*
Line (formation)	*2*	*7*
Wedge (formation)	*1*	*2*
Divided Defense	*1*	*2*
Disengage	*1*	*3*
Primary Weapon, Spear	*2*	*5*
Secondary Weapon, Handaxe	*1*	*1*
Physical Training	*1*	*1*
Disengage	*1*	*3*
Camouflage	*1*	*2*
		Total *— 26*

(9) The unit's spear OB is 52 = 35 (average combatant OB) + 20 (unit OB) -3 (Fer unit stat bonus). Its handaxe OB is 32 = 25+10-3. The unit's new hit points due to unit skill ranks is 1296 = (4.5 x 3) x 96; so the unit's new Hit Point Total is 3696 = 1296 + 2400 (starting). This total can be increased by the unit's leaders' hit points. PC hit points are usually kept track of separately.

(10) The GM decides not to require DP allocation for 2nd level skill development.

All in all, Joe's band is quite a hardy lot. They choose to dub themselves Joseph's Jokers and set off in search of fame, women, and plunder. But, not necessarily in that order.

23.3 ADVANCING A LEVEL

When a unit accumulates enough experience points to advance a level (see Section 19.2), a unit must perform several actions as outlined in *ChL* Section 5.3 and in this Section.

- "Stat gain rolls" must be made to determine if the temporary unit stats rise or fall.
- Skill ranks increase for the skills which have been learned and developed since the last level advancement.
- The skill development process is performed again as described in *ChL* Section 3.2. Keep track of the skill ranks developed for possible use when the unit takes casualties (see Section 23.4).
- Finally, any skill rank bonuses whose components have changed must be re-totaled.



23.4 NEW RECRUITS

After a battle, a unit must recover its stragglers and heal its wounded (see Section 18.0). Then the unit must recruit new combatants if it wishes to return to full strength. A GM should use a process similar to the one outlined in Section 23.2.1 to determine the availability of recruits. Alternatively, as a leader of a unit increases his Leadership, Recruitment, and Military Organization skill ranks, he may want to increase the size of his unit and change its command structure. In either case, a period of re-training is required and the unit may lose experience as outlined in the New Recruit Chart.

Note: *A GM should allow new recruits to be added to a unit only once between level advancements and battle losses. That is, a unit should not be allowed to replace 30% of battle losses in 10% chunks.*

NEW RECRUIT CHART

% New Recruits *	Re-Training Time	Exp. Pt. Loss
1-10	1 week	0%
11-20	3 weeks	5%
21-30	6 weeks	10%
31-40	10 weeks	15%
41-50	15 weeks	20%
51-60	5 months	30%
61-70	7 months	40%
71-80	9 months	50%
81-90	1 year	75%
91+	†	†

* — Based on: # new recruits ÷ unit's size (before casualties). If replacing battle casualties the EP loss is based upon the total casualties.

† — Unit dissolves and must be regenerated.

COMBATANT CHARACTERISTICS

As new recruits enter a unit, the average combatant characteristics may change (e.g., OB, DB, hits, etc.). In turn, this requires the recalculation some of the unit's characteristics. A GM may decide to ignore this if the new recruits have approximately the same or better capabilities as the old members of the unit.

EFFECTS OF UNIT EL LOSS

If a unit's EP loss due to new recruits causes its Experience Level to drop, the GM should decide what and how many skill ranks it loses. If the skill ranks developed each level has been recorded, this is straightforward. Otherwise, the GM may just want to reduce each skill rank by one for every Experience Level dropped.

Example: *The Light Brigade a 5th level light cavalry unit with 58000 EPs, takes 50% casualties, all of which are slain. Returning to its base area, it recruits new members and spends 15 weeks re-training. Its EP loss is 17400 = 58000 x 30%, so they have 40600 EP left. Thus, the Light Brigade is now 4th level and loses all skill ranks developed between 4th and 5th level. The GM rules that the new recruits have*

PART V
OPTIONAL MATERIAL

This part of *War Law* provides general information and a number of optional rules and guidelines for a ***Rolemaster*** GM wishing to run a military campaign. A GM should examine this material carefully before using it in his campaign.

The pricing information provided is included as an example of how a GM can interject military costing into his campaign. Each GM should modify the figures provided to fit his world system and campaign realities.

24.0 CAMPAIGN NOTES

24.1 MAINTAINING TROOPS

HIRING TROOPS

There are many different ways of building an army — two of main ways are: by conscription and by hiring soldiers. Conscripts are likely to have lower morale, and are usually less skilled than professional soldiers.

The costs of hiring men to fight will vary greatly depending upon the situation and culture, but some very rough, general guidelines are given in the Weekly Pay Chart. We suggest that a specific unit's Experience Level for this purpose be modified by +1–2 for heavy troops (i.e., usually troops in chain and plate) and by +1–2 levels for specially trained troops (e.g., trackers, archers, engineers, etc.).

WEEKLY PAY CHART

Foot Soldiers Exp. Lvl	Pay	Cavalry Exp. Lvl	Pay	Officers Exp. Lvl	Pay
1	1–3 bp	1	2–6 bp	1–3	5–25 bp
2	3–6 bp	2	6–12 bp	4-6	2–8 sp
3	7–10 bp	3	12–20 bp	7-8	6-10 sp
4	1–3 sp	4	2–6 sp	9–10	1–3 gp
5–6	4–7 sp	5–6	8–14 sp	11–12	4-6 gp
7+	8+ sp	7+	2+ gp	13+	7+ gp

CONTINUING COSTS

Every army runs on it's stomach, and a unit can only fight if it has equipment and that equipment is well maintained. Therefore, it is necessary for a leader to spend a certain amount of money on housing, feeding, clothing, equipping, and maintaining his troops. The Food and Housing Chart provides general guidelines for weekly expenditures. The GM should vary this rate to suit his own currency standards.

Maintenance costs are 10% of equipment costs per month. Horses increase costs by 50% per man per week. The weight of one weeks rations is about 14 lb per man. Many times an army must forage for its food from the countryside.

If these requirements are not met, the troops will suffer negative moral modifications and will start to desert (see the Logistics Effects Chart). The GM may wish to apply a unit's Discipline bonus to lower these desertion percentages and negative morale modifications.

FOOD AND HOUSING COSTS CHART

# Troops	Housing Cost Per Man	Feeding Cost Per Man
1 – 10	14 cp	7 cp
11 – 50	13 cp	6 cp
51 – 100	11 cp	6 cp
101 – 200	10 cp	5 cp
201 – 500	9 cp	5 cp
501 – 1000	8 cp	4 cp
1000+	7 cp	4 cp

LOGISTICS EFFECTS CHART

Normal Requisite 'Cost Per Man' Spent	Weekly Desertion*	Morale Mod.
100%	1–2%	-0
90%	3–10%	-10
80%	11–20%	-20
70%	21–30%	-30
60%	31–40%	-40
50%	41–50%	-50
40%	51–60%	-60
30%	61–70%	-70
20%	71–80%	-80
10%	81–90%	-90
0%	91–100%	-100

FORAGING

In order to feed an army on the move, foraging bands are often sent out to find food. The number of troops required depends on the type of terrain foraged in (see the Foraging Chart).

These troops are not available for battle and run the risk of being lost to enemy action — 1D10 - 7 percent will be lost each week of foraging in hostile territory. A recall of the foraging bands will bring back 10% of the army every four hours.

Normally troops can only forage in neutral or hostile territory. A foraging army may march no more than 8 hours a day, so that the foraging bands may keep up with the army. Each week spent in the same area will increase the percentage of troops required by 10%. If this percentage increases above 50%, foraging is totally ineffective.

Some troop types like supply units, Elves, Rangers, and horse nomads can live off the land and do not have to meet these foraging requirements. Such troops usually have large skill bonuses for foraging (or scrounging). Such troops are also very effective for meeting an army's foraging requirements — multiply each group of foraging troops by 1 + 2 x (foraging skill bonus ÷ 100). For example, 100 foragers with a foraging skill bonus of 55 would count as 210 foragers (100 x [1 + 2 x 0.55]).

FORAGING CHART	
Terrain Type	**% of Force out Foraging**
fertile farmland	10%
average farmland	20%
uncultivated	30%
wilderness	40%
desolation	50%

24.2 BACKGROUND INFO

THE COMBATANTS

The Foot Soldier — The bulk of any army is made up of foot soldiers. In many medieval settings, these are mainly the poor people of a realm who have been pressed into service by the local lord. A foot soldier's may serve as an archer, spear thrower, pikeman, swordsman, etc. In any case, these troops are not usually very skilled nor very happy to be on a battlefield. But the primary effect of foot soldiers is that there are usually a lot of them and they are often considered to be expendable.

Cavalry — Around the year 378 AD, a large force of Gothic cavalry totally decimated a 40,000 man unit of Roman soldiers, the Roman Emperor and all his generals. This was the beginning of the cavalry age in our world. For the next 1000 years, the cavalry soldier was supreme and would not see a serious threat from infantry until the advent of the long bow, pike, and "gonne" of around 1300. Cavalry were armed and armored in a wide array of styles, but usually he carried one long range weapon (e.g., lance, bow, javelin, etc.) and one short ranged weapon (e.g., axe, sword, spear, etc.).

A Cavalry man was often a man of means. He probably purchased both his mount and accessories. While mounted, he possessed speed, maneuverability, mass, and was very difficult to strike.

ARMY ORGANIZATION

Army organizations have varied throughout the ages from enraged mobs to highly specialized units. An army was often a fairly arbitrary conglomeration of men and equipment from a particular national origin and time period. There was always a commander, but the number of people he actually commanded varied from culture to culture and time to time. What follows is only a general overview of four, nonspecific cultural "types."

Clans, Tribes, and Such — Within these societies there was little organization. There would be a clan or tribal leader who had gained his position by strength of arm or cunning. This man (or occasionally a woman) and his more powerful relatives and friends, would lead the rest to battle. They would usually have some sort of favorite tactic, but were not particularly effective against an organized foe. However, they were usually very fierce and not easily quelled.

General Military Societies — In many cases, ancient societies were based on and molded by military pursuits. The Vikings, or Norse, are a prime example of this. The military hierarchy for these societies was usually very simple: King, village or clan leader, soldier. Perhaps the most important leader, though, was the village or clan leader. In lands where villages were wide spread or clan loyalties were strong, it was more up to these leaders than the King as to whether or not a particular campaign would be pursued.

Feudal Societies — In a feudal society, there were often five basic types of military leaders: Kings, Dukes (Earls), Barons, land holders, and mercenaries. None of these leaders had much in the way of standing armies — such organizations were expensive. So each leader would depend on the next lower man to provide units in case of need: King on Duke, Duke on Baron, Baron on land holder, etc. The reason for this was that most "soldiers" were actually farmers or regular folk who would serve a specified military term every year (usually about 40 days or so).

What standing armies there were consisted of the elite who did nothing but soldier. These were the knights of England and the horse soldiers of Normandy. But all levels of leadership would use mercenaries to augment their armies as needed. Additionally, a military leader would often align himself with another leader, so that they could help each other on a case by case basis.

Imperial Societies (Roman) — The prime example of an imperial society in our world is the Roman Empire. During the centuries that the Roman Empire ranged the known world, they were a fierce and nearly unbeatable force. This was due particularly to their highly organized form of warfare.

Primarily, the Roman armies were organized into several levels. On the lowest level was the auxiliary who served as a foot soldier, archer, or slinger. This was a common citizen who was pressed into, or had volunteered for duty. Above these were the veteran legionaries and the cavalry (usually well-to-do individuals). The leaders were also either well-to-do individuals or men of political consequence.

A typical Roman Legion was composed as follows: 1 century = 100 men; 1 cohort = 600 men; 1 legion = 6,000 men; 6 centuries = 1 cohort; 10 cohorts = 1 legion. Additionally, 300 cavalry were attached to each legion and were divided into 10 squadrons of 30 men each.

Toward the end of the 3rd century AD, the Roman organization became more cavalry oriented and cavalry comprised fully one-third of the ranks. By the 4th century, this percentage had swelled to half. By this time, the cavalry age had been fully established and the horse soldier began to play an increasingly important role in warfare.

Civilian Soldiers — Some societies required military training (up to a year in some cases) for the general populace. Greek city-states like Athens are the best examples of this.

Mercenaries — Many historical mititary forces consisted primarily of hired professional soldiers.

25.0 OPTIONAL RULES

In this part of *War Law*, some rules are introduced which may add detail to your game, but can make it more complex and time consuming. The GM will have to decide when to implement specific optional rules, if ever. The GM and players should feel free to modify the existing rules and add their own — this is after all, a role playing game.

25.1 FORMATIONS AND DENSITY

The Refereed Game assumes that each unit in a battle is in a formation and that the area occupies meets the unit/formation density requirements (see Section 13.1). Normally, the area required to hold a unit is equal to the number of combatants in the unit times the formation's Density Rating (see Table T-6).

If a unit is forced to occupy an area that is insufficient for its density requirements it will assume Open Horde formation and will be subject to certain penalties. This situation is called overcrowding.

To determine overcrowding penalties for a unit, determine the Density Rating for the unit by dividing the area occupied by the unit (in sq.ft.) by the number of combatants in the unit. Then refer to Table T-19. These tables assume that the unit has already assumed Open Horde formation.

Note: *There will be certain combat situations when men are not in a particular formation, and may be at a high or low density. For example, a battle on a bridge is likely to be an unordered mass of bodies, while a cavalry unit pursuing fleeing troops through a forest is likely to be scattered and haphazard. In any case, the "formation" is Open Hoard by default, but the density will vary greatly.*

UNIT MANEUVERS

While in a particular formation, it is easier to perform certain maneuvers than others. The Optional Formation Table T-18 lists specific maneuver modifiers for specific. If this table is being used, then the maneuver mods from Table T-5 should not be used.

UNIT FRONTAGE

In the Refereed Game, the GM estimates how many combatants are on each edge of a formation. This material and the Formation Size Chart help make this process more exact.

A unit can usually be viewed as consisting of rows and columns of combatants with the rows parallel to the front of the unit frontage and the columns perpendicular to it. The Optional Formation Table T-18 can be used to estimate row and column length. Two numbers are given: the row length (i.e., the unit's *frontage*) and the column length (i.e., the unit's *depth*). The numbers given are for men. To find the values for a cavalry formation multiply frontage by 2 and depth by 5.

25.2 SEQUENTIAL COMBAT

Attacks in combat do not really occur simultaneously. Longer weapons should have a slight advantage over shorter weapons, since they will often have the first opportunity to strike. To simulate this, this section's optional rules allow certain units to resolve all or part of their melee attacks before their targets attack.

For this purpose, weapons have been broken into five weapon categories based on weapon length and means of delivery. The Sequential Weapon Attack Table T-22, details these categories: I, II, III, IV, and V. A lower numbered category has a length/delivery advantage over a higher numbered category.

Note: *This process can dramatically increase the complexity of the combat process. It does not work as well for long WL turns (i.e., 5+ minutes).*

RESOLVING NON-SIMULTANEOUS COMBAT

After all attacks have been declared in the Melee Phase, each attack should be examined using Table T-22. Each attack that has a higher category number than its target should resolve its attack before its target. Then the percentage of damage (i.e., casualties and hits) indicated by Table T-22 is applied before the target gets to resolve its attack. An 'S' result from Table T-22 means that the two attacks are truly simultaneous and damage is applied simultaneously.

Because a unit with longer weapons gets to inflict damage on its target before the target attacks in turn, the unit with the shorter weapons usually has fewer and less effective combatants left to attack with.

Example: *Calgor's Crushers is a band of 41 mercenaries. Their primary weapon is the battle axe: OB 45, AT 16, DB 25, 2000 hit points. They face Joseph's Jokers who also number 41. Their primary weapon is the spear: OB of 52, AT 13, DB 20, Shield 20, 1500 hit points.*

The units spread out so its 41 on 41. Since the Jokers are armed with spears, Category II weapons, they will strike before the Crushers' battle axes, Category III.

The Jokers' OB is 52 minus the Crushers' DB of 25. The Jokers roll a 67 on their luck roll which adds +5 for a total of +32. Against AT 16, the spears of the 41 Jokers do "5.1 0.10," for a total of 209 hits and 4.1 casualties. The roll for the extra casualty is '43' so the casualties delivered is 4. When Table T-22 is consulted, we find that Category II versus Category III weapons indicates that 25% damage is applied to the Crushers before they get to attack. So the Crushers immediately take 52 hits and 1 casualty.

The Crushers attack with a OB of 45 minus the DB of 20 and the shield bonus of 20. The Crushers roll an 87 on their luck roll which gives them an additional bonus of +11 for a total OB of +16. Against AT 13, the 40 battle axes (i.e., reduced by one) inflict a "19.6 0.17," for a total of 784 hits and 6.8 casualties. The roll for the extra casualty is '87' so the casualties delivered is 6.

This damage is inflicted on the Jokers, and the Crushers take their remaining 3 casualties and 157 hits.

25.3 CAVALRY

TARGETING HORSES

It is possible for a unit attacking cavalry to target the mounts instead of the riders. In this case the statistics for the horses (e.g., AT, OB, DB) should be used instead of the rider's. This requires keeping separate records for the mounts and the riders. Dismounted riders become infantry. This can dramatically increase the complexity of play and the record keeping requirements.

TRAMPLING

The GM may wish to allow a cavalry unit a trampling attack in addition to its normal attack. If the non-simultaneous rules are being used, hooves are weapon category V. Only one trample attack per horse in the unit is allowed.

25.4 CASUALTIES & AT

Some types of armor are more likely to result in recoverable casualties than others. For example, when a man in full plate mail is incapacitated, his wounds are likely to be less severe than if he had no armor at all. Section 8.0 provides some suggested casualty recovery percentages. The chart below gives some AT modifications to the Section 8.0 casualty recovery percentages.

A GM may also want to decrease the deserter recovery percentage by an amount equal to half (round up) of the AT mods given in the chart.

CASUALTIES AND ARMOR TYPE CHART

AT	Mod	AT	Mod	AT	Mod	AT	Mod
1	-5	6	+5	11	+15	16	+15
2	-5	7	+5	12	+20	17	+10
3	+5	8	+10	13	+5	18	+15
4	+10	9	+5	14	+10	19	+20
5	0	10	+10	15	+15	20	+25

25.5 PLAYER CHARACTERS & HEROES IN COMBAT

Section 10.1 provides some guidelines for handling player characters and important individual NPCs in large-scale combat. This section provides a more detailed method of handling character encounters and activity during battles.

Any combat directly involving a character may be resolved separately from the unit versus unit conflicts. The GM may use the Character Encounter Severity Chart and Table T-24 to provide encounters for characters during melee combat.

Players can decide how heroic they want their characters to be by choosing a encounter roll modification between -3 and +3 before the roll is made (the GM may wish to modify the roll too). In addition, the encounter roll should be modified by an amount (-3 to +3) based upon the attack ratio (see Section 16.5.3) for the unit that the character is in.

CHARACTER ENCOUNTER SEVERITY CHART

Roll	Encounter Type	Situation	Mods
≤ 3	None	Player's choice	-3 to +3
4–5	A *	Unit attack ratio	-3 to +3
6–7	B *		
8	C *	* — Roll on Table T-24.	
9	D *		
9+	E *		

RESULTS FROM TABLE T-24

"Fight -10 Foe" — The foe is an enemy whose OB is 10 below the enemy unit's OB. Combat continues until one of the combatants is incapacitated or successfully disengages. Similarly, if the result indicates a foe at +20, his OB will be 20 above the unit's OB. If it doesn't specify, then the soldier's OB is the same as his unit's OB. DBs are assumed to be the same as the unit's DB.

"Fight # foes for x rounds" — The "rounds" referred to on the table are 10 second *AL* rounds. PC must fend off '#' enemies who have the unit's average OB for 'x' rounds, after which time it is assumed that the situation has changed due to reinforcements, etc. If a character is engaged in personal combat at the end of a *WL* turn, the combat continues to the next turn (barring retreats by one of the units). When a character defeats a foe or runs away successfully, he should roll for another encounter at the end of the next Morale Phase.

If an encounter isn't appropriate for a certain situation, the GM should alter it to his needs. The encounter descriptions are intended as guidelines only and the GM will have to fill in the details for the players.

25.6 SIEGE WEAPONS & FORTIFICATIONS

Due to the amount of detail describing units and combat, there is not room in this book for detailed rules on siege warfare, but the following sections offer some guidelines for handling siege weapons and heavy defenses. This subject will be treated in greater detail in upcoming releases.

SIEGE WEAPONS (25.6.1)

This section provides an attack chart, critical chart, and a fumble chart for siege weapons. It also provides statistics and prices for various siege weapons (see also Sections 16.6.6 and 16.6.7). See Section 25.15 for information about the amount of damage that the targets of siege weapons can take.

Ballistae — Ballistae work with a windlass and bow string which will hurl either a rock or large "arrow." The rock-throwing ballistae will throw a 25 to 50 pounds stone ball between a distance of between 350 and 450 yds with decreasing accuracy (at extreme ranges accuracy is very bad). These engines are better employed against personnel than city walls. Arrow-throwing ballistae fire 5 or 6 lb., iron-tipped arrows out to ranges of 450 to 500 yards. These arrows may be employed against siege towers, other engines, and personnel. A common defense against these arrow throwers is a huge net of cabled cord which either deflects or entangles the arrows.

Catapults — Catapults are built on a heavy frame, either wheeled or not. The rock, dead horse, or ball of flaming hay is placed in the cup or sling at the end of the arm. The arm is held at the pivot end in tightly twisted rope and drawn down by use of a windlass. It will hurl rocks up to 65 lb. out to a maximum range of 700 yards. If the catapult is armed with a cup rather than a sling, the maximum range is cut by 25%. City walls are susceptible to the massed force of several of these engines.

Trebuchets — These are rather ponderous machines that are usually built on site as they are needed. The trebuchet uses an arm up to 50 ft. in length. When the sling end of the arm is released, a counterweight of up to 20,000 lbs falls, yanking the sling forward. This action will throw a 300 lb. rock up to 375 yards. The force exerted by a trebuchet thrown rock is sufficient to shatter stone walls.

Battering Rams — These are huge (usually iron-tipped) poles that are brought up to a door or wall and used to pound away until something gives. A ram can be carried and entirely held by the men that swing it. Alternatively, it can be suspended from a frame that supports the weight of the ram while still allowing it to be swung.

This second technique is much more effective because the men do not have to expend effort holding the ram up. In addition, the ram can be protected because the frame can be part of a siege tower or a testudo (i.e., a covered frame on wheels, also called: "tortoise," "penthouse," or "sow").

Drills — These are sharp-tipped screws or levers that are used to attack the foundations of walls. They pick out mortar between stones in walls and to eventually pry out the stones themselves. A drill is also called a "mouse" or a "bore." A drill is most effective if protected by a siege tower or testudo.

SIEGE WEAPON CHART

Name	Price (gp)	Ammo (lb)	Av. Crew	Range (yds)	Fum-ble	Rate of Fire *
Ballistae						
Light	75	25	8	350	4	1 / 3rnds
Heavy	100	50	11	450	5	1 / 5rnds
Catapults						
Light	100	25	5	300	5	1 / 8rnds
Medium	125	50	8	500	6	1 / 10rnds
Heavy	150	65	12	700	7	1 / 13rnds
Trebuchets						
Light	150	100	10	300	2	1 / 13rnds
Medium	200	200	15	350	3	1 / 15rnds
Heavy	250	300	20	375	4	1 / 20rnds
Battering Rams						
Light	—	100 ‡	5	—	2	2 / rnd
Medium	25	200 ‡	10	—	3	1 / rnd
Heavy †	100	300 ‡	25	—	4	1 / 2rnds
Drills						
Light	150	25 ‡	2	—	3	3 / rnd
Medium	175	50 ‡	6	—	4	2 / rnd
Heavy †	200	75 ‡	8	—	5	1 / rnd

* — The rate of fire is based on 10 second rounds.
† — Requires a structure for support.
‡ — Weight is listed only to determine maximum damage on Siege Weapons Attack Table.

SIEGE WEAPON CRITICAL STRIKE CHART

Roll	A	B	C	D	E
01–05	10	15	20	25	30
06–10	15	25	35	45	55
11–15	20	35	50	65	80
16–20	25	45	65	85	105
21–35	30	55	80	105	130
36–45	35	65	95	125	155
46–50	40	75	100	145	180
51–55	45	85	125	165	205
56–60	50	95	140	185	230
61–65	55	105	155	205	255
66	150	293	435	548	710
67–70	60	125	185	225	305
71–75	65	135	200	245	330
76–80	70	145	215	265	355
81–85	75	155	230	285	380
86–90	80	165	245	305	405
91–95	85	175	260	325	430
96–99	90	185	275	345	455
100	100	195	290	365	480

Note: Result is additional hits delivered to the target.

SIEGE WEAPON FUMBLE CHART

01–25	Flavius drops ammunition on foot. Crew out for 3 rnds laughing.
26–30	Ropes part with a loud twang. 3 rnds to repair.
31–40	Crewman loses 3 fingers in mechanism and unfortunately jam it. Takes 6 rnds to clear.
41–50	Disagreement about which direction is east causes aim to be off by 30° in a random direction.
51–60	Improper loading results in missile being hurled a grand total of 50 yds directly in front of the weapon (probably right in the middle of your own troops).
61–70	Winch ropes snap in two. Machine down for 2 hrs, minimum.
71–80	Flavius gets a hernia tightening winch. Winch ropes slip off track, jam mechanism. 4 hrs to sort it out.
81–85	Attempt to realign weapon causes inept crew to tip it over. Out 6 hrs for repairs.
86–90	Crewman slips in the mud, catching his arm in mechanism. Poor fool is permanently maimed. Worse, ammunition jams in winch, taking half a day for repairs.
91–95	Winch axle snaps, throwing shards of wood in all directions. 1–3 crewmen are killed as winding posts snap and cables flay them to shreds. 24 hrs to repair.
96–99	Flavius trips over winch release. Ammunition flies 200' straight up, to land directly on weapon. 1–5 crewmen killed. 2 days to repair.
100	With a groan and snap, water-logged cables give way. Your machine literally tears itself apart from stress during loading. 1–10 crewmen are mangled and shredded by flying parts. Machine is destroyed, and the emperor saw everything.

SIEGE WEAPON ATTACK CHART

	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
01–0x	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	01–0x
0x–18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0x–18
19–21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	19–21
22–24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	22–24
25–27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30A	20	25–27
28–30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	40A	20	28–30
31–33	0	0	0	0	0	0	0	0	0	0	0	10	0	0	10	20	0	0	40A	30A	31–33
34–36	0	0	0	0	0	0	0	0	0	0	0	10	0	0	20	20A	0	0	50A	40A	34–36
37–39	0	0	0	0	0	0	0	10	0	0	0	20	0	10	20	30A	0	0	50A	40A	37–39
40–42	0	0	0	10	0	0	0	10	0	0	10	20	0	10	30	30A	0	10	60A	50A	40–42
43–45	0	0	0	10	0	0	0	20	0	0	20	30A	0	20	30A	40A	0	20	60B	50A	43–45
46–48	0	0	0	20	0	0	10	20	0	10	20	30A	10	20	40A	40A	0	30A	70B	60B	46–48
49–51	0	0	10	20	0	0	10	30	0	10	30	40A	10	30	40A	50A	10	30A	70B	60B	49–51
52–54	0	0	10	30	0	10	20	30	0	20	30A	40A	20	30A	50A	50A	20	40A	80B	70B	52–54
55–57	0	10	20	30	0	10	20	40	10	20	40A	50A	20	40A	50A	60A	30A	40B	80C	70B	55–57
58–60	0	10	20	40	10	20	30	40A	10	30	40A	50A	30	40A	60A	60B	30A	50B	90C	80C	58–60
61–63	10	20	30	40	10	20	30	50A	20	30	50A	60A	30A	50A	60A	70B	40A	50B	90C	80C	61–63
64–66	10	20	30	50	20	30	40	50A	20	40A	50A	60A	40A	50A	70A	70B	40B	60C	100C	90C	64–66
67–69	20	30	40	50	20	30	40A	60A	30	40A	60A	70A	40A	60A	70B	80B	50B	60C	100D	90C	67–69
70–72	20	30	40	60A	30	40	50A	60A	30A	50A	60A	80A	50A	60A	80B	90C	50B	70C	110D	100D	70–72
73–75	30	40	50	60A	30	40	50A	70B	40A	50A	70A	90B	50A	70B	80B	100C	60C	80C	110D	100D	73–75
Maximum Result for 25 lb. Ammunition																					
76–78	30	40	50	70A	40	50A	60A	80B	40A	60A	70A	100B	60A	70B	90B	110C	60C	90D	120D	110D	76–78
79–81	40	50	60A	70B	40	50A	60B	90B	50A	60A	80B	110B	60A	80B	100C	120C	70C	100D	130E	120D	79–81
82–84	40	50A	60A	80B	50A	30A	70B	100C	60A	70A	90B	120B	70B	80B	110C	140D	80D	110D	140E	130E	82–84
85–87	50	60A	70A	90B	60A	70B	80B	110C	70A	80A	100B	130B	80B	90C	120C	150D	90D	120E	150E	150E	85–87
88–90	60	70A	80A	100B	70A	80B	90C	120C	80A	90B	110B	140C	90B	100C	130C	160D	100E	130E	160E	170E	88–90
Maximum Result for 50 lb. Ammunition																					
91–93	70	80A	100A	120B	80A	90B	110C	140C	90A	100B	130B	160C	100B	120C	140D	180E	110E	140E	170E	190E	91–93
94–96	80	90A	120B	140B	90A	100B	130C	160C	100A	120B	150B	180C	120C	140C	160D	200E	120E	150E	180E	210F	94–96
97–99	90A	100B	140B	160B	100B	120B	150C	180C	120B	140B	170C	200C	140C	160C	180E	220F	140E	170E	200F	230F	97–99
100–102	100B	120B	160B	180B	120B	140C	170C	200C	140B	160B	190C	220C	160C	180D	200E	240F	160E	190E	220F	250F	100–102
103–105	110B	140B	180B	200C	140B	160C	190C	220D	160B	180C	210C	240C	180C	200D	220F	260G	180E	210E	240F	270F	103–105
Maximum Result for 75 lb. Ammunition																					
106–108	120B	160B	200B	220C	160C	180C	210C	240D	180B	200C	230C	260D	200D	220D	240F	280G	200E	230E	260F	290G	106–108
109–111	130B	180B	220C	240C	180C	200C	230D	260D	200C	220C	250D	280D	220D	240E	260G	300G	220E	250E	280G	310G	109–111
112–114	140B	190C	240C	260C	200C	220D	250D	280D	220C	240C	270D	300D	240D	260E	280G	320H	240E	270F	300G	330G	112–114
115–117	150C	200C	260C	280D	220C	240D	270D	300E	240C	260D	290D	320E	260E	280E	300G	340H	260E	290F	320G	350H	115–117
118–120	160C	210C	280D	300D	230D	260D	290E	320E	260C	280D	310E	340E	280E	300E	320G	360H	280E	310F	340H	370H	118–120
Maximum Result for 100 lb. Ammunition																					
121–123	170D	220D	290D	310D	240D	280E	310E	340E	270D	300D	330E	360E	300E	320E	340G	380H	300E	330F	360H	390H	121–123
124–126	180D	230D	300E	320E	250E	300E	330E	360F	280D	320D	350E	380E	320E	340E	360H	400H	320E	350F	380H	410H	124–126
127–129	190D	240D	310E	330E	260E	310E	350F	380F	290D	340E	370E	400F	330F	360F	380H	420H	340E	370F	410H	440H	127–129
130–132	200D	250E	320E	340E	270E	320F	370F	400F	300E	350E	380F	420F	340F	380F	400H	440H	360E	390F	440H	470I	130–132
133–135	210D	260E	330E	350F	280F	330F	380F	420F	310E	360E	410F	440F	350F	400G	420H	460H	380F	410F	470I	500I	133–135
Maximum Result for 200 lb. Ammunition																					
136–138	220E	270E	340F	360F	290F	340F	390F	430G	320E	370E	430F	460F	360F	420G	440I	480I	400F	440F	510I	540I	136–138
139–141	230E	280E	350F	370F	300F	350F	400F	440G	330E	380E	450F	480F	370F	440G	470I	510I	420F	470F	550I	580I	139–141
142–144	240E	290F	360F	380F	310F	360F	410G	450G	340E	390F	460F	500F	380G	460G	500I	540I	440F	500G	590I	620I	142–144
145–147	250E	300F	370F	390F	320F	370G	420G	460G	350F	400F	470F	520G	390G	480G	530I	570J	470F	530G	630I	660J	145–147
148–150	260E	310G	380G	400G	330G	380G	430G	470G	360F	410F	480G	540G	400G	500H	560J	600J	500G	560G	670J	700J	148–150
Maximum Result for 300 lb. Ammunition																					

'F' Critical Result = An 'E' Seige Weapon critical and an 'A' Seige Weapon critical.
'G' Critical Result = An 'E' Seige Weapon critical and a 'B' Seige Weapon critical.
'H' Critical Result = An 'E' Seige Weapon critical and a 'C' Seige Weapon critical.
'I' Critical Result = An 'E' Seige Weapon critical and a 'D' Seige Weapon critical.
'J' Critical Result = An 'E' Seige Weapon critical and an 'E' Seige Weapon critical.

FORTIFICATIONS (25.6.2)

Section 25.15 provides specific guidelines for determining how much damage various fortifications can take. This section gives some very basic suggestions for the effects that fortifications can have on *WL* battles.

FORTIFICATIONS AS WEAPONS

Units in a defensive position often use some sort of fortification. This may range from a trench or foxhole to stone castle. The Fortification Modification Table T-20 provides some suggested OB and DB modifications for defenders protected by fortifications.

DEFENSES AS WEAPONS

Frequently throughout history, military units have attempted to erect defenses that in certain senses acted as weapons. The Defensive Weapon Table T-21 provides a listing of some such measures and their effect on an advancing force.

25.7 QUICK COMBAT RESOLUTION

A role playing game is unique in that it centers around a few characters, for whom events are very detailed. There will be situations where the player characters are leading or merely fighting in a small unit that is part of a much larger force that is engaged in battle. Since the players only have a small part to play in many such battles, the GM may not wish to use much detail in resolving combat.

Example: *The PCs are part of a group of 20 scouts for an army of 20,000. The army enters into battle while the PCs are out scouting, so the GM decides to resolve the battle using one of the following options.*

Option 1: One way to quickly resolve large battles is to assign nominal Stats to the whole army — OB, DB, AT, etc. Some of these are going to be very approximate (e.g., it's unlikely that a whole army wears the same kind of armor or uses the same weapons). The time scale for such a large group would have to be decided by the GM (say 1 hour per turn for the example above). Formations and maneuver rolls would not be considered, but C/C rolls may be required.

Any unit(s) that the players are in would probably have several rounds of combat (or whatever they're doing) for each turn of the large battle. The battle will be over when one side routs or surrenders.

Option 2: Another way to resolve large combats in which there is only minor interest is to use the following chart.

To use the chart, cross-index the following two values:

- **The Odds:** the ratio of the number of troops on side A to the number on side B. Consult the modifiers at the bottom of the chart to determine if the column used should be shifted.
- **The LR Difference:** The LR of side A minus that of side B.

The result is the percent chance of side A winning the battle. The GM can use the "closeness" of the roll to determine how the battle went. For example if side A has a 40% chance of winning (i.e., they need to roll 1–40), and they roll an 01, then they won spectacularly. If they rolled a 39, then the battle was more or less a draw with great losses on each side.

QUICK COMBAT RESOLUTION CHART

LR Difference	ODDS										
	1–5	1–4	1–3	1–2	2–3	1–1	3–2	2–1	3–1	4–1	5–1
50	8	15	40	45	60	75	80	85	90	95	98
40	8	14	38	43	57	70	77	83	88	94	98
30	7	13	26	40	54	65	74	80	86	93	97
20	7	12	24	37	50	60	70	77	84	92	97
10	6	11	22	35	46	55	66	75	82	91	96
5	5	10	21	32	43	52	63	72	81	90	95
0	5	10	20	30	40	50	60	70	80	90	95
5	5	10	19	28	37	48	57	68	79	90	95
-10	4	9	18	25	34	45	54	65	78	89	94
-20	3	8	16	23	30	40	50	63	76	88	93
-30	3	7	14	20	26	35	46	60	74	87	93
-40	2	6	12	17	23	30	43	57	72	86	92
-50	2	5	10	15	20	25	40	55	70	85	92

Modifiers: If troops on one side are significantly better, shift odds one column in their favor. If one side is in fortified terrain, shift 3 columns in their favor.

25.8 EXHAUSTION POINTS

A unit's Exhaustion Point (EhP) total is an optional characteristic. It is a measure of how far a unit can be physically pushed before it will just drop in its tracks. A fully rested unit's EhP is equal to its Endurance stat.

As a unit moves and operates, it loses EhP at a rate depending upon the severity of the terrain, weather conditions, how much food is available, etc. See the Exhaustion Effects Table T-23 for a summary of what lowers a unit's EhP. Each 25% decrease in EhP results in a -10 modifier applied to each of: OB, MR, and maneuver rolls. When a unit's EhP reaches, the unit collapses from exhaustion.

EhP are regained at rate based upon a unit's End stat. The number of EhPs regained in an hour of rest is provided in the EhP Recovery column of the Stat Bonus Table T-12.

Example: *The First Missile Brigade has been on a forced march for 3 hours. They have an End of 70, so at the end of the march they have 10 = 70 - (20 x 3) EhP left. Since 25% of 70 is 17.5, the unit has less than 25% EhP left and is hence operating with a -30 modification to OB, to Morale Rating, and to all maneuvers. Since they have a End of 70, they will recover 9.6 EhPs per hour spent resting. After resting for 6 hrs, the unit will have:*

67.6 EPs = 10 + (6 x 9.6) [round to 68]

The unit will be operating at nearly full capacity after its rest.

25.9 LEADERSHIP TRAINING

The individual skill "Leadership" represents the formal training in the business of getting soldiers to fight as you want them to. It represents information that has been accumulated from ages of waging war. Unless special circumstances exist, only one skill rank may be developed each level, and only if the character is under the tutelage of a more learned soldier.

Skill ranks 1–5 represent the basic knowledge that any civilized soldier should know — barbarian armies are at a disadvantage here.

Skill ranks 6–15 represent a deeper understanding that is not normally general knowledge even in civilized societies. A kingdom that has been warring for a few hundred years will likely have several senior officers that can provide tutelage in these skills.

Skill ranks above 15 are taught only by a few masters of the art of war. Only the most promising students become the pupils of these great leaders, and the cost and time spent in seeking one out should be considerable.

25.10 MILITARY ORGANIZATION SKILL

A character may only develop skill in Military Organization above rank 5 by actually working in the structure of a military organization.

25.11 VARYING THE TURN SEQUENCE

Sometimes in a battle with long turn lengths, situations will occur that do not make sense with respect to the normal *AL&CL* combat sequence. A GM should use common sense and the principles of the normal *AL&CL* combat system to modify the *WL* turn sequence to alleviate some of these inconsistencies.

One of the most common occurrences of this problem occurs when a unit takes an abnormal amount missile or spell fire while it is trying to close with a unit that starts a turn very close. In such cases, a GM may wish to first resolve 25–75% of the missile and spell attacks involved. Then, involved closing units can be allowed to move up to a distance equal to 25% of its movement rate and melee. Then, the rest of the missile/spell attacks can be resolved and the turn sequence can continue normally.

Example: *A unit with a Movement Rate of 50' per 10 second round starts a 3 minute turn 25' from an enemy unit armed with bows. The GM decides that the bow-unit can make 25% of its bow attacks before the moving unit closes and melees it.*

25.12 WEAPONS & FORMATIONS

A GM may wish to restrict the use of certain weapon and formation combinations. The most obvious restrictions are:

Whips, Bolas, Flails — Open Horde only with no penalty.

Morning Stars, Battle Axes, War Mattocks, Quarterstaffs, and Two-Hand Swords, Slings — Open Horde with no penalty, other formations at half normal OB.

25.13 STRATEGIC MOVEMENT

Normally, an army can march an average of 10 hours a day. Only armies that have no baggage and/or are very disciplined can move up to 12 hours a day. The major limits are daylight, the time it takes to form up and start a march, and the fact that an army is only as fast as it's slowest unit. The Strategic Movement Chart (see *Campaign Law* Section 3.3.3) can be used to determine how far an army can travel through the varies terrain types.

Using a 10 hour day and a "normal walk", an average army of foot soldiers can cover 25 mile a day on a good road — 40 miles a day for a cavalry force using "horse (slow)." Both would be able to fight normally at the end of the day. Force marches would use a "jog/walk" for foot soldiers and "horse (fast)" for cavalry. Force marches would leave the troops fatigued (use GM assigned OB/Maneuver/Morale penalties). The "horse (fast)" transport type can only be used for an extended period if remounts are available.

Baggage trains should use "careful walk" transport type when not on roads and would have trouble moving more than 8 hours a day.

25.14 VARIABLE TIME SCALES

If a GM wishes he can run a battle in which each unit has its own turn length based upon the suggestions in the Time Scale Chart in Section 12.2. If this option is being used, the GM should keep a "schedule" of the times that each unit starts its new turn sequence. This time should be based on "turns" that have the smallest turn length of any of the units.

Even if a smaller time increment is being used by some units, each unit only makes one maneuver roll and one Morale Check for each of its "turns" as specified by the table. Thus, smaller units would be more flexible in that they would be able to maneuver more often due to their smaller turn length. However, the smaller units would also have to make Morale Checks more often.

This option really makes the turn sequence complicated for a GM. It really helps if the largest turn length is evenly divisible by the smaller turn lengths. E.g., if the largest turn length is 8 minutes, you don't want any 6 minute turn lengths.

Example: *Tiney's unit are making a last stand on a bluff. The unit has 20 bowmen left so its actions should be resolved in turns with a length of 3 rounds each (30 seconds). An opposing group of 50 Orcs is advancing forward through a barrage of arrows its its normal turn length is 1 minute and thus it only makes a maneuver roll and a Morale Checks once every 6 rounds — i.e., half as often as Tiney's troop.*

The GM decides to resolve combat in turns with a length of 30 seconds each. Thus, every turn Tiney's men have the opportunity to maneuver and must make a Morale Check if required to do so by conditions. The same is true for the Orc unit, but only on turns 1, 3, 5, 7, ... These time scales might change if the units take enough casualties.

Tiney's men are using missile weapons that can fire once each round, and the GM rules that due to the steep slope on the bluff, all of them can see the enemy. During each turn, the unit will get to make 40 = 2x20 missile attacks against the Orcs, until the units are engaged in melee.

Since Tiney's unit can attack every turn, the GM determines the position of the moving Orc unit each turn to allow for the proper range modifications. If the Orc leader changes his mind about attacking, he will have to wait until turn 3 (two turns after turn 1) to make a maneuver roll to stop advancing.

Two turns later (turn 3), the Orcs have crossed the intervening terrain and engaged Tiney's men, who are now using their short swords. The Orcs now number 44, and having passed Morale Checks on turn 1 and will have to make another this turn due to losses taken from missile fire during turn 2. The GM allows 40 melee attacks by the Orcs (two for each of Tiney's troops), and resolves the melee turn by turn. Thus on turn 3 the Orcs make a 40 scimitar attack on Tiney's men, who attack back with 20 short swords. The next turn of melee will be resolved on turn 4 unless Tiney's unit maneuvers to disengage (the Orcs don't have that option). During turn 4, Tiney's troops will have to make a Morale Check if they take losses, but the Orc unit will not have to.

25.15 MATERIAL INTEGRITY

The guidelines in this section can be used to determine the effects of damage on various types of material (e.g., stone walls, wooden doors, metal grates, etc.). This damage can be inflicted by normal weapons (see *AL&CL*) and by siege weapons (see Section 25.6.1).

The Materials Integrity Chart (MIC) assumes that every material can be given an armor type and quantifiable concussion hits. When using the MIC, it is important to note that only a partial list of the possible materials appear as examples in the various AT categories. Before using the MIC in a game, all materials unique to a campaign world should be categorized within the table so that they can be easily referenced.

MATERIALS INTEGRITY CHART

AT	Hits per * 36 in^3	1 ft^3	Substance Category
1	2	96	Flesh, soft plants, jell-o, silly putty
2	6	288	Cloth, hair
3	8	384	Canvas, rope, vine, briars, bamboo, rubber (primitive)
4	10	480	Cured animal hide, coal
5	15	720	Clay, mud, loose coarse soils
6	20	960	Soft metals (gold, silver, lead, ithildin, aluminum)
7	25	1200	Packed earth, hard clay, natural conglomerate (mixed, hard soil)
8	30	1440	Soft woods (Birch, Pine)
9	35	1680	Hard woods (ebony, oak, pecan)
10	40	1920	Glass, shale, fossilized bone
11	45	2160	Bone, ice
12	50	2400	Metamorphic/sedimentary rock (sandstone, limestone)
13	60	2880	Gravel, Brick
14	65	3120	Concrete, cement
15	80	3840	Medium metals (bronze, brass, pig iron, copper, tin)
16	100	4800	Enchanted woods (treant, mallorn, linden)
17	150	7200	Igneous rock (granite, obsidian)
18	200	9600	Hard metals (steel, iron)
19	500	24000	Gemstones, armor plating, high steel
20	1000	48000	Enchanted materials (laen, eog, mithril), Extraordinary high-tech materials (Ordium, Crysteel)

* — Half concussion hits if organic material. 36 in^3 represents one square foot with a ¼inch thickness.

DEFINITIONS

Concussion Hits — The term "concussion hits" or simply "hits" signifies a quantifiable unit which describes the limits of damage which a target can sustain before being breached or destroyed. Hits do not reflect pain and bleeding as they do when associated with a living target. Instead, it refers to the general cracking, weakening and splintering of a material. Note: No correlation should be drawn between the hits of an inanimate object and the hits of a living being. The term "concussion hits" when applied to a living creature includes such factors as shock and pain, while in reference to structural materials only takes into account the relative toughness of the substance.

Material — The term "material" is used to refer to any substance, organic or inorganic. It does not refer to anything sentient which is able, in some way, to defend itself if attacked.

Structure — The term "structure" is used to refer to things such as weapons, ships, castles, fortresses, etc.

GEOMETRIC FORMULAS

The most frequently used notation is as follows:

r = radius	**h** = altitude or height
b (or a) length of base	**A** = area
C = circumference	**V** = volume
S = curved surface area	**B** = area of base

Formulas for areas, circumference of circle, volumes, and curved surface area are as follows.

Triangle ..... $A = \frac{1}{2}\ bh$
Circle ..... $A = \pi r^2$, $C = 2\pi r$
Parallelogram ..... $A = bh$
Trapezoid ..... $A = \frac{1}{2}(a+b)h$
Right Circular Cylinder ..... $V = \pi r^2 h$, $S = 2\pi rh$
Right Circular Cone ..... $V = \frac{1}{3}\pi r^2 h$, $S = \pi r(r^2 + h^2)\frac{1}{2}$
Sphere ..... $V = \frac{4}{3}\pi r^3$, $S = 4\pi r^2$
Prism ..... $V = Bh$
Pyramid ..... $V = \frac{1}{3}Bh$

INTEGRITY CHARACTERISTICS

Hardness — In order for a substance to be able to damage another (attack), it must be at least or nearly as hard. For example, canvas could not damage bone or ice, but hardwoods (oak) could. As a guideline, the GM should only allow materials which are one to two armor types less than the target to deliver damage, and even then he may reduce the actual damage inflicted. In some cases no damage may be inflicted at all.

Fragility (Brittleness) — Some materials are fragile or brittle. Examples include glass, ice, pottery, aluminum and chalk. As a general rule, if the material in question receives more than ½ of its remaining hits in a single blow, it will shatter. Concussion weapons are extremely effective against these materials and could possibly inflict 2x, 3x, or even 4x damage.

Density — Some materials are extremely dense, such as lead and marble. When determining hits for these types of materials, the GM may increase them by 1.5 or even double them (x2).

Reinforcement — A material's hits should be doubled for each level (unit, mark, etc.) of reinforcement. Reinforcement can be accomplished in a variety of ways. Concrete often has steel mesh embedded within it. Doors often have wooden plates nailed to their backs and then be strapped with iron.

Resiliency — Some materials are extremely resilient and 'absorb' otherwise punishing damage. Some examples include rubber or plastic, etc. Slashing/cutting weapons are very effective against these materials and could possibly inflict 2x, 3x, or even 4x damage.

Enchantment — Enchantment, for the purposes of material integrity, refers to the inherent or magical bonus of the material. An enchanted material receives a defensive bonus (DB) equal to the enchantment bonus.

USING THE INTEGRITY CHART

Determine the material that makes up the majority of the target. Locate it on the Materials Integrity Table. If it is not listed, determine where it would best fit by comparing its properties with the examples listed. Once this is done, the AT and base hits can be determined — a little math is required to determine the total hits of the target. Some examples follow.

Note: *If several substances/materials make up equally large parts of the target, an average can be taken of all the properties of each material/substance involved.*

Note: *The Materials Integrity system is designed to be used for determining the amount of physical damage various inanimate substances and materials can withstand before being damaged or destroyed. The Armor Types used in Arms Law represent the basic protective capability assigned to the material covering the body. They do not represent the integrity or toughness of the material itself.*

EXAMPLES

In these examples, $\pi \approx 3.142$ **and** *Total Hits* = (total volume of target ÷ Base Unit of Volume for target (see MIC)) x target's hits at Base Unit of Volume.

Common Brick — Dimensions: 3" x 8" x 4"
Volume (V=abh): 3" x 8" x 4" = $96in^3$
Material: Brick AT = 13 Base Hits at $36in^3$ = 60
Total Hits = $96in^3 \div 36in^3$ x 60 = 2.67 x 60 = 160

Door, Exterior Wooden — Dimensions: 1" x 6' x 3.5'
Volume (V=abh): 1" x 72" x 42" = $3024in^3$
Material: Oak AT = 9 Base Hits at $36in^3$ = 35
Total Hits = $3024in^3 \div 36in^3$ x 35 = 84 x 35 = 2940

Door, Interior Wooden — Dimensions ¾" x 6' x 3'
Volume (V=abh): ¾" x 72" x 36" = $1944in^3$
Material: Pine AT = 8 Base Hits at $36in^3$ = 30
Total Hits = $1944in^3 \div 36in^3$ x 30 = $54in^3$ x 30 = 1620

Door, Vault — Dimensions: 3' x 4' x 4'
Volume (V=abh): 36" x 48" x 48" = $82,944in^3$
Material: High Steel AT = 19 Base hits at $36in^3$ = 500
Total Hits = $82,944in^3 \div 35in^3$ x 500 x 500 = 1,152,000

Tree Trunk — Dimensions: 30' high with a radius of 1'
Volume ($V=\pi r^2 h$): 3.142 x $1ft^2$ x 30' = $94.26ft^2$
Material: Oak AT = 9 Base Hits at $1ft^3$ = 1680
Total hits = $94.26ft^3 \div 1ft^3$ x 1680 = 158,356

Simple Iron Lock — Dimensions: ½" x 3" x 3"
Volume (V=abh): ½ x 3 x 3 = $4.5in^3$
Material: Iron AT = 18 Base Hits at $36in^3$ = 200
Total Hits = $4.5in^3 \div 36in^3$ x 200 = 25

Wall of Stone (as per spell) — Dimensions: 10' x 10' x 1'
Volume (V=abh): 10' x 10' x 1' = $100ft^3$
Material: Stone (metamorphic/sedimentary)
AT : 12 Base Hits at $1ft^3$ = 2400
Total Hits = $100ft^3 \div 1ft^3$ x 2400 = 240,000

BREACHING MATERIAL

The total hits derived in the preceding examples are what is required to totally destroy the target. In order to breach or make a hole in the target, an area of the target must first be chosen and the total hits for this 'restricted' area must be determined. Once the concussion total is exceeded for this area, the target is considered breached.

Example: *From the vault door example, it was determined that the door had 1,152,000 total hits. To breach just a portion of the door would be much more efficient than destroying the whole thing. So, a small portion is targeted measuring about 6 inches square.*

Dimensions: 3' x 6" x 6" Volume: 36" x 6" x 6" = 1296in³
Material: High Steel AT: 19 Base Hits at 36in³ = 500
Total Hits = 1296in³ ÷ 36in³ x 500 = 18,000

This smaller area, although still a formidable barrier, seems a bit more plausible than 1,152,000 hits! Consider a small ¼" drill against the same material.

Dimensions: ¼" x 3' (radius of a ¼" drill bit is ⅛")
Volume (V=πr²h): 3.142 x 1/64in² x 36" = 1.77in³
Material: High Steel AT: 19 Base Hits at 36in³= 500
Total Hits = 1.77in³ ÷ 36in³ x 500 = 25

DAMAGE FROM CONCUSSION HITS

The amount of material destroyed by an attack can be determined from the concussion hits delivered.

Example I: *Elbune the Bizarre is busy refining his Firebolt spell when he accidently loses concentration and blasts the ceiling. This wouldn't ordinarily be a problem, except that his lab is under sixty feet of water. To see if he has damaged his lab enough to allow the ocean to begin rushing in, the volume of damage must be determined. Elbune's lab is made from a giant clam shell (a big clam). There is no reference for clam shell in the table, so an armor type will have to be chosen based upon what is already indicated. AT/10 is chosen because it lists shale and fossilized bone. Now that an AT has been selected, the damage can be determined. Elbune's bolt delivers 27 hits.*

Dimensions: roughly 2' thick x 1" diameter (see the material on the Diameter of Elemental Bolts)
Volume (V = πr²h): 3.142 x 0.5² x 2' (24") = 19in³
Material: Clam Shell AT: 10 Base Hits at 36in³ = 40
Total Hits = 19in³ ÷ 36in³ x 40 = 21 hits

Elbune grows cold with fear as he hears the terrible popping sounds of air bubbles bursting up into the icy waters above. Since the clam shell only had 21 hits in the area affected by the bolt, and poor Elbune delivered 27 hits, so his bolt cleanly pierced a 1" diameter hole through it. Hopefully Elbune has a water breathing spell handy.

Example II: *Using the example above, Elbune instead fires an elemental ball attack. The Radius of the ball is 5', so an entire 10' section will be affected not to mention most of the interior of the lab. In the interest of fairness, since Elbune was not directly targeting the ceiling, a 1D10 roll could be made to determine just how much of the ball actually made contact with the ceiling of the lab. For the purposes of this example though, Elbune's player rolls a 10. His ball attack delivers 28 hits.*

Dimensions : 5' radius x 2' thick
Volume (V = πr²h): 3.142 x 5ft² x 2' = 157.1ft³
Material: Clam Shell AT : 10 Base Hits at 1ft³ = 1920
Total Hits = 157ft³ ÷ 1ft³ x 1920 = 301,632 hits

The 28 hits delivered by the ball attack are only a small fraction of what is needed to effect an area so large, so Elbune sighs as he wipes his singed beard from his face. The ceiling held with only minor burns remaining as evidence of his clumsiness.

DAMAGE FROM CRITICALS

The normal ***RM*** critical strike tables are geared toward living targets rather than large inanimate materials. Attacks against structures deliver normal concussion damage as indicated on their appropriate attack charts. However, when a critical is indicated, the following table should be used instead of the normal critical strike table. Any additional information listed in the critical can be applied as a special effect (see the material on Special Effects for Spell Attacks).

STRUCTURAL CRITICAL DAMAGE

Critical Severity	Additional Melee Damage	Additional Spell Damage
A	+5 hits	+10 hits
B	+10 hits	+20 hits
C	+15 hits	+30 hits
D	+20 hits	+40 hits
E	+25 hits	+50 hits
F	+35 hits	+65 hits
G	+45 hits	+80 hits
H	+55 hits	+95 hits
I	+65 hits	+110 hits
J	+75 hits	+125 hits

SPECIAL EFFECTS FOR SPELLS

When deciding on modified damage for a specific attack, the nature of an attack is the most important factor. Special effects come into play when certain forces are used against specific targets. A commonly occurring special effect is fire versus wood. An elemental *Firebolt* would do much more damage against wood than say a *Waterbolt* or *Shockbolt* — wood burns. A wooden target attacked by fire could burn down of its own accord after one attack, while the same target might have to be repeatedly attacked by *Waterbolts* to accomplish the same level of destruction.

Another example is that of electricity used against metal — a powerful electrical discharge can be conducted by a metal target. Thus, anything not metallic which is in direct contact with such a target could receive secondary damage, such as a critical of lesser severity or half of the concussion hits determined in the attack chart. A metal target would of course sustain damage from such an attack, but it would be realistic to reduce the actual physical damage indicated in the attack chart by half.

A more complex situation would be the effect of rapid temperature changes against a target.

Example: *Two magicians team up against a wooden door and reinforced high steel lock. One magician will use fire, while the other uses cold. They alternate their attacks in an attempt to weaken the wood and lock by rapidly changing its temperature as well as delivering normal damage.*

Only one or two options of the following options should be used for a specific attack. Combining more than two options could eliminate a target too fast.

- Adjust the damage inflicted by an attack by assigning it a damage multiple. This multiple can reflect additional damage (x2,x3) or restricted damage (x½, x⅓).
- For attacks made with unnaturally occurring elements such as Chaos, Nether, or Plasma, the targeted material could be treated as AT/1. (This should only be used for normal materials which are not enchanted, living, or magical).
- Allow a single attack to continue delivering damage over several rounds. This could be reflected by an acid attack. As an example, an acid attack which delivered 30 hits on the initial round could deliver 20 on the next, and then 10 and 5 on subsequent rounds until the acid dissipated. The actual decline could additionally reflect the potency of the attack; slow decline for very strong acid or a fast decline for a very weak acid.
- Modify and apply specific critical results to the target. For example, when a fire attack is used against combustibles, and the critical inflicts hits per round, apply those hits to the target every round to reflect the continued burning of the target.

SPECIAL EFFECTS FOR PHYSICAL ATTACKS

The special effects for melee attacks are generally reflected quite well in their critical charts just as they are for spell attacks. However, when engaging a fortress or similarly huge structure, special weapons may be used other than the common sword or spear. Some examples are catapults, ballista, and drills (see Section 25.6).

Even standard weapons can have a special effect in a fantasy campaign where magic is creatively employed. These weapons can be augmented with spells allowing them to slice through stone as if it were butter, additional criticals can be inflicted, etc. When magic is employed through a weapon to produce a specific result, it must be handled on a case by case basis. But in most situations, the options discussed in the section for Special Effects for Spell Attacks will be adequate.

SPECIAL PURPOSE SPELLS AND SPELL LISTS

There are spells and Spell Lists which have specialized functions when it comes to affecting matter. They are:

Closed Mentalism	Solid Manipulation
Open Channeling	Barrier Law
Closed Essence	Lofty Bridge
Magician Base	Earth Law
Sorcerer Base	Solid Disruption
Mystic Base	Solid Alteration
Evil Magician Base	Matter Disruption
Druid Base	Stone Mastery
Witch Base	Earth Mastery
Arcane Coven	Barrier Ways
Arcane lists	Stone Lore, Metal Lore, Plasma Mastery, Wood Shaping

Unless a structure (keep, castle) possesses some level of protection, any number of professions with access to such lists can ruin its defenses.

These lists generally have two main effects: transmuting or disintegrating matter in finite volumes, or a weakening effect which produces stress that diminishes overall structural integrity. For those cases where the spell effect removes a volume of material, the damage caused is easily determined.

Example: *Bruce Holemaker, a 12th level Evil Magician, is hired by a local crusader to cast Powder Stone at his neighbor's keep. The keep is surrounded by a 10' thick, 15' high, and 45' long granite wall on four sides. Bruce agrees to the task. Under the cover of night, Bruce sneaks up to the wall and works his spell against the neighbor's wall. Powder Stone effects 100 cubic feet of stone.*

Spell: Powder Stone 100 cubic feet —
Volume: 100ft³ = 172,800in³ Base Hits per 36in³ = 150
Total Hits Affected = 172,800in³ ÷ 36in³ x 150 = 720,000

For comparison, one of the four walls has:

Material: Granite
Volume: 10' x 15' x 45' = 6,750ft³ = 11,664,000in³
Base Hits at 36in³= 150
Total Hits = 11,664,000in³ ÷ 36in³ x 150 = 48,600,000

So, provided Bruce had enough spell points, it would take him 48,600,000 ÷ 720,000 = 68 castings of Powder Stone or 612 power points to destroy one entire side of the keep wall! However, the crusader only wishes Bruce to create a passage large enough for his minions to get through. Since 100 cubic feet is about 4.64' on a side, and the wall is ten feet thick, Bruce would only have to cast his spell about 3 times (10 ÷ 4.64). Note: With a spell mastery roll (GM discretion), Bruce could breach the wall with only one spell if he chose dimensions of 2' x 10' x 5'.

Other spells such as *Cause Cracks*, *Cracks Call*, and *Erosions* serve to weaken the target. When these spells are employed, the GM should allow all further attacks to inflict double or even triple damage due to the new stress upon the structure. Some of the spells turn stone into mud or packed earth. In the case of mud, the attackers may still find it very difficult to maneuver through 100 cubic feet or more of mud. Similarly, attackers faced with 100 cubic feet of packed earth are not necessarily better off than when they faced stone. The spell description for *Powder Stone* does not describe how the stone is powdered. It does say however that it is a fine powder, so when this spell is used, 100 cubic feet of fine powdered dust could be sent into the air. This could cut visibility to zero and make breathing most difficult.

DIAMETER OF ELEMENTAL BOLTS

Most spells in ***RM*** have definite areas of effect. Elemental ball attacks have a radius, the matter transmutation type spells all effect a defined area. What is not defined is the area of effect of an elemental bolt attack. What is the diameter of an elemental bolt? The definition states that it is shot forth from the palm of the caster's hand. This limits the size to about a four inch diameter for a 'normal' sized human hand. But this becomes relative when the bolt is shot forth from the palm of a giant or even a titan. Their hands are enormous, and if the bolt size is to be based upon palm size then larger creatures would in effect be able to throw elemental bolts which had an area of effect similar to that of an elemental ball attack.

Since there is no basis in the current rules for the actual diameter of a bolt attack, a bolt attack will be considered to have a diameter of one inch (1") for the purposes of these rules.

BEAK/PINCER UNIT ATTACK TABLE

A–1.1

	AT 1		AT 2		AT 3		AT 4		AT 5		AT 6		AT 7		AT 8		AT 9		AT 10		AT 11		AT 12		AT 13		AT 14		AT 15		AT 16		AT 17		AT 18		AT 19		AT 20		
	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	
100	34.2	.51	32.5	.51	28.5	.49	25.3	.48	31.2	.50	29.9	.49	24.4	.48	22.5	.48	28.3	.49	26.4	.48	20.9	.47	18.0	.46	26.7	.49	25.4	.47	21.7	.46	20.8	.46	26.2	.48	24.4	.47	19.7	.46	17.4	.44	100
95	33.3	.50	31.6	.50	27.7	.48	24.4	.46	30.2	.49	29.0	.48	23.6	.47	21.7	.47	27.2	.48	25.6	.47	20.0	.45	16.9	.43	25.7	.48	24.6	.46	20.8	.44	19.9	.44	25.3	.47	23.7	.46	18.5	.43	16.3	.42	95
90	32.4	.50	30.7	.49	26.8	.47	23.6	.45	29.0	.48	28.0	.47	22.7	.46	20.9	.46	26.1	.47	24.7	.45	18.8	.42	15.8	.40	24.6	.47	23.2	.44	19.5	.42	18.6	.42	24.4	.46	22.4	.43	17.3	.41	15.2	.39	90
85	31.3	.49	29.7	.48	25.9	.46	22.3	.43	27.7	.47	26.9	.46	21.7	.45	19.7	.44	24.8	.46	23.1	.43	17.5	.40	14.7	.38	23.4	.46	21.7	.41	18.2	.39	17.4	.39	23.4	.45	20.9	.41	16.1	.38	14.1	.36	85
80	30.2	.48	28.6	.47	24.9	.45	20.8	.41	26.4	.46	25.8	.45	20.3	.42	18.3	.41	23.3	.44	21.6	.40	16.3	.37	13.6	.35	22.1	.44	20.2	.38	16.9	.36	16.1	.36	21.9	.42	19.5	.38	14.9	.35	13.0	.33	80
	Maximum Result for Large Attacks																																						
75	28.9	.47	27.4	.46	23.4	.42	19.3	.38	24.9	.45	24.1	.42	18.8	.39	17.0	.38	21.6	.41	20.0	.37	15.0	.34	12.5	.32	20.5	.41	18.7	.36	15.6	.33	14.9	.33	20.3	.40	18.0	.35	13.7	.32	11.9	.31	75
70	27.6	.46	26.2	.45	21.7	.40	17.8	.35	23.2	.43	22.4	.40	17.4	.37	15.6	.35	19.9	.38	18.5	.34	13.8	.31	11.4	.29	18.9	.38	17.2	.33	14.3	.31	13.6	.31	18.8	.37	16.6	.32	12.5	.30	10.8	.28	70
65	26.2	.44	24.9	.44	20.1	.37	16.3	.32	21.3	.40	20.6	.37	15.9	.34	14.3	.33	18.2	.36	16.9	.32	12.5	.29	10.3	.27	17.3	.36	15.7	.30	13.0	.28	12.4	.28	17.2	.34	15.1	.30	11.3	.27	9.7	.25	65
	Maximum Result for Medium Attacks																																						
60	24.7	.43	23.1	.42	18.4	.34	14.8	.30	19.5	.37	18.9	.34	14.5	.31	12.9	.30	16.5	.33	15.4	.29	11.3	.26	9.2	.24	15.7	.33	14.2	.27	11.7	.25	11.1	.25	15.7	.31	13.7	.27	10.1	.24	8.6	.22	60
55	22.7	.40	21.3	.39	16.8	.31	13.3	.27	17.6	.34	17.1	.31	13.0	.28	11.6	.27	14.8	.30	13.8	.26	10.0	.23	8.1	.21	14.1	.30	12.7	.24	10.4	.22	9.9	.22	14.1	.29	12.2	.24	8.9	.21	7.5	.20	55
50	20.9	.38	19.6	.36	15.2	.29	11.9	.24	15.9	.32	15.5	.29	11.7	.26	10.3	.25	13.3	.28	12.4	.24	8.9	.20	7.1	.19	12.6	.28	11.3	.22	9.2	.20	8.7	.20	12.7	.26	10.9	.21	7.8	.19	6.5	.17	50
	Maximum Result for Small Attacks																																						
45	19.1	.35	17.8	.34	13.7	.26	10.5	.21	14.2	.29	13.9	.26	10.3	.23	9.1	.22	11.7	.25	10.9	.21	7.7	.18	6.1	.16	11.1	.25	9.9	.19	8.0	.17	7.6	.17	11.2	.23	9.5	.19	6.7	.16	5.5	.15	45
40	17.3	.32	16.1	.31	12.2	.23	9.2	.19	12.6	.26	12.3	.23	9.0	.20	7.9	.19	10.2	.22	9.5	.18	6.6	.15	5.2	.14	9.7	.22	8.6	.17	6.8	.15	6.5	.15	9.9	.21	8.2	.17	5.7	.14	4.6	.13	40
35	15.6	.29	14.5	.28	10.7	.21	7.9	.17	11.0	.24	10.8	.21	7.9	.18	6.8	.17	8.8	.20	8.2	.16	5.6	.13	4.3	.12	8.4	.20	7.3	.15	5.8	.13	5.5	.13	8.6	.18	7.0	.14	4.8	.12	3.8	.11	35
30	14.0	.27	13.0	.26	9.4	.19	6.8	.14	9.6	.21	9.4	.19	6.8	.16	5.8	.15	7.6	.17	7.0	.14	4.6	.11	3.6	.10	7.2	.17	6.2	.12	4.8	.11	4.6	.11	7.4	.16	5.9	.12	3.9	.10	3.1	.09	30
25	12.4	.24	11.5	.23	8.1	.16	5.7	.12	8.3	.19	8.1	.16	5.7	.14	4.9	.13	6.4	.15	5.8	.12	3.8	.09	2.9	.08	6.1	.15	5.1	.10	3.9	.09	3.7	.09	6.2	.14	4.9	.10	3.1	.08	2.4	.07	25
20	10.9	.22	10.1	.21	7.0	.14	4.8	.10	7.1	.17	6.9	.14	4.8	.12	4.0	.11	5.3	.13	4.8	.09	3.0	.07	2.2	.06	5.1	.13	4.1	.08	3.1	.07	3.0	.07	5.2	.12	4.0	.08	2.4	.06	1.8	.05	20
15	9.6	.20	8.8	.18	5.9	.12	3.9	.09	6.0	.15	5.8	.12	3.9	.10	3.2	.09	4.4	.11	3.8	.08	2.2	.05	1.6	.04	4.2	.11	3.2	.07	2.4	.05	2.2	.05	4.3	.10	3.1	.07	1.7	.04	1.2	.03	15
10	8.3	.17	7.6	.16	4.9	.10	3.1	.07	5.0	.13	4.8	.10	3.2	.08	2.6	.07	3.6	.09	2.9	.06	1.6	.04	1.0	.03	3.4	.09	2.3	.05	1.6	.04	1.5	.04	3.4	.08	2.3	.05	1.1	.03	1.0	.03	10
5	7.1	.15	6.5	.14	3.9	.08	2.3	.05	4.1	.10	3.9	.08	2.5	.06	1.9	.05	2.8	.07	2.1	.04	1.1	.03	1.0	.02	2.7	.07	1.5	.03	1.2	.03	1.1	.03	2.7	.06	1.5	.03	1.1	.02	.9	.02	5
0	6.1	.13	5.4	.12	3.1	.06	1.6	.03	3.3	.09	3.1	.06	1.8	.04	1.4	.03	2.2	.05	1.4	.03	1.1	.02	.9	.02	2.1	.05	1.3	.02	1.1	.02	1.1	.02	2.0	.04	1.3	.02	1.0	.02	.9	.02	0
-5	5.0	.11	4.5	.10	2.3	.05	1.3	.02	2.7	.07	2.3	.05	1.2	.03	1.1	.02	1.7	.04	1.3	.02	1.0	.02	.9	.02	1.6	.04	1.3	.02	1.1	.02	1.0	.02	1.3	.03	1.2	.02	.9	.02	.8	.02	-5
-10	4.2	.09	3.7	.08	1.6	.03	1.2	.02	2.1	.05	1.6	.03	1.2	.02	1.1	.02	1.4	.02	1.2	.02	1.0	.02	.8	.02	1.3	.02	1.2	.02	1.0	.02	.9	.02	1.3	.02	1.1	.02	.9	.02	.8	.02	-10
-15	3.4	.08	2.9	.06	1.3	.02	1.1	.02	1.6	.03	1.4	.02	1.1	.02	1.0	.02	1.3	.02	1.2	.02	.9	.02	.7	.02	1.2	.02	1.1	.02	.9	.02	.9	.02	1.2	.02	1.1	.02	.8	.02	.7	.02	-15
-20	2.6	.06	2.2	.05	1.3	.02	1.1	.02	1.4	.02	1.3	.02	1.0	.02	.9	.02	1.2	.02	1.1	.02	.8	.02	.7	.02	1.1	.02	1.0	.02	.9	.02	.8	.02	1.1	.02	1.0	.02	.8	.02	.7	.02	-20
-25	2.0	.04	1.6	.03	1.2	.02	1.0	.02	1.3	.02	1.2	.02	1.0	.02	.9	.02	1.1	.02	1.0	.02	.8	.02	.6	.02	1.0	.02	1.0	.02	.8	.02	.8	.02	1.0	.02	.9	.02	.7	.02	.6	.02	-25
-30	1.4	.02	1.4	.02	1.1	.02	.9	.02	1.2	.02	1.1	.02	.9	.02	.8	.02	1.0	.02	.9	.02	.7	.02	.6	.01	1.0	.02	.9	.02	.7	.02	.7	.02	1.0	.02	.8	.02	.6	.02	.6	.01	-30
-35	1.4	.02	1.3	.02	1.0	.02	.8	.02	1.1	.02	1.0	.02	.8	.02	.7	.02	.9	.02	.9	.02	.6	.01	.5	.01	.9	.02	.8	.02	.7	.01	.6	.01	.9	.02	.8	.02	.6	.01	.5	.01	-35
-40	1.3	.02	1.2	.02	.9	.02	.8	.02	1.0	.02	1.0	.02	.7	.02	.7	.02	.8	.02	.8	.01	.6	.01	.5	.01	.8	.02	.7	.01	.6	.01	.6	.01	.8	.02	.7	.01	.5	.01	.4	.01	-40
-45	1.2	.02	1.1	.02	.9	.02	.7	.01	.9	.02	.9	.02	.7	.01	.6	.01	.8	.02	.7	.01	.5	.01	.4	.01	.7	.02	.7	.01	.5	.01	.5	.01	.7	.01	.6	.01	.5	.01	.4	.01	-45
-50	1.0	.02	1.0	.02	.8	.01	.6	.01	.8	.02	.8	.01	.6	.01	.5	.01	.7	.01	.6	.01	.4	.01	.4	.01	.6	.01	.6	.01	.5	.01	.4	.01	.6	.01	.5	.01	.4	.01	.3	.01	-50
-55	0.9	.02	.9	.02	.7	.01	.5	.01	.7	.01	.7	.01	.5	.01	.4	.01	.6	.01	.5	.01	.4	.01	.3	.01	.5	.01	.5	.01	.4	.01	.4	.01	.6	.01	.5	.01	.3	.01	.3	.01	-55
-60	0.9	.02	.8	.02	.6	.01	.5	.01	.6	.01	.6	.01	.4	.01	.4	.01	.5	.01	.5	.01	.3	.01	.3	.01	.5	.01	.4	.01	.3	.01	.3	.01	.5	.01	.4	.01	.3	.01	.2	.01	-60
-65	0.8	.01	.7	.01	.5	.01	.4	.01	.5	.01	.5	.01	.4	.01	.3	.01	.4	.01	.4	.01	.3	.01	.2	.01	.4	.01	.4	.01	.3	.01	.3	.01	.4	.01	.3	.01	.2	.01	.2	.01	-65
-70	0.7	.01	.6	.01	.5	.01	.3	.01	.5	.01	.5	.01	.3	.01	.3	.01	.4	.01	.3	.01	.2	.01	.2	.00	.4	.01	.3	.01	.2	.01	.2	.01	.4	.01	.3	.01	.2	.00	.2	.00	-70
-75	0.6	.01	.6	.01	.4	.01	.3	.01	.4	.01	.4	.01	.3	.01	.2	.01	.3	.01	.3	.01	.2	.00	.1	.00	.3	.01	.3	.01	.2	.00	.2	.00	.3	.01	.2	.00	.2	.00	.1	.00	-75
-80	0.5	.01	.5	.01	.3	.01	.2	.01	.3	.01	.3	.01	.2	.01	.2	.01	.3	.01	.2	.00	.1	.00	.1	.00	.2	.01	.2	.00	.2	.00	.1	.00	.3	.01	.2	.00	.1	.00	.1	.00	-80
-85	0.5	.01	.4	.01	.3	.01	.2	.00	.3	.01	.3	.01	.2	.00	.2	.00	.2	.01	.2	.00	.1	.00	.1	.00	.2	.01	.2	.00	.1	.00	.1	.00	.2	.00	.1	.00	.1	.00	.1	.00	-85
-90	0.4	.01	.4	.01	.2	.00	.1	.00	.2	.01	.2	.00	.2	.00	.1	.00	.2	.00	.1	.00	.1	.00	.0	.00	.2	.00	.1	.00	.1	.00	.1	.00	.2	.00	.1	.00	.1	.00	.0	.00	-90
-95	0.4	.01	.3	.01	.2	.00	.1	.00	.2	.01	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	-95
-100	0.3	.01	.3	.01	.1	.00	.1	.00	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.1	.00	.1	.00	.1	.00	.0	.00	.1	.00	.1	.00	.0	.00	.0	.00	-100

BITE UNIT ATTACK TABLE

	AT 1		AT 2		AT 3		AT 4		AT 5		AT 6		AT 7		AT 8		AT 9		AT 10		AT 11		AT 12		AT 13		AT 14		AT 15		AT 16		AT 17		AT 18		AT 19		AT 20		
	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	
100	47.3	.52	45.3	.51	37.7	.50	32.2	.49	44.1	.51	40.4	.50	32.4	.49	32.4	.50	39.5	.49	34.5	.49	27.9	.47	23.3	.46	35.8	.49	31.2	.48	25.6	.47	25.5	.47	33.4	.49	28.7	.48	26.1	.46	19.8	.46	100
95	46.0	.51	44.1	.50	36.5	.49	31.1	.48	42.8	.50	39.2	.49	31.4	.48	31.4	.49	38.3	.48	33.3	.48	26.9	.46	21.8	.43	34.7	.48	30.1	.47	24.7	.46	24.6	.46	32.4	.48	27.7	.47	24.8	.45	18.5	.43	95
90	44.7	.50	42.8	.50	35.3	.48	30.0	.46	41.5	.49	37.8	.48	30.3	.47	30.3	.48	37.1	.47	32.0	.47	25.7	.44	20.4	.40	33.5	.47	29.0	.45	23.3	.43	23.5	.44	31.3	.46	26.7	.45	23.2	.42	17.3	.40	90
85	43.2	.49	41.3	.49	33.9	.47	28.8	.45	39.9	.48	36.4	.47	29.0	.46	29.1	.46	35.7	.46	30.6	.46	24.0	.41	18.9	.38	31.7	.45	27.5	.43	21.7	.40	21.9	.41	30.1	.45	25.3	.43	21.6	.39	16.0	.37	85
80	41.7	.48	39.8	.48	32.4	.46	26.9	.43	38.3	.47	34.9	.46	27.8	.45	27.8	.45	34.2	.45	28.9	.44	22.3	.39	17.5	.35	29.6	.42	25.6	.41	20.2	.38	20.4	.39	28.2	.43	23.6	.41	20.0	.36	14.8	.35	80
	Maximum Result for Large Attacks																																							
75	40.0	.47	38.1	.47	30.7	.45	25.0	.40	36.5	.46	33.2	.45	26.3	.44	26.4	.44	32.1	.43	26.9	.41	20.6	.36	16.0	.32	27.5	.40	23.8	.38	18.6	.35	18.8	.36	26.2	.40	21.9	.38	18.4	.34	13.5	.32	75
70	38.2	.46	36.3	.46	28.5	.42	23.1	.37	34.7	.45	31.1	.43	24.4	.41	24.7	.42	29.8	.40	24.8	.39	18.9	.33	14.6	.29	25.4	.37	21.9	.35	17.1	.32	17.3	.33	24.3	.37	20.2	.35	16.8	.31	12.3	.29	70
65	36.2	.45	34.4	.44	26.3	.39	21.2	.34	32.1	.42	28.8	.40	22.5	.38	22.8	.39	27.5	.37	22.8	.36	17.2	.30	13.1	.27	23.3	.34	20.1	.32	15.5	.29	15.7	.30	22.3	.34	18.5	.32	15.2	.28	11.0	.26	65
	Maximum Result for Medium Attacks																																							
60	34.2	.44	32.3	.43	24.1	.36	19.3	.32	29.6	.39	26.4	.37	20.6	.36	20.9	.37	25.2	.34	20.7	.33	15.5	.28	11.7	.24	21.2	.31	18.2	.30	14.0	.27	14.2	.28	20.4	.32	16.8	.30	13.6	.25	9.8	.23	60
55	31.7	.42	29.7	.40	21.9	.34	17.4	.29	27.0	.37	24.1	.35	18.7	.33	19.0	.34	22.9	.32	18.7	.30	13.8	.25	10.2	.21	19.1	.29	16.4	.27	12.4	.24	12.6	.25	18.4	.29	15.1	.27	12.0	.23	8.5	.21	55
50	29.2	.39	27.3	.38	19.9	.31	15.6	.26	24.7	.34	21.9	.32	16.9	.30	17.3	.31	20.7	.29	16.8	.28	12.2	.22	8.9	.19	17.1	.26	14.7	.24	11.0	.21	11.2	.22	16.6	.26	13.5	.24	10.6	.20	7.4	.18	50
	Maximum Result for Small Attacks																																							
45	26.7	.37	24.8	.35	17.8	.28	13.9	.24	22.3	.31	19.7	.29	15.1	.27	15.5	.29	18.6	.26	14.9	.25	10.7	.20	7.6	.16	15.2	.23	12.9	.22	9.6	.19	9.8	.20	14.8	.24	11.9	.22	9.1	.18	6.3	.16	45
40	24.2	.34	22.4	.32	15.9	.25	12.2	.21	20.0	.29	17.6	.26	13.5	.25	13.8	.26	16.5	.24	13.1	.22	9.2	.18	6.4	.14	13.3	.21	11.3	.19	8.3	.17	8.5	.18	13.0	.21	10.5	.19	7.8	.15	5.3	.14	40
35	21.9	.31	20.2	.29	14.0	.23	10.6	.18	17.8	.26	15.6	.24	11.9	.22	12.2	.23	14.6	.21	11.4	.20	7.9	.15	5.3	.12	11.5	.18	9.8	.17	7.0	.14	7.2	.15	11.4	.18	9.1	.17	6.5	.13	4.4	.12	35
30	19.6	.28	18.0	.27	12.2	.20	9.1	.16	15.7	.23	13.7	.21	10.4	.20	10.7	.21	12.7	.19	9.8	.17	6.7	.13	4.3	.10	9.8	.16	8.4	.15	5.9	.12	6.1	.13	9.8	.16	7.7	.15	5.4	.11	3.6	.10	30
25	17.5	.26	16.0	.24	10.6	.18	7.7	.14	13.8	.21	11.9	.19	9.0	.18	9.3	.19	11.0	.17	8.3	.15	5.5	.11	3.5	.08	8.3	.13	7.1	.13	4.8	.10	5.1	.11	8.3	.14	6.5	.13	4.4	.09	2.9	.08	25
20	15.5	.23	14.1	.22	9.1	.16	6.4	.12	11.9	.18	10.3	.17	7.7	.15	8.0	.16	9.3	.14	7.0	.13	4.5	.09	2.7	.06	6.8	.11	5.9	.11	3.9	.08	4.1	.09	7.0	.12	5.4	.11	3.5	.07	2.2	.06	20
15	13.6	.21	12.3	.19	7.7	.14	5.3	.10	10.3	.16	8.8	.15	6.5	.13	6.8	.14	7.9	.12	5.8	.11	3.6	.08	2.0	.04	5.5	.09	4.7	.09	3.0	.07	3.3	.08	5.8	.10	4.4	.09	2.6	.05	1.6	.04	15
10	11.8	.19	10.7	.17	6.4	.11	4.3	.08	8.7	.14	7.4	.13	5.4	.11	5.7	.12	6.5	.10	4.7	.09	2.8	.06	1.3	.03	4.3	.07	3.7	.07	2.2	.05	2.6	.06	4.6	.08	3.4	.07	1.9	.04	1.1	.03	10
5	10.3	.17	9.2	.15	5.2	.09	3.3	.06	7.3	.12	6.1	.10	4.4	.09	4.7	.10	5.3	.08	3.7	.07	2.0	.04	1.2	.02	3.2	.05	2.8	.05	1.5	.03	1.9	.04	3.6	.06	2.6	.05	1.4	.03	1.1	.02	5
0	8.8	.15	7.8	.13	4.2	.08	2.4	.04	6.0	.10	5.0	.09	3.5	.08	3.9	.09	4.1	.07	2.9	.05	1.5	.03	1.2	.02	2.2	.03	1.9	.03	1.3	.02	1.3	.03	2.6	.04	1.8	.03	1.3	.02	1.0	.02	0
-5	7.4	.12	6.5	.11	3.2	.06	1.6	.03	4.8	.08	3.9	.07	2.8	.06	3.1	.07	3.1	.05	2.1	.04	1.4	.02	1.1	.02	1.8	.03	1.6	.02	1.3	.02	1.3	.02	1.7	.03	1.5	.02	1.3	.02	.9	.02	-5
-10	6.1	.10	5.3	.09	2.4	.04	1.6	.02	3.8	.06	3.0	.05	2.1	.04	2.4	.05	2.1	.03	1.7	.03	1.3	.02	1.0	.02	1.7	.02	1.5	.02	1.2	.02	1.2	.02	1.6	.02	1.4	.02	1.2	.02	.9	.02	-10
-15	5.0	.09	4.3	.08	1.8	.03	1.5	.02	2.8	.04	2.2	.03	1.5	.02	1.7	.03	1.9	.02	1.6	.02	1.2	.02	1.0	.02	1.6	.02	1.4	.02	1.1	.02	1.1	.02	1.5	.02	1.3	.02	1.1	.02	.8	.02	-15
-20	4.0	.07	3.4	.06	1.7	.02	1.4	.02	2.0	.03	1.8	.02	1.4	.02	1.4	.02	1.7	.02	1.5	.02	1.1	.02	.9	.02	1.5	.02	1.3	.02	1.0	.02	1.0	.02	1.4	.02	1.2	.02	1.0	.02	.8	.02	-20
-25	3.1	.05	2.5	.04	1.6	.02	1.3	.02	1.9	.02	1.7	.02	1.3	.02	1.4	.02	1.6	.02	1.4	.02	1.0	.02	.8	.02	1.4	.02	1.2	.02	.9	.02	1.0	.02	1.3	.02	1.1	.02	.9	.02	.7	.02	-25
-30	2.3	.03	1.9	.02	1.4	.02	1.2	.02	1.8	.02	1.6	.02	1.2	.02	1.3	.02	1.5	.02	1.3	.02	1.0	.02	.7	.01	1.3	.02	1.1	.02	.9	.02	.9	.02	1.2	.02	1.0	.02	.9	.02	.6	.01	-30
-35	1.9	.02	1.8	.02	1.3	.02	1.1	.02	1.6	.02	1.5	.02	1.1	.02	1.2	.02	1.4	.02	1.2	.02	.9	.02	.7	.01	1.2	.02	1.0	.02	.8	.01	.8	.02	1.1	.02	.9	.02	.8	.01	.6	.01	-35
-40	1.7	.02	1.6	.02	1.2	.02	1.0	.02	1.5	.02	1.3	.02	1.0	.02	1.1	.02	1.3	.02	1.1	.02	.8	.01	.6	.01	1.1	.02	.9	.02	.7	.01	.7	.01	1.0	.02	.9	.02	.7	.01	.5	.01	-40
-45	1.6	.02	1.5	.02	1.1	.02	.9	.01	1.4	.02	1.2	.02	1.0	.02	1.0	.02	1.2	.02	1.0	.02	.7	.01	.5	.01	1.0	.01	.8	.01	.6	.01	.6	.01	.9	.01	.8	.01	.6	.01	.4	.01	-45
-50	1.5	.02	1.4	.02	1.0	.02	.8	.01	1.2	.02	1.1	.02	.8	.02	.9	.02	1.0	.01	.8	.01	.6	.01	.4	.01	.9	.01	.7	.01	.5	.01	.6	.01	.8	.01	.7	.01	.5	.01	.4	.01	-50
-55	1.3	.02	1.2	.02	.9	.01	.7	.01	1.1	.02	1.0	.01	.8	.01	.8	.01	.9	.01	.7	.01	.5	.01	.4	.01	.8	.01	.6	.01	.5	.01	.5	.01	.7	.01	.6	.01	.5	.01	.3	.01	-55
-60	1.2	.02	1.1	.02	.8	.01	.6	.01	1.0	.01	.9	.01	.7	.01	.7	.01	.8	.01	.6	.01	.5	.01	.3	.01	.7	.01	.6	.01	.4	.01	.4	.01	.6	.01	.5	.01	.4	.01	.3	.01	-60
-65	1.1	.02	1.0	.01	.7	.01	.5	.01	.9	.01	.8	.01	.6	.01	.6	.01	.7	.01	.6	.01	.4	.01	.3	.01	.6	.01	.5	.01	.3	.01	.4	.01	.6	.01	.4	.01	.3	.01	.2	.01	-65
-70	1.0	.01	.9	.01	.6	.01	.4	.01	.8	.01	.7	.01	.5	.01	.5	.01	.6	.01	.5	.01	.3	.01	.2	.00	.5	.01	.4	.01	.3	.01	.3	.01	.5	.01	.4	.01	.3	.01	.2	.00	-70
-75	.9	.01	.8	.01	.5	.01	.4	.01	.7	.01	.6	.01	.4	.01	.5	.01	.5	.01	.4	.01	.3	.01	.2	.00	.4	.01	.3	.01	.2	.01	.2	.01	.4	.01	.3	.01	.2	.00	.1	.00	-75
-80	.8	.01	.7	.01	.4	.01	.3	.01	.6	.01	.5	.01	.4	.01	.4	.01	.5	.01	.3	.01	.2	.00	.1	.00	.3	.01	.3	.01	.2	.00	.2	.00	.3	.01	.3	.01	.2	.00	.1	.00	-80
-85	.7	.01	.6	.01	.4	.01	.3	.00	.5	.01	.4	.01	.3	.01	.3	.01	.4	.01	.3	.01	.2	.00	.1	.00	.3	.00	.2	.00	.1	.00	.2	.00	.3	.00	.2	.00	.1	.00	.1	.00	-85
-90	.6	.01	.5	.01	.3	.01	.2	.00	.4	.01	.4	.01	.3	.01	.3	.01	.3	.00	.2	.00	.1	.00	.1	.00	.2	.00	.2	.00	.1	.00	.1	.00	.2	.00	.2	.00	.1	.00	.1	.00	-90
-95	.5	.01	.5	.01	.3	.00	.2	.00	.4	.01	.3	.01	.2	.00	.2	.01	.3	.00	.2	.00	.1	.00	.1	.00	.2	.00	.1	.00	.1	.00	.1	.00	.2	.00	.1	.00	.1	.00	.0	.00	-95
-100	.4	.01	.4	.01	.2	.00	.1	.00	.3	.00	.2	.00	.2	.00	.2	.00	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	-100

CLAW/TALON UNIT ATTACK TABLE

A–1.3

	AT 1		AT 2		AT 3		AT 4		AT 5		AT 6		AT 7		AT 8		AT 9		AT 10		AT 11		AT 12		AT 13		AT 14		AT 15		AT 16		AT 17		AT 18		AT 19		AT 20		
	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	
100	29.5	.52	29.4	.52	26.2	.50	24.0	.49	28.2	.51	26.1	.50	20.7	.49	20.5	.48	25.4	.50	23.0	.48	20.0	.47	16.6	.44	24.3	.50	22.1	.48	18.7	.45	18.9	.45	23.3	.49	20.3	.47	18.3	.47	14.8	.43	100
95	28.9	.51	28.7	.51	25.6	.49	23.3	.48	27.5	.50	25.4	.49	20.1	.48	19.8	.47	24.8	.49	22.3	.47	19.4	.46	15.5	.41	23.7	.49	21.4	.47	17.6	.42	17.7	.43	22.6	.48	19.7	.46	17.5	.45	13.8	.41	95
90	28.1	.50	28.0	.50	24.8	.48	22.5	.46	26.7	.49	24.6	.48	19.4	.47	19.2	.46	24.1	.48	21.6	.46	18.3	.43	14.5	.38	22.9	.48	20.6	.45	16.4	.39	16.6	.40	21.9	.46	18.9	.44	16.4	.42	12.9	.38	90
85	27.4	.49	27.2	.49	24.0	.47	21.7	.45	25.9	.48	23.7	.47	18.7	.46	18.4	.45	23.3	.47	20.8	.45	17.1	.40	13.4	.35	22.1	.47	19.3	.42	15.3	.37	15.4	.37	21.2	.45	17.7	.42	15.3	.39	11.9	.35	85
80	26.5	.49	26.4	.48	23.1	.46	20.3	.43	25.0	.47	22.8	.46	17.9	.45	17.5	.43	22.4	.46	19.5	.42	15.9	.38	12.4	.33	20.7	.44	18.0	.40	14.1	.34	14.3	.34	20.2	.44	16.5	.39	14.2	.37	11.0	.32	80
Maximum Result for Large Attacks																																							
75	25.6	.47	25.4	.47	22.2	.45	18.9	.40	24.0	.46	21.7	.44	16.8	.43	16.3	.41	21.4	.45	18.1	.39	14.7	.35	11.3	.30	19.3	.41	16.7	.37	13.0	.31	13.1	.32	18.8	.41	15.3	.36	13.1	.34	10.0	.30	75
70	24.6	.46	24.4	.46	20.9	.43	17.5	.37	23.0	.45	20.2	.42	15.6	.40	15.1	.38	20.0	.42	16.8	.37	13.5	.32	10.3	.27	17.9	.38	15.4	.34	11.8	.28	12.0	.29	17.5	.38	14.1	.33	12.0	.31	9.1	.27	70
65	23.6	.45	23.4	.45	19.4	.40	16.1	.34	21.4	.42	18.7	.39	14.4	.37	13.9	.35	18.5	.39	15.4	.34	12.3	.29	9.2	.24	16.5	.36	14.1	.31	10.7	.26	10.8	.26	16.1	.35	12.9	.31	10.9	.28	8.1	.24	65
Maximum Result for Medium Attacks																																							
60	22.5	.44	22.3	.44	17.9	.37	14.7	.32	19.8	.39	17.2	.36	13.2	.34	12.7	.32	17.1	.37	14.1	.31	11.1	.27	8.2	.22	15.1	.33	12.8	.29	9.5	.23	9.7	.23	14.8	.33	11.7	.28	9.8	.26	7.2	.21	60
55	21.4	.43	21.1	.43	16.4	.35	13.3	.29	18.2	.37	15.7	.33	12.0	.32	11.5	.30	15.6	.34	12.7	.28	9.9	.24	7.1	.19	13.7	.30	11.5	.26	8.4	.20	8.5	.20	13.4	.30	10.5	.25	8.7	.23	6.2	.19	55
50	19.9	.41	19.6	.40	15.0	.32	12.0	.26	16.7	.34	14.3	.31	10.9	.29	10.4	.27	14.3	.31	11.5	.26	8.8	.21	6.2	.16	12.4	.28	10.3	.23	7.3	.18	7.5	.18	12.2	.27	9.4	.23	7.7	.20	5.4	.16	50
Maximum Result for Small Attacks																																							
45	18.3	.38	18.0	.37	13.6	.29	10.7	.24	15.1	.31	12.9	.28	9.8	.26	9.3	.24	12.9	.28	10.2	.23	7.7	.19	5.2	.14	11.1	.25	9.1	.21	6.3	.15	6.5	.16	10.9	.25	8.3	.20	6.7	.18	4.5	.14	45
40	16.8	.35	16.5	.35	12.2	.26	9.4	.21	13.7	.29	11.5	.25	8.7	.24	8.2	.22	11.6	.26	9.0	.20	6.6	.17	4.3	.12	9.8	.22	8.0	.18	5.3	.13	5.5	.14	9.6	.22	7.3	.18	5.7	.16	3.8	.12	40
35	15.3	.32	15.0	.32	10.9	.24	8.2	.18	12.2	.26	10.2	.23	7.6	.21	7.2	.19	10.3	.23	7.8	.18	5.7	.14	3.5	.10	8.6	.20	6.9	.16	4.4	.11	4.6	.12	8.4	.19	6.3	.16	4.8	.13	3.1	.10	35
30	13.8	.30	13.6	.29	9.6	.21	7.1	.16	10.9	.23	9.0	.20	6.7	.19	6.2	.17	9.1	.21	6.7	.16	4.8	.12	2.8	.08	7.4	.17	5.8	.14	3.6	.09	3.8	.10	7.4	.17	5.3	.13	4.0	.11	2.4	.08	30
25	12.4	.27	12.2	.27	8.4	.19	6.0	.14	9.6	.21	7.8	.18	5.8	.17	5.3	.15	7.9	.18	5.7	.14	3.9	.10	2.1	.06	6.3	.15	4.9	.12	2.7	.07	3.1	.08	6.3	.15	4.5	.11	3.3	.09	1.8	.06	25
20	11.1	.24	10.9	.24	7.3	.17	5.0	.12	8.4	.18	6.7	.16	4.9	.14	4.5	.13	6.8	.16	4.8	.12	3.2	.08	1.5	.04	5.3	.12	4.0	.10	2.0	.05	2.4	.06	5.4	.13	3.6	.09	2.6	.07	1.3	.04	20
15	9.9	.22	9.7	.22	6.3	.15	4.1	.10	7.2	.16	5.7	.13	4.1	.12	3.8	.11	5.8	.14	4.0	.10	2.5	.07	1.0	.03	4.3	.10	3.2	.08	1.4	.03	1.7	.04	4.5	.11	2.9	.08	1.9	.05	.9	.03	15
10	8.7	.20	8.6	.20	5.3	.13	3.3	.08	6.1	.14	4.7	.11	3.4	.10	3.1	.09	4.8	.11	3.2	.08	1.8	.05	.9	.02	3.4	.08	2.4	.06	1.1	.03	1.1	.03	3.7	.09	2.2	.06	1.4	.04	.8	.02	10
5	7.6	.17	7.5	.18	4.4	.10	2.6	.06	5.2	.12	3.9	.09	2.7	.08	2.5	.07	3.9	.09	2.5	.06	1.2	.03	.9	.02	2.6	.06	1.7	.04	1.0	.02	1.0	.02	2.9	.07	1.6	.04	1.0	.03	.8	.02	5
0	6.6	.15	6.5	.16	3.6	.09	1.9	.04	4.3	.10	3.1	.08	2.2	.07	1.9	.05	3.2	.08	1.8	.04	1.0	.02	.8	.02	1.9	.04	1.2	.03	.9	.02	1.0	.02	2.2	.05	1.1	.03	.9	.02	.7	.02	0
-5	5.7	.13	5.6	.14	2.9	.07	1.2	.03	3.4	.08	2.4	.06	1.6	.05	1.3	.04	2.4	.06	1.2	.03	1.0	.02	.8	.02	1.3	.03	1.1	.02	.9	.02	.9	.02	1.6	.04	1.0	.02	.9	.02	.7	.02	-5
-10	4.8	.11	4.7	.11	2.2	.05	1.2	.02	2.7	.06	1.8	.04	1.1	.03	1.0	.02	1.8	.04	1.1	.02	.9	.02	.7	.02	1.2	.02	1.0	.02	.8	.02	.8	.02	1.2	.02	1.0	.02	.8	.02	.7	.02	-10
-15	4.0	.10	3.9	.10	1.5	.03	1.1	.02	2.0	.04	1.3	.03	1.0	.02	.9	.02	1.2	.03	1.1	.02	.9	.02	.7	.02	1.1	.02	1.0	.02	.8	.02	.8	.02	1.1	.02	.9	.02	.8	.02	.6	.02	-15
-20	3.2	.08	3.1	.08	1.2	.02	1.0	.02	1.3	.03	1.2	.02	.9	.02	.9	.02	1.2	.02	1.0	.02	.8	.02	.6	.02	1.0	.02	.9	.02	.7	.02	.7	.02	1.0	.02	.8	.02	.7	.02	.6	.02	-20
-25	2.5	.06	2.5	.06	1.1	.02	1.0	.02	1.2	.02	1.1	.02	.9	.02	.8	.02	1.1	.02	.9	.02	.7	.02	.6	.02	1.0	.02	.8	.02	.7	.02	.7	.02	1.0	.02	.8	.02	.7	.02	.5	.02	-25
-30	1.9	.04	1.8	.04	1.1	.02	.9	.02	1.2	.02	1.0	.02	.8	.02	.8	.02	1.0	.02	.9	.02	.7	.02	.5	.01	.9	.02	.8	.02	.6	.01	.6	.01	.9	.02	.7	.02	.6	.02	.5	.01	-30
-35	1.3	.02	1.2	.02	1.0	.02	.8	.02	1.1	.02	1.0	.02	.7	.02	.7	.02	.9	.02	.8	.02	.6	.01	.5	.01	.8	.02	.7	.02	.5	.01	.6	.01	.8	.02	.7	.02	.6	.01	.4	.01	-35
-40	1.2	.02	1.2	.02	.9	.02	.7	.02	1.0	.02	.9	.02	.7	.02	.6	.02	.9	.02	.7	.02	.6	.01	.4	.01	.8	.02	.7	.01	.5	.01	.5	.01	.8	.02	.6	.01	.5	.01	.4	.01	-40
-45	1.1	.02	1.1	.02	.8	.02	.7	.01	.9	.02	.8	.02	.6	.02	.6	.02	.8	.02	.6	.01	.5	.01	.4	.01	.7	.02	.6	.01	.4	.01	.4	.01	.7	.02	.5	.01	.4	.01	.3	.01	-45
-50	1.0	.02	1.0	.02	.7	.02	.6	.01	.8	.02	.7	.02	.5	.01	.5	.01	.7	.02	.6	.01	.4	.01	.3	.01	.6	.01	.5	.01	.4	.01	.4	.01	.6	.01	.5	.01	.4	.01	.3	.01	-50
-55	0.9	.02	.9	.02	.7	.01	.5	.01	.8	.02	.6	.01	.5	.01	.5	.01	.6	.01	.5	.01	.4	.01	.3	.01	.6	.01	.5	.01	.3	.01	.3	.01	.5	.01	.4	.01	.3	.01	.2	.01	-55
-60	0.8	.02	.8	.02	.6	.01	.5	.01	.7	.01	.6	.01	.4	.01	.4	.01	.6	.01	.4	.01	.3	.01	.2	.01	.5	.01	.4	.01	.3	.01	.3	.01	.5	.01	.4	.01	.3	.01	.2	.01	-60
-65	0.8	.02	.7	.02	.5	.01	.4	.01	.6	.01	.5	.01	.4	.01	.4	.01	.5	.01	.4	.01	.3	.01	.2	.00	.4	.01	.3	.01	.2	.01	.2	.01	.4	.01	.3	.01	.2	.01	.2	.00	-65
-70	0.7	.01	.7	.01	.5	.01	.3	.01	.5	.01	.4	.01	.3	.01	.3	.01	.4	.01	.3	.01	.2	.01	.1	.00	.4	.01	.3	.01	.2	.00	.2	.00	.4	.01	.3	.01	.2	.01	.1	.00	-70
-75	0.6	.01	.6	.01	.4	.01	.3	.01	.5	.01	.4	.01	.3	.01	.3	.01	.4	.01	.3	.01	.2	.01	.1	.00	.3	.01	.2	.01	.1	.00	.1	.00	.3	.01	.2	.01	.2	.00	.1	.00	-75
-80	0.6	.01	.5	.01	.4	.01	.2	.01	.4	.01	.3	.01	.2	.01	.2	.01	.3	.01	.2	.01	.2	.00	.1	.00	.3	.01	.2	.00	.1	.00	.1	.00	.3	.01	.2	.00	.1	.00	.1	.00	-80
-85	0.5	.01	.5	.01	.3	.01	.2	.00	.4	.01	.3	.01	.2	.01	.2	.01	.3	.01	.2	.00	.1	.00	.0	.00	.2	.01	.2	.00	.1	.00	.1	.00	.2	.01	.1	.00	.1	.00	.0	.00	-85
-90	0.4	.01	.4	.01	.3	.01	.2	.00	.3	.01	.2	.01	.2	.01	.2	.00	.2	.01	.2	.00	.1	.00	.0	.00	.2	.00	.1	.00	.0	.00	.1	.00	.2	.00	.1	.00	.1	.00	.0	.00	-90
-95	0.4	.01	.4	.01	.2	.01	.1	.00	.3	.01	.2	.00	.1	.00	.1	.00	.2	.00	.1	.00	.1	.00	.0	.00	.1	.00	.1	.00	.0	.00	.0	.00	.1	.00	.1	.00	.0	.00	.0	.00	-95
-100	0.3	.01	.3	.01	.2	.00	.1	.00	.2	.00	.2	.00	.1	.00	.1	.00	.2	.00	.1	.00	.0	.00	.0	.00	.1	.00	.1	.00	.0	.00	.0	.00	.1	.00	.1	.00	.0	.00	.0	.00	-100

GRAPPLE/GRASP/ENVELOP/SWALLOW UNIT ATTACK TABLE

	AT 1		AT 2		AT 3		AT 4		AT 5		AT 6		AT 7		AT 8		AT 9		AT 10		AT 11		AT 12		AT 13		AT 14		AT 15		AT 16		AT 17		AT 18		AT 19		AT 20		
	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	
100	19.6	.46	20.2	.48	18.2	.48	16.6	.48	19.3	.48	18.6	.48	18.3	.50	17.5	.50	19.5	.48	18.1	.50	14.9	.50	13.3	.50	19.0	.50	17.4	.50	16.7	.50	15.8	.50	18.3	.50	16.6	.50	14.1	.50	11.9	.51	100
95	18.7	.45	19.5	.47	17.5	.47	16.0	.47	18.6	.47	18.0	.47	17.8	.49	17.0	.49	18.8	.47	17.6	.49	14.5	.49	13.0	.49	18.5	.49	16.9	.49	16.2	.49	15.4	.49	17.7	.49	16.1	.49	13.7	.49	11.6	.50	95
90	17.5	.42	18.8	.46	16.7	.46	15.4	.46	17.8	.45	17.4	.46	17.2	.48	16.5	.48	18.2	.46	17.0	.48	14.1	.48	12.6	.48	17.8	.48	16.3	.48	15.7	.48	14.9	.48	17.2	.48	15.6	.48	13.3	.47	11.4	.49	90
85	16.3	.39	18.0	.45	15.8	.44	14.7	.45	16.6	.43	16.7	.45	16.6	.47	15.9	.47	17.4	.45	16.4	.46	13.6	.47	12.2	.47	17.2	.46	15.7	.47	15.2	.47	14.4	.47	16.6	.47	15.1	.47	12.9	.46	11.1	.48	85
80	15.1	.36	17.2	.44	14.7	.41	13.9	.43	15.5	.40	16.0	.44	15.9	.45	15.3	.46	16.7	.44	15.7	.45	13.1	.45	11.8	.46	16.5	.45	15.1	.45	14.6	.46	13.9	.46	15.9	.45	14.5	.45	12.4	.45	10.8	.47	80
	Maximum Result for Large Attacks																																							
75	13.9	.34	16.3	.42	13.6	.38	12.9	.40	14.3	.37	15.0	.41	15.3	.44	14.7	.44	15.8	.42	15.0	.44	12.6	.44	11.4	.44	15.8	.44	14.5	.44	14.0	.44	13.4	.45	15.2	.44	13.9	.44	12.0	.44	10.4	.46	75
70	12.7	.31	15.1	.40	12.5	.35	11.9	.38	13.2	.34	13.9	.39	14.5	.43	14.1	.43	14.7	.40	14.1	.42	12.1	.43	10.9	.43	14.8	.42	13.8	.43	13.4	.43	12.8	.43	14.5	.43	13.3	.43	11.5	.43	10.1	.45	70
65	11.5	.28	13.9	.37	11.4	.33	10.9	.35	12.0	.32	12.8	.36	13.7	.42	13.4	.42	13.5	.37	13.0	.39	11.4	.42	10.5	.42	13.7	.39	12.8	.41	12.8	.42	12.2	.42	13.5	.41	12.6	.42	11.0	.42	9.7	.44	65
	Maximum Result for Medium Attacks																																							
60	10.3	.25	12.7	.34	10.3	.30	9.9	.32	10.9	.29	11.7	.33	12.6	.39	12.4	.40	12.4	.34	12.0	.37	10.6	.39	10.0	.41	12.6	.37	11.8	.38	12.1	.41	11.6	.41	12.4	.38	11.6	.39	10.4	.41	9.4	.43	60
55	9.1	.23	11.5	.31	9.2	.27	8.9	.29	9.7	.26	10.6	.30	11.6	.36	11.4	.37	11.2	.31	10.9	.34	9.7	.36	9.2	.38	11.5	.34	10.8	.35	11.1	.38	10.8	.39	11.4	.35	10.7	.36	9.6	.38	9.0	.42	55
50	8.0	.20	10.4	.29	8.2	.24	7.9	.27	8.7	.24	9.5	.28	10.6	.33	10.5	.35	10.2	.29	9.9	.31	8.9	.33	8.5	.36	10.5	.31	9.9	.32	10.3	.36	10.0	.37	10.4	.32	9.8	.33	8.9	.35	8.4	.39	50
	Maximum Result for Small Attacks																																							
45	6.9	.17	9.2	.26	7.1	.22	7.0	.24	7.6	.21	8.5	.25	9.6	.31	9.6	.32	9.1	.26	8.9	.29	8.1	.31	7.8	.33	9.4	.29	8.9	.30	9.4	.33	9.1	.34	9.4	.30	8.9	.31	8.1	.33	7.7	.36	45
40	5.8	.15	8.2	.24	6.2	.19	6.1	.22	6.6	.18	7.5	.23	8.6	.28	8.6	.29	8.0	.24	8.0	.26	7.3	.28	7.1	.30	8.4	.26	8.0	.27	8.5	.30	8.3	.31	8.4	.27	8.0	.28	7.3	.30	7.1	.34	40
35	4.9	.13	7.2	.21	5.3	.17	5.3	.19	5.6	.16	6.6	.20	7.7	.26	7.8	.27	7.1	.21	7.1	.23	6.6	.26	6.4	.28	7.5	.23	7.1	.25	7.6	.28	7.5	.29	7.5	.25	7.1	.26	6.6	.27	6.5	.31	35
30	4.1	.11	6.2	.19	4.4	.15	4.5	.17	4.7	.14	5.7	.18	6.9	.23	6.9	.24	6.2	.19	6.2	.21	5.8	.23	5.7	.25	6.6	.21	6.3	.22	6.8	.25	6.7	.26	6.7	.22	6.3	.23	5.9	.25	5.9	.29	30
25	3.3	.09	5.4	.17	3.7	.12	3.9	.15	3.9	.12	4.9	.16	6.0	.21	6.1	.22	5.4	.17	5.4	.19	5.2	.21	5.1	.23	5.7	.19	5.5	.20	6.1	.23	6.0	.24	5.8	.20	5.6	.21	5.3	.23	5.3	.26	25
20	2.6	.07	4.6	.15	3.1	.10	3.2	.13	3.2	.09	4.2	.14	5.3	.19	5.4	.20	4.6	.15	4.7	.16	4.5	.19	4.6	.21	4.9	.16	4.8	.18	5.4	.21	5.3	.22	5.1	.18	4.9	.19	4.7	.20	4.8	.24	20
15	2.0	.05	3.9	.13	2.5	.09	2.7	.11	2.6	.08	3.6	.12	4.6	.16	4.7	.18	3.9	.13	4.0	.14	3.9	.16	4.0	.19	4.2	.14	4.1	.15	4.7	.19	4.7	.20	4.4	.15	4.3	.16	4.1	.18	4.3	.22	15
10	1.4	.04	3.3	.11	2.0	.07	2.2	.09	2.0	.06	3.0	.10	3.9	.14	4.1	.16	3.3	.11	3.4	.12	3.4	.14	3.5	.17	3.6	.12	3.5	.13	4.1	.17	4.2	.18	3.7	.13	3.7	.14	3.6	.16	3.8	.19	10
5	1.1	.03	2.7	.09	1.5	.05	1.8	.07	1.4	.04	2.4	.08	3.3	.13	3.5	.14	2.7	.09	2.8	.10	2.9	.13	3.1	.15	3.0	.10	3.0	.11	3.6	.15	3.6	.16	3.1	.11	3.1	.13	3.2	.15	3.4	.17	5
0	1.0	.02	2.2	.07	1.1	.03	1.4	.05	1.0	.03	1.9	.06	2.8	.11	3.0	.12	2.2	.07	2.3	.09	2.5	.11	2.7	.13	2.4	.09	2.5	.10	3.1	.13	3.2	.14	2.6	.10	2.6	.11	2.8	.13	2.9	.15	0
-5	0.9	.02	1.7	.06	.9	.02	1.0	.04	1.0	.02	1.4	.05	2.3	.09	2.5	.10	1.7	.06	1.8	.07	2.0	.09	2.3	.11	1.9	.07	2.0	.08	2.6	.11	2.7	.12	2.1	.08	2.2	.09	2.4	.11	2.5	.13	-5
-10	0.9	.02	1.3	.04	.9	.02	.8	.02	.9	.02	1.0	.03	1.9	.07	2.1	.08	1.3	.04	1.4	.05	1.6	.07	1.9	.09	1.5	.05	1.6	.06	2.2	.09	2.3	.10	1.7	.06	1.8	.07	2.0	.09	2.2	.11	-10
-15	0.8	.02	.9	.02	.8	.02	.8	.02	.8	.02	.9	.02	1.4	.05	1.6	.06	.9	.02	1.0	.03	1.3	.05	1.5	.07	1.1	.03	1.2	.04	1.8	.07	1.9	.08	1.2	.04	1.3	.05	1.6	.07	1.8	.10	-15
-20	0.8	.02	.9	.02	.7	.02	.7	.02	.8	.02	.8	.02	1.0	.04	1.2	.05	.9	.02	.8	.02	.9	.04	1.2	.06	.9	.02	.8	.02	1.4	.06	1.5	.07	.8	.02	1.0	.04	1.2	.06	1.5	.08	-20
-25	0.7	.02	.8	.02	.7	.02	.7	.02	.7	.02	.8	.02	.8	.02	.8	.03	.8	.02	.8	.02	.7	.02	.8	.04	.8	.02	.7	.02	1.0	.04	1.1	.05	.8	.02	.7	.02	.9	.04	1.2	.06	-25
-30	0.6	.02	.8	.02	.6	.02	.6	.02	.7	.02	.7	.02	.7	.02	.7	.02	.7	.02	.7	.02	.6	.02	.6	.02	.8	.02	.7	.02	.7	.02	.8	.03	.7	.02	.7	.02	.6	.02	.8	.04	-30
-35	0.6	.01	.7	.02	.6	.02	.6	.02	.6	.02	.6	.02	.7	.02	.7	.02	.7	.02	.7	.02	.6	.02	.5	.02	.7	.02	.6	.02	.7	.02	.6	.02	.7	.02	.6	.02	.6	.02	.5	.02	-35
-40	0.5	.01	.6	.02	.5	.02	.5	.02	.6	.01	.6	.02	.6	.02	.6	.02	.6	.02	.6	.02	.5	.02	.5	.02	.6	.02	.6	.02	.6	.02	.6	.02	.6	.02	.6	.02	.5	.02	.5	.02	-40
-45	0.5	.01	.6	.02	.5	.01	.5	.01	.5	.01	.5	.02	.6	.02	.6	.02	.6	.02	.6	.02	.5	.02	.5	.02	.6	.02	.5	.02	.6	.02	.6	.02	.6	.02	.5	.02	.5	.02	.5	.02	-45
-50	0.4	.01	.5	.01	.4	.01	.4	.01	.4	.01	.5	.01	.5	.02	.5	.02	.5	.01	.5	.02	.4	.02	.4	.02	.5	.02	.5	.02	.5	.02	.5	.02	.5	.02	.5	.02	.4	.02	.4	.02	-50
-55	0.3	.01	.5	.01	.4	.01	.3	.01	.4	.01	.4	.01	.5	.02	.5	.02	.5	.01	.4	.01	.4	.02	.4	.02	.5	.01	.4	.01	.5	.02	.5	.02	.5	.01	.4	.02	.4	.02	.4	.02	-55
-60	0.3	.01	.4	.01	.3	.01	.3	.01	.3	.01	.4	.01	.4	.01	.4	.01	.4	.01	.4	.01	.4	.01	.4	.02	.4	.01	.4	.01	.4	.02	.4	.02	.4	.01	.4	.01	.4	.01	.4	.02	-60
-65	0.2	.01	.4	.01	.3	.01	.3	.01	.3	.01	.3	.01	.4	.01	.4	.01	.4	.01	.4	.01	.3	.01	.3	.01	.4	.01	.4	.01	.4	.01	.4	.01	.4	.01	.4	.01	.3	.01	.3	.02	-65
-70	0.2	.01	.3	.01	.2	.01	.2	.01	.2	.01	.3	.01	.3	.01	.3	.01	.3	.01	.3	.01	.3	.01	.3	.01	.3	.01	.3	.01	.3	.01	.3	.01	.3	.01	.3	.01	.3	.01	.3	.01	-70
-75	0.2	.00	.3	.01	.2	.01	.2	.01	.2	.01	.2	.01	.3	.01	.3	.01	.3	.01	.3	.01	.3	.01	.3	.01	.3	.01	.3	.01	.3	.01	.3	.01	.3	.01	.3	.01	.3	.01	.3	.01	-75
-80	0.1	.00	.2	.01	.1	.01	.2	.01	.2	.00	.2	.01	.3	.01	.3	.01	.2	.01	.2	.01	.2	.01	.2	.01	.2	.01	.2	.01	.3	.01	.3	.01	.3	.01	.2	.01	.2	.01	.2	.01	-80
-85	0.1	.00	.2	.01	.1	.00	.1	.01	.1	.00	.2	.01	.2	.01	.2	.01	.2	.01	.2	.01	.2	.01	.2	.01	.2	.01	.2	.01	.2	.01	.2	.01	.2	.01	.2	.01	.2	.01	.2	.01	-85
-90	0.1	.00	.2	.01	.1	.00	.1	.00	.1	.00	.1	.00	.2	.01	.2	.01	.2	.01	.2	.01	.2	.01	.2	.01	.2	.01	.2	.01	.2	.01	.2	.01	.2	.01	.2	.01	.2	.01	.2	.01	-90
-95	0.0	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.2	.01	.2	.01	.1	.00	.1	.01	.1	.01	.2	.01	.1	.01	.1	.01	.2	.01	.2	.01	.2	.01	.2	.01	.2	.01	.2	.01	-95
-100	0.0	.00	.1	.00	.1	.00	.1	.00	.0	.00	.1	.00	.1	.01	.1	.01	.1	.00	.1	.00	.1	.01	.1	.01	.1	.00	.1	.00	.2	.01	.2	.01	.1	.00	.1	.01	.1	.01	.1	.01	-100

HORN/TUSK UNIT ATTACK TABLE

A–1.5

	AT 1		AT 2		AT 3		AT 4		AT 5		AT 6		AT 7		AT 8		AT 9		AT 10		AT 11		AT 12		AT 13		AT 14		AT 15		AT 16		AT 17		AT 18		AT 19		AT 20		
	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	
100	38.7	.52	37.6	.51	34.5	.50	32.3	.49	36.6	.51	33.6	.50	28.8	.49	26.3	.49	33.7	.50	29.0	.49	26.6	.48	23.8	.47	30.9	.50	27.8	.48	25.4	.44	25.3	.44	29.9	.49	26.9	.47	23.9	.47	21.6	.45	100
95	37.7	.51	36.6	.50	33.5	.49	31.3	.48	35.6	.50	32.7	.49	27.8	.48	25.4	.48	32.7	.49	28.0	.48	25.7	.46	22.9	.46	29.9	.49	26.9	.47	24.6	.43	24.5	.43	29.0	.47	26.0	.46	23.1	.46	20.2	.43	95
90	36.7	.50	35.5	.50	32.4	.48	30.2	.47	34.5	.49	31.6	.48	26.7	.47	24.5	.46	31.6	.48	27.0	.47	24.7	.45	21.9	.45	28.9	.48	26.0	.46	23.2	.41	23.1	.41	28.1	.46	25.1	.45	22.0	.45	18.9	.40	90
85	35.5	.49	34.3	.49	31.2	.47	29.0	.46	33.3	.48	30.4	.47	25.6	.46	23.5	.45	30.5	.47	26.0	.46	23.6	.44	20.4	.42	27.8	.47	24.9	.44	21.7	.39	21.5	.38	26.6	.44	23.7	.43	20.6	.42	17.5	.37	85
80	34.2	.48	33.1	.48	30.0	.46	27.7	.45	32.0	.47	29.1	.46	24.4	.45	22.2	.44	29.2	.46	24.6	.44	22.0	.42	19.0	.39	26.6	.45	23.3	.42	20.1	.36	20.0	.36	24.9	.42	22.1	.40	19.1	.39	16.2	.34	80
	Maximum Result for Large Attacks																																						
75	32.8	.47	31.7	.46	28.6	.44	25.9	.43	30.6	.46	27.8	.45	22.8	.42	20.7	.41	27.9	.45	22.9	.41	20.4	.39	17.5	.36	24.9	.43	21.6	.39	18.6	.34	18.5	.33	23.1	.39	20.5	.37	17.7	.36	14.8	.32	75
70	31.4	.46	30.2	.45	26.9	.42	24.0	.40	29.2	.45	26.4	.44	21.1	.40	19.1	.38	26.1	.43	21.2	.39	18.8	.36	16.1	.34	23.1	.40	20.0	.36	17.1	.31	17.0	.31	21.4	.36	18.9	.35	16.2	.34	13.5	.29	70
65	29.8	.45	28.7	.44	24.9	.40	22.1	.37	27.6	.44	24.4	.41	19.4	.37	17.6	.35	24.2	.40	19.5	.36	17.2	.33	14.6	.31	21.3	.38	18.3	.33	15.6	.29	15.4	.28	19.6	.33	17.3	.32	14.8	.31	12.1	.26	65
	Maximum Result for Medium Attacks																																						
60	28.2	.44	27.0	.43	22.9	.37	20.2	.34	25.6	.41	22.5	.38	17.7	.34	16.0	.33	22.2	.38	17.8	.33	15.6	.31	13.2	.28	19.5	.35	16.7	.31	14.0	.26	13.9	.26	17.9	.31	15.7	.29	13.3	.28	10.8	.23	60
55	26.5	.43	24.8	.40	20.9	.34	18.3	.32	23.5	.39	20.5	.36	16.0	.31	14.5	.30	20.3	.35	16.1	.30	14.0	.28	11.7	.25	17.7	.32	15.0	.28	12.5	.23	12.4	.23	16.1	.28	14.1	.26	11.9	.25	9.4	.21	55
50	24.5	.40	22.8	.38	19.0	.32	16.5	.29	21.6	.36	18.7	.33	14.4	.29	13.1	.27	18.5	.32	14.6	.28	12.5	.25	10.4	.23	16.1	.29	13.5	.25	11.1	.21	11.0	.21	14.5	.25	12.6	.24	10.5	.23	8.2	.18	50
	Maximum Result for Small Attacks																																						
45	22.4	.38	20.8	.35	17.1	.29	14.7	.26	19.6	.33	16.9	.30	12.8	.26	11.6	.25	16.6	.30	13.0	.25	11.0	.23	9.0	.20	14.4	.27	12.0	.23	9.7	.19	9.6	.18	12.8	.22	11.1	.21	9.2	.20	7.0	.16	45
40	20.4	.35	18.8	.32	15.3	.26	13.0	.23	17.7	.31	15.1	.28	11.3	.23	10.2	.22	14.9	.27	11.4	.22	9.6	.20	7.8	.18	12.7	.24	10.5	.20	8.3	.16	8.3	.16	11.3	.20	9.8	.19	8.0	.18	5.9	.14	40
35	18.4	.32	16.9	.29	13.6	.24	11.4	.21	15.9	.28	13.5	.25	9.9	.21	8.9	.19	13.2	.24	10.0	.20	8.3	.18	6.6	.15	11.2	.21	9.2	.18	7.1	.14	7.0	.14	9.7	.17	8.4	.17	6.8	.15	4.9	.12	35
30	16.6	.29	15.1	.27	12.0	.21	9.9	.18	14.1	.25	11.9	.22	8.6	.19	7.7	.17	11.6	.22	8.6	.17	7.1	.16	5.6	.13	9.7	.19	7.9	.16	5.9	.12	5.9	.12	8.4	.15	7.2	.14	5.8	.13	4.0	.10	30
25	14.8	.27	13.5	.24	10.4	.19	8.5	.16	12.5	.23	10.4	.20	7.4	.16	6.6	.15	10.1	.19	7.4	.15	6.1	.14	4.7	.11	8.4	.17	6.7	.14	4.9	.10	4.9	.10	7.0	.13	6.1	.12	4.8	.11	3.2	.08	25
20	13.2	.24	11.8	.22	9.0	.16	7.2	.14	11.0	.20	9.0	.18	6.2	.14	5.5	.13	8.7	.17	6.2	.13	5.1	.12	3.8	.09	7.1	.14	5.6	.12	3.9	.08	3.9	.08	5.8	.11	5.1	.10	3.9	.09	2.5	.06	20
15	11.6	.22	10.3	.19	7.7	.14	6.0	.12	9.5	.18	7.7	.16	5.2	.12	4.6	.11	7.4	.15	5.2	.11	4.2	.10	3.0	.08	5.9	.12	4.6	.10	3.1	.06	3.1	.06	4.7	.09	4.1	.09	3.1	.08	1.8	.04	15
10	10.1	.19	9.0	.17	6.5	.12	5.0	.10	8.2	.16	6.6	.14	4.3	.10	3.8	.09	6.3	.13	4.2	.09	3.4	.08	2.3	.06	4.9	.10	3.7	.08	2.3	.05	2.3	.05	3.7	.07	3.2	.07	2.4	.06	1.2	.03	10
5	8.8	.17	7.7	.15	5.4	.10	4.1	.08	7.0	.14	5.5	.12	3.5	.08	3.0	.07	5.2	.11	3.4	.07	2.6	.06	1.7	.04	4.0	.08	2.9	.06	1.5	.03	1.5	.03	2.8	.05	2.4	.05	1.8	.04	1.2	.02	5
0	7.6	.15	6.5	.13	4.4	.09	3.2	.06	5.9	.12	4.5	.10	2.7	.06	2.3	.05	4.2	.09	2.6	.05	2.0	.04	1.3	.03	3.1	.07	2.1	.04	1.3	.02	1.3	.02	1.9	.03	1.7	.03	1.3	.03	1.1	.02	0
-5	6.4	.13	5.5	.11	3.5	.07	2.4	.05	4.9	.10	3.7	.08	2.1	.05	1.7	.04	3.3	.07	1.8	.04	1.4	.03	1.2	.02	2.4	.05	1.4	.03	1.3	.02	1.2	.02	1.5	.03	1.4	.02	1.2	.02	1.0	.02	-5
-10	5.4	.11	4.5	.09	2.7	.05	1.7	.03	4.0	.08	2.9	.06	1.5	.03	1.3	.02	2.6	.05	1.4	.03	1.3	.02	1.1	.02	1.6	.03	1.3	.02	1.2	.02	1.2	.02	1.4	.02	1.3	.02	1.1	.02	1.0	.02	-10
-15	4.5	.10	3.6	.08	1.9	.03	1.5	.02	3.1	.06	2.2	.04	1.3	.02	1.2	.02	1.8	.03	1.3	.02	1.2	.02	1.0	.02	1.4	.02	1.3	.02	1.1	.02	1.1	.02	1.3	.02	1.2	.02	1.0	.02	.9	.02	-15
-20	3.6	.08	2.8	.06	1.6	.02	1.4	.02	2.4	.05	1.5	.02	1.2	.02	1.1	.02	1.5	.02	1.2	.02	1.1	.02	1.0	.02	1.4	.02	1.2	.02	1.0	.02	1.0	.02	1.3	.02	1.1	.02	1.0	.02	.8	.02	-20
-25	2.9	.06	2.1	.04	1.5	.02	1.3	.02	1.7	.03	1.4	.02	1.2	.02	1.1	.02	1.4	.02	1.2	.02	1.0	.02	.9	.02	1.3	.02	1.1	.02	.9	.02	.9	.02	1.2	.02	1.0	.02	.9	.02	.8	.02	-25
-30	2.2	.04	1.6	.02	1.4	.02	1.2	.02	1.5	.02	1.3	.02	1.1	.02	1.0	.02	1.3	.02	1.1	.02	1.0	.02	.8	.02	1.2	.02	1.0	.02	.9	.02	.9	.02	1.1	.02	1.0	.02	.8	.02	.7	.01	-30
-35	1.6	.02	1.5	.02	1.3	.02	1.1	.02	1.4	.02	1.2	.02	1.0	.02	.9	.02	1.2	.02	1.0	.02	.9	.02	.7	.02	1.1	.02	.9	.02	.8	.01	.8	.01	1.0	.02	.9	.02	.8	.02	.6	.01	-35
-40	1.5	.02	1.4	.02	1.2	.02	1.0	.02	1.3	.02	1.1	.02	.9	.02	.8	.02	1.1	.02	.9	.02	.8	.02	.7	.01	1.0	.02	.9	.02	.7	.01	.7	.01	.9	.02	.8	.01	.7	.01	.6	.01	-40
-45	1.3	.02	1.3	.02	1.1	.02	.9	.02	1.2	.02	1.0	.02	.8	.02	.7	.02	1.0	.02	.8	.02	.7	.01	.6	.01	.9	.02	.8	.01	.6	.01	.6	.01	.8	.01	.7	.01	.6	.01	.5	.01	-45
-50	1.2	.02	1.1	.02	.9	.02	.8	.01	1.1	.02	.9	.02	.7	.01	.6	.01	.9	.02	.7	.01	.6	.01	.5	.01	.8	.01	.7	.01	.6	.01	.5	.01	.7	.01	.6	.01	.5	.01	.4	.01	-50
-55	1.1	.02	1.0	.02	.9	.01	.7	.01	1.0	.02	.8	.02	.6	.01	.6	.01	.8	.01	.6	.01	.5	.01	.4	.01	.7	.01	.6	.01	.5	.01	.5	.01	.6	.01	.6	.01	.5	.01	.3	.01	-55
-60	1.0	.02	.9	.02	.8	.01	.6	.01	.9	.02	.8	.01	.6	.01	.5	.01	.7	.01	.6	.01	.5	.01	.4	.01	.6	.01	.5	.01	.4	.01	.4	.01	.6	.01	.5	.01	.4	.01	.3	.01	-60
-65	0.9	.02	.8	.01	.7	.01	.6	.01	.8	.01	.7	.01	.5	.01	.4	.01	.7	.01	.5	.01	.4	.01	.3	.01	.6	.01	.5	.01	.3	.01	.3	.01	.5	.01	.4	.01	.3	.01	.2	.01	-65
-70	0.8	.01	.8	.01	.6	.01	.5	.01	.7	.01	.6	.01	.4	.01	.4	.01	.6	.01	.4	.01	.4	.01	.3	.01	.5	.01	.4	.01	.3	.01	.3	.01	.4	.01	.4	.01	.3	.01	.2	.00	-70
-75	0.7	.01	.7	.01	.5	.01	.4	.01	.6	.01	.5	.01	.4	.01	.3	.01	.5	.01	.4	.01	.3	.01	.2	.01	.4	.01	.3	.01	.2	.00	.2	.00	.3	.01	.3	.01	.2	.01	.2	.00	-75
-80	0.7	.01	.6	.01	.4	.01	.4	.01	.5	.01	.4	.01	.3	.01	.3	.01	.4	.01	.3	.01	.2	.01	.2	.00	.4	.01	.3	.01	.2	.00	.2	.00	.3	.01	.2	.01	.2	.00	.1	.00	-80
-85	0.6	.01	.5	.01	.4	.01	.3	.01	.5	.01	.4	.01	.3	.01	.2	.01	.4	.01	.3	.01	.2	.00	.1	.00	.3	.01	.2	.00	.1	.00	.1	.00	.2	.00	.2	.00	.2	.00	.1	.00	-85
-90	0.5	.01	.4	.01	.3	.01	.2	.00	.4	.01	.3	.01	.2	.00	.2	.00	.3	.01	.2	.00	.2	.00	.1	.00	.2	.00	.2	.00	.1	.00	.1	.00	.2	.00	.2	.00	.1	.00	.1	.00	-90
-95	0.4	.01	.4	.01	.3	.01	.2	.00	.3	.01	.3	.01	.2	.00	.1	.00	.3	.01	.2	.00	.1	.00	.1	.00	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	-95
-100	0.4	.01	.3	.01	.2	.00	.2	.00	.3	.01	.2	.00	.1	.00	.1	.00	.2	.00	.1	.00	.1	.00	.1	.00	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	-100

RAM/BUTT/BASH/KNOCK DOWN/SLUG UNIT ATTACK TABLE

A–1.6

	AT 1		AT 2		AT 3		AT 4		AT 5		AT 6		AT 7		AT 8		AT 9		AT 10		AT 11		AT 12		AT 13		AT 14		AT 15		AT 16		AT 17		AT 18		AT 19		AT 20		
	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	
100	22.5	.39	22.4	.40	18.4	.38	18.3	.38	21.8	.39	20.0	.38	18.3	.38	18.3	.41	21.5	.40	19.7	.39	17.2	.40	15.5	.40	21.8	.41	18.6	.39	17.7	.39	17.6	.39	21.1	.41	19.0	.40	16.4	.40	14.7	.40	100
95	21.1	.37	21.0	.38	17.3	.36	17.2	.36	20.5	.36	18.8	.36	17.1	.36	17.2	.38	20.2	.37	18.5	.37	16.1	.38	14.6	.38	20.5	.38	17.5	.37	16.6	.36	16.6	.36	20.6	.40	17.9	.38	15.5	.38	13.8	.38	95
90	19.8	.34	19.7	.35	16.1	.34	16.1	.34	19.1	.34	17.6	.34	16.0	.34	16.2	.36	18.9	.35	17.3	.35	15.1	.35	13.7	.35	19.3	.36	16.4	.35	15.5	.34	15.5	.34	19.5	.39	16.8	.36	14.5	.35	12.9	.35	90
85	18.4	.32	18.4	.33	15.0	.32	14.9	.32	17.8	.32	16.3	.32	14.9	.31	15.1	.34	17.6	.33	16.2	.33	14.1	.33	12.7	.33	18.0	.34	15.3	.32	14.5	.32	14.4	.32	18.3	.36	15.7	.33	13.5	.33	12.1	.33	85
80	17.0	.30	17.1	.31	13.9	.29	13.8	.29	16.5	.30	15.1	.29	13.8	.29	14.0	.32	16.4	.31	15.0	.30	13.1	.31	11.8	.31	16.7	.32	14.1	.30	13.4	.30	13.4	.30	17.1	.34	14.5	.31	12.5	.31	11.2	.31	80
	Maximum Result for Large Attacks																																								
75	15.7	.28	15.8	.29	12.8	.27	12.7	.27	15.2	.27	13.9	.27	12.7	.27	12.9	.29	15.1	.28	13.8	.28	12.1	.28	10.9	.29	15.5	.29	13.0	.28	12.3	.27	12.3	.27	15.8	.32	13.4	.29	11.6	.29	10.3	.28	75
70	14.3	.25	14.4	.26	11.7	.25	11.6	.25	13.9	.25	12.7	.25	11.5	.25	11.9	.27	13.8	.26	12.6	.26	11.0	.26	10.0	.26	14.2	.27	11.9	.25	11.3	.25	11.2	.25	14.6	.30	12.3	.27	10.6	.26	9.5	.26	70
65	12.9	.23	13.1	.24	10.5	.22	10.5	.22	12.5	.23	11.5	.22	10.4	.22	10.8	.25	12.6	.24	11.5	.24	10.0	.24	9.1	.24	12.9	.25	10.8	.23	10.2	.23	10.2	.23	13.4	.27	11.2	.24	9.6	.24	8.6	.24	65
	Maximum Result for Medium Attacks																																								
60	11.6	.21	11.8	.22	9.4	.20	9.3	.20	11.2	.21	10.2	.20	9.3	.20	9.7	.22	11.3	.22	10.3	.21	9.0	.22	8.1	.22	11.7	.23	9.7	.21	9.1	.21	9.1	.21	12.2	.25	10.1	.22	8.7	.22	7.7	.22	60
55	10.2	.18	10.5	.20	8.3	.18	8.2	.18	9.9	.18	9.0	.18	8.2	.18	8.7	.20	10.0	.19	9.1	.19	8.0	.19	7.2	.20	10.4	.20	8.5	.19	8.1	.18	8.0	.18	11.0	.23	8.9	.20	7.7	.20	6.8	.19	55
50	8.9	.16	9.3	.18	7.3	.16	7.2	.16	8.7	.16	7.9	.16	7.1	.16	7.7	.18	8.8	.17	8.0	.17	7.1	.17	6.4	.18	9.2	.18	7.5	.17	7.1	.16	7.0	.16	9.8	.21	7.9	.18	6.8	.18	6.0	.17	50
	Maximum Result for Small Attacks																																								
45	7.6	.14	8.0	.15	6.2	.14	6.1	.14	7.4	.14	6.7	.14	6.1	.14	6.7	.16	7.6	.15	6.9	.15	6.2	.15	5.5	.15	8.0	.16	6.5	.15	6.1	.14	6.1	.14	8.7	.18	6.9	.16	5.9	.15	5.3	.15	45
40	6.3	.12	6.8	.13	5.2	.12	5.1	.12	6.2	.12	5.6	.12	5.1	.12	5.7	.14	6.5	.13	5.9	.13	5.3	.13	4.8	.13	6.9	.14	5.5	.13	5.2	.12	5.2	.12	7.5	.16	5.9	.14	5.1	.13	4.5	.13	40
35	5.1	.10	5.6	.11	4.2	.10	4.2	.10	5.1	.10	4.6	.10	4.2	.10	4.8	.12	5.4	.11	4.9	.11	4.4	.11	4.0	.11	5.8	.12	4.6	.11	4.3	.10	4.3	.10	6.5	.14	5.0	.12	4.3	.11	3.8	.11	35
30	3.9	.07	4.6	.09	3.3	.08	3.3	.08	4.0	.08	3.6	.08	3.3	.07	4.0	.10	4.4	.09	4.0	.09	3.6	.09	3.3	.09	4.8	.10	3.7	.09	3.5	.08	3.4	.08	5.5	.12	4.1	.10	3.5	.09	3.1	.09	30
25	2.8	.05	3.5	.07	2.5	.05	2.4	.05	3.0	.06	2.7	.05	2.4	.05	3.1	.08	3.4	.07	3.1	.07	2.9	.08	2.6	.08	3.8	.08	2.8	.07	2.7	.07	2.7	.07	4.6	.10	3.2	.08	2.8	.08	2.5	.08	25
20	1.8	.03	2.5	.05	1.7	.04	1.7	.04	2.0	.04	1.9	.04	1.7	.04	2.4	.06	2.4	.05	2.2	.05	2.2	.06	2.0	.06	2.9	.06	2.1	.05	2.0	.05	2.0	.05	3.7	.08	2.5	.06	2.1	.06	1.9	.06	20
15	1.3	.02	1.6	.03	1.1	.02	1.1	.02	1.3	.02	1.2	.02	1.1	.02	1.7	.04	1.6	.03	1.4	.03	1.6	.04	1.4	.04	2.0	.04	1.4	.03	1.3	.03	1.3	.03	2.8	.06	1.8	.04	1.5	.04	1.4	.04	15
10	1.3	.02	1.3	.02	1.0	.02	1.0	.02	1.2	.02	1.1	.02	1.0	.02	1.0	.02	1.2	.02	1.1	.02	1.0	.02	.9	.02	1.2	.02	1.1	.02	1.0	.02	1.0	.02	2.0	.04	1.1	.02	.9	.02	.8	.02	10
5	1.2	.02	1.2	.02	1.0	.02	1.0	.02	1.2	.02	1.1	.02	1.0	.02	1.0	.02	1.1	.02	1.1	.02	.9	.02	.8	.02	1.2	.02	1.0	.02	.9	.02	.9	.02	1.3	.03	1.0	.02	.9	.02	.8	.02	5
0	1.1	.02	1.1	.02	.9	.02	.9	.02	1.1	.02	1.0	.02	.9	.02	.9	.02	1.1	.02	1.0	.02	.9	.02	.8	.02	1.1	.02	.9	.02	.9	.02	.9	.02	1.1	.02	1.0	.02	.8	.02	.7	.02	0
-5	1.1	.02	1.1	.02	.9	.02	.9	.02	1.0	.02	1.0	.02	.9	.02	.9	.02	1.0	.02	.9	.02	.8	.02	.7	.02	1.0	.02	.9	.02	.8	.02	.8	.02	1.0	.02	.9	.02	.8	.02	.7	.02	-5
-10	1.0	.02	1.0	.02	.8	.02	.8	.02	1.0	.02	.9	.02	.8	.02	.8	.02	1.0	.02	.9	.02	.8	.02	.7	.02	1.0	.02	.8	.02	.8	.02	.8	.02	1.0	.02	.9	.02	.7	.02	.7	.02	-10
-15	0.9	.02	.9	.02	.8	.02	.8	.02	.9	.02	.8	.02	.8	.02	.8	.02	.9	.02	.8	.02	.7	.02	.6	.02	.9	.02	.8	.02	.7	.02	.7	.02	.9	.02	.8	.02	.7	.02	.6	.02	-15
-20	0.9	.02	.9	.02	.7	.01	.7	.01	.8	.01	.8	.01	.7	.01	.7	.02	.8	.02	.8	.02	.7	.02	.6	.02	.8	.02	.7	.02	.7	.02	.7	.01	.9	.02	.7	.02	.6	.02	.6	.02	-20
-25	0.8	.01	.8	.01	.7	.01	.6	.01	.8	.01	.7	.01	.6	.01	.7	.01	.8	.01	.7	.01	.6	.01	.6	.01	.8	.01	.7	.01	.6	.01	.6	.01	.8	.02	.7	.01	.6	.01	.5	.01	-25
-30	0.7	.01	.7	.01	.6	.01	.6	.01	.7	.01	.6	.01	.6	.01	.6	.01	.7	.01	.6	.01	.6	.01	.5	.01	.7	.01	.6	.01	.6	.01	.6	.01	.7	.01	.6	.01	.5	.01	.5	.01	-30
-35	0.7	.01	.7	.01	.5	.01	.5	.01	.6	.01	.6	.01	.5	.01	.6	.01	.6	.01	.6	.01	.5	.01	.5	.01	.7	.01	.6	.01	.5	.01	.5	.01	.7	.01	.6	.01	.5	.01	.4	.01	-35
-40	0.6	.01	.6	.01	.5	.01	.5	.01	.6	.01	.5	.01	.5	.01	.5	.01	.6	.01	.5	.01	.5	.01	.4	.01	.6	.01	.5	.01	.5	.01	.5	.01	.6	.01	.5	.01	.4	.01	.4	.01	-40
-45	0.5	.01	.5	.01	.4	.01	.4	.01	.5	.01	.5	.01	.4	.01	.4	.01	.5	.01	.5	.01	.4	.01	.4	.01	.5	.01	.4	.01	.4	.01	.4	.01	.6	.01	.5	.01	.4	.01	.4	.01	-45
-50	0.4	.01	.5	.01	.4	.01	.4	.01	.4	.01	.4	.01	.4	.01	.4	.01	.4	.01	.4	.01	.4	.01	.3	.01	.5	.01	.4	.01	.4	.01	.3	.01	.5	.01	.4	.01	.3	.01	.3	.01	-50
-55	0.4	.01	.4	.01	.3	.01	.3	.01	.4	.01	.3	.01	.3	.01	.3	.01	.4	.01	.3	.01	.3	.01	.3	.01	.4	.01	.3	.01	.3	.01	.3	.01	.4	.01	.3	.01	.3	.01	.3	.01	-55
-60	0.3	.01	.3	.01	.3	.01	.3	.01	.3	.01	.3	.01	.3	.01	.3	.01	.3	.01	.3	.01	.3	.01	.2	.01	.3	.01	.3	.01	.3	.01	.3	.01	.4	.01	.3	.01	.3	.01	.2	.01	-60
-65	0.3	.00	.3	.01	.2	.00	.2	.00	.3	.00	.2	.00	.2	.00	.2	.01	.3	.01	.2	.01	.2	.01	.2	.01	.3	.01	.2	.01	.2	.01	.2	.01	.3	.01	.2	.01	.2	.01	.2	.01	-65
-70	0.2	.00	.2	.00	.2	.00	.2	.00	.2	.00	.2	.00	.2	.00	.2	.00	.2	.00	.2	.00	.2	.00	.2	.00	.2	.00	.2	.00	.2	.00	.2	.00	.3	.01	.2	.00	.2	.00	.2	.00	-70
-75	0.1	.00	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.2	.00	.2	.00	.1	.00	.1	.00	.1	.00	.2	.00	.1	.00	.1	.00	.1	.00	.2	.01	.2	.00	.1	.00	.1	.00	-75
-80	0.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.2	.00	.1	.00	.1	.00	.1	.00	-80
-85	0.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	-85
-90	0.1	.00	.1	.00	.0	.00	.0	.00	.1	.00	.1	.00	.0	.00	.0	.00	.1	.00	.1	.00	.0	.00	.0	.00	.1	.00	.0	.00	.0	.00	.0	.00	.1	.00	.1	.00	.0	.00	.0	.00	-90
-95	0.1	.00	.1	.00	.0	.00	.0	.00	.1	.00	.0	.00	.0	.00	.0	.00	.1	.00	.0	.00	.0	.00	.0	.00	.1	.00	.0	.00	.0	.00	.0	.00	.1	.00	.0	.00	.0	.00	.0	.00	-95
-100	0.1	.00	.1	.00	.0	.00	.0	.00	.1	.00	.0	.00	.0	.00	.0	.00	.1	.00	.0	.00	.0	.00	.0	.00	.1	.00	.0	.00	.0	.00	.0	.00	.1	.00	.0	.00	.0	.00	.0	.00	-100

STINGER UNIT ATTACK TABLE

A–1.7

	AT 1		AT 2		AT 3		AT 4		AT 5		AT 6		AT 7		AT 8		AT 9		AT 10		AT 11		AT 12		AT 13		AT 14		AT 15		AT 16		AT 17		AT 18		AT 19		AT 20		
	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	
100	17.8	.34	16.9	.34	14.9	.33	13.3	.31	15.0	.33	14.0	.33	11.3	.33	11.0	.32	14.9	.33	12.1	.30	8.5	.26	6.3	.23	14.9	.33	11.8	.29	7.5	.25	7.5	.25	14.1	.31	11.4	.28	8.5	.26	6.0	.22	100
95	17.5	.34	16.5	.34	14.4	.33	12.5	.29	14.7	.33	13.5	.33	10.7	.32	10.4	.30	14.4	.33	11.4	.28	7.9	.24	5.8	.21	14.4	.33	11.0	.27	7.0	.23	7.0	.23	13.3	.29	10.7	.26	7.9	.24	5.5	.20	95
90	17.1	.34	16.2	.33	13.6	.31	11.7	.28	14.3	.33	12.8	.31	10.0	.30	9.8	.29	13.6	.31	10.6	.27	7.3	.22	5.3	.19	13.6	.31	10.3	.26	6.5	.21	6.5	.21	12.5	.28	9.9	.24	7.3	.22	5.1	.18	90
85	16.7	.33	15.9	.33	12.7	.29	10.9	.26	13.5	.31	12.0	.29	9.4	.28	9.1	.27	12.7	.29	9.9	.25	6.7	.21	4.8	.17	12.7	.29	9.5	.24	5.9	.20	5.9	.20	11.6	.26	9.2	.23	6.7	.21	4.6	.16	85
80	16.3	.33	15.5	.33	11.9	.27	10.1	.24	12.6	.29	11.2	.27	8.8	.26	8.5	.25	11.9	.27	9.2	.23	6.1	.19	4.3	.16	11.9	.27	8.8	.22	5.4	.18	5.4	.18	10.8	.24	8.5	.21	6.2	.19	4.1	.15	80
	Maximum Result for Large Attacks																																							
75	15.9	.33	14.6	.32	11.0	.26	9.4	.22	11.8	.28	10.4	.26	8.1	.24	7.8	.23	11.0	.26	8.4	.21	5.6	.17	3.9	.14	11.0	.26	8.1	.20	4.8	.16	4.8	.16	9.9	.22	7.7	.19	5.6	.17	3.6	.13	75
70	15.1	.32	13.7	.30	10.2	.24	8.6	.21	11.0	.26	9.6	.24	7.5	.23	7.2	.22	10.2	.24	7.7	.20	5.0	.15	3.4	.12	10.2	.24	7.3	.19	4.3	.14	4.3	.14	9.1	.21	7.0	.17	5.0	.15	3.1	.11	70
65	14.1	.30	12.8	.28	9.4	.22	7.8	.19	10.1	.24	8.8	.22	6.8	.21	6.6	.20	9.4	.22	6.9	.18	4.4	.14	2.9	.10	9.4	.22	6.6	.17	3.8	.13	3.8	.13	8.3	.19	6.2	.16	4.4	.14	2.6	.09	65
	Maximum Result for Medium Attacks																																							
60	13.2	.29	11.8	.27	8.5	.20	7.0	.17	9.3	.22	8.0	.20	6.2	.19	5.9	.18	8.5	.20	6.2	.16	3.8	.12	2.4	.09	8.5	.20	5.8	.15	3.2	.11	3.2	.11	7.4	.17	5.5	.14	3.8	.12	2.1	.08	60
55	12.2	.27	10.9	.25	7.7	.19	6.2	.15	8.4	.21	7.2	.19	5.6	.17	5.3	.16	7.7	.19	5.5	.14	3.2	.10	1.9	.07	7.7	.19	5.1	.13	2.7	.09	2.7	.09	6.6	.15	4.8	.12	3.2	.10	1.6	.06	55
50	11.2	.25	10.0	.23	6.9	.17	5.5	.14	7.7	.19	6.5	.17	5.0	.16	4.7	.15	6.9	.17	4.8	.13	2.7	.09	1.4	.05	6.9	.17	4.4	.12	2.2	.07	2.2	.07	5.8	.14	4.1	.11	2.7	.09	1.2	.04	50
	Maximum Result for Small Attacks																																							
45	10.3	.24	9.1	.21	6.1	.15	4.7	.12	6.9	.17	5.7	.15	4.4	.14	4.1	.13	6.1	.15	4.1	.11	2.1	.07	1.0	.04	6.1	.15	3.7	.10	1.7	.06	1.7	.06	5.0	.12	3.4	.09	2.1	.07	.7	.03	45
40	9.4	.22	8.2	.20	5.3	.13	4.0	.10	6.1	.16	5.0	.13	3.8	.12	3.5	.11	5.3	.13	3.4	.09	1.5	.05	.5	.02	5.3	.13	3.0	.08	1.2	.04	1.1	.04	4.2	.10	2.7	.07	1.6	.05	.5	.02	40
35	8.5	.20	7.4	.18	4.6	.12	3.3	.09	5.3	.14	4.3	.12	3.2	.11	2.9	.10	4.6	.12	2.7	.07	1.0	.03	.5	.02	4.6	.12	2.4	.06	.7	.02	.7	.02	3.5	.09	2.0	.05	1.0	.03	.5	.02	35
30	7.6	.18	6.6	.16	3.8	.10	2.6	.07	4.6	.12	3.6	.10	2.6	.09	2.4	.08	3.8	.10	2.1	.06	.6	.02	.5	.02	3.8	.10	1.7	.05	.5	.02	.5	.02	2.7	.07	1.4	.04	.6	.02	.5	.02	30
25	6.8	.17	5.8	.14	3.1	.08	1.9	.05	3.9	.10	3.0	.08	2.1	.07	1.8	.06	3.1	.08	1.5	.04	.6	.02	.4	.02	3.1	.08	1.1	.03	.5	.02	.5	.02	2.0	.05	.8	.02	.6	.02	.4	.02	25
20	6.0	.15	5.0	.13	2.5	.06	1.3	.03	3.2	.09	2.3	.06	1.6	.05	1.3	.04	2.5	.06	.9	.02	.5	.02	.4	.02	2.5	.06	.7	.02	.5	.02	.5	.02	1.4	.03	.7	.02	.5	.02	.4	.01	20
15	5.2	.13	4.3	.11	1.8	.05	.8	.02	2.5	.07	1.7	.05	1.1	.04	.8	.03	1.8	.05	.7	.02	.5	.02	.4	.01	1.8	.05	.7	.02	.5	.02	.5	.02	.8	.02	.7	.02	.5	.02	.4	.01	15
10	4.4	.11	3.6	.09	1.2	.03	.8	.02	1.9	.05	1.1	.03	.6	.02	.6	.02	1.2	.03	.7	.02	.5	.01	.4	.01	1.2	.03	.7	.02	.4	.01	.4	.01	.8	.02	.7	.02	.5	.01	.4	.01	10
5	3.7	.10	2.9	.07	.8	.02	.7	.02	1.3	.03	.8	.02	.6	.02	.6	.02	.8	.02	.6	.02	.5	.01	.3	.01	.8	.02	.6	.02	.4	.01	.4	.01	.8	.02	.6	.02	.5	.01	.3	.01	5
0	3.0	.08	2.2	.06	.8	.02	.7	.02	.8	.02	.7	.02	.6	.02	.6	.02	.8	.02	.6	.02	.4	.01	.3	.01	.8	.02	.6	.01	.4	.01	.4	.01	.7	.02	.6	.01	.4	.01	.3	.01	0
-5	2.4	.06	1.6	.04	.7	.02	.6	.01	.8	.02	.7	.02	.5	.02	.5	.02	.7	.02	.6	.01	.4	.01	.3	.01	.7	.02	.6	.01	.4	.01	.4	.01	.7	.01	.5	.01	.4	.01	.3	.01	-5
-10	1.7	.04	1.0	.02	.7	.02	.6	.01	.7	.02	.6	.02	.5	.02	.5	.01	.7	.02	.5	.01	.4	.01	.3	.01	.7	.02	.5	.01	.3	.01	.3	.01	.6	.01	.5	.01	.4	.01	.3	.01	-10
-15	1.1	.03	.8	.02	.6	.01	.6	.01	.7	.02	.6	.01	.5	.01	.5	.01	.6	.01	.5	.01	.3	.01	.2	.01	.6	.01	.5	.01	.3	.01	.3	.01	.6	.01	.5	.01	.3	.01	.2	.01	-15
-20	0.9	.02	.8	.02	.6	.01	.5	.01	.6	.01	.6	.01	.4	.01	.4	.01	.6	.01	.5	.01	.3	.01	.2	.01	.6	.01	.4	.01	.3	.01	.3	.01	.5	.01	.4	.01	.3	.01	.2	.01	-20
-25	0.8	.02	.7	.02	.6	.01	.5	.01	.6	.01	.5	.01	.4	.01	.4	.01	.6	.01	.4	.01	.3	.01	.2	.01	.6	.01	.4	.01	.2	.01	.2	.01	.5	.01	.4	.01	.3	.01	.2	.01	-25
-30	0.8	.02	.7	.02	.5	.01	.4	.01	.6	.01	.5	.01	.4	.01	.4	.01	.5	.01	.4	.01	.3	.01	.2	.01	.5	.01	.4	.01	.2	.01	.2	.01	.5	.01	.4	.01	.3	.01	.2	.01	-30
-35	0.7	.02	.6	.01	.5	.01	.4	.01	.5	.01	.4	.01	.3	.01	.3	.01	.5	.01	.4	.01	.2	.01	.1	.01	.5	.01	.3	.01	.2	.01	.2	.01	.4	.01	.3	.01	.2	.01	.1	.00	-35
-40	0.7	.01	.6	.01	.4	.01	.4	.01	.5	.01	.4	.01	.3	.01	.3	.01	.4	.01	.3	.01	.2	.01	.1	.00	.4	.01	.3	.01	.2	.01	.2	.01	.4	.01	.3	.01	.2	.01	.1	.00	-40
-45	0.6	.01	.6	.01	.4	.01	.3	.01	.4	.01	.4	.01	.3	.01	.3	.01	.4	.01	.3	.01	.2	.01	.1	.00	.4	.01	.3	.01	.1	.00	.1	.00	.3	.01	.2	.01	.2	.01	.1	.00	-45
-50	0.6	.01	.5	.01	.3	.01	.3	.01	.4	.01	.3	.01	.2	.01	.2	.01	.3	.01	.2	.01	.1	.00	.1	.00	.3	.01	.2	.01	.1	.00	.1	.00	.3	.01	.2	.01	.1	.00	.1	.00	-50
-55	0.5	.01	.5	.01	.3	.01	.2	.01	.3	.01	.3	.01	.2	.01	.2	.01	.3	.01	.2	.01	.1	.00	.0	.00	.3	.01	.2	.00	.1	.00	.1	.00	.2	.01	.2	.00	.1	.00	.0	.00	-55
-60	0.5	.01	.4	.01	.3	.01	.2	.01	.3	.01	.2	.01	.2	.01	.2	.01	.3	.01	.2	.00	.1	.00	.0	.00	.3	.01	.1	.00	.1	.00	.1	.00	.2	.01	.1	.00	.1	.00	.0	.00	-60
-65	0.4	.01	.4	.01	.2	.01	.2	.00	.3	.01	.2	.01	.2	.01	.1	.00	.2	.01	.1	.00	.0	.00	.0	.00	.2	.01	.1	.00	.0	.00	.0	.00	.2	.00	.1	.00	.0	.00	.0	.00	-65
-70	0.4	.01	.3	.01	.2	.00	.1	.00	.2	.01	.2	.00	.1	.00	.1	.00	.2	.00	.1	.00	.0	.00	.0	.00	.2	.00	.1	.00	.0	.00	.0	.00	.1	.00	.1	.00	.0	.00	.0	.00	-70
-75	0.3	.01	.3	.01	.2	.00	.1	.00	.2	.01	.1	.00	.1	.00	.1	.00	.2	.00	.1	.00	.0	.00	.0	.00	.2	.00	.1	.00	.0	.00	.0	.00	.1	.00	.0	.00	.0	.00	.0	.00	-75
-80	0.3	.01	.2	.01	.1	.00	.1	.00	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	.0	.00	.1	.00	.0	.00	.0	.00	.0	.00	.1	.00	.0	.00	.0	.00	.0	.00	-80
-85	0.3	.01	.2	.01	.1	.00	.0	.00	.1	.00	.1	.00	.1	.00	.0	.00	.1	.00	.0	.00	.0	.00	.0	.00	.1	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	-85
-90	0.2	.01	.2	.00	.1	.00	.0	.00	.1	.00	.1	.00	.0	.00	.0	.00	.1	.00	.0	.00	.0	.00	.0	.00	.1	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	-90
-95	0.2	.00	.1	.00	.0	.00	.0	.00	.1	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	-95
-100	0.1	.00	.1	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	-100

TINY ANIMAL UNIT ATTACK TABLE

	AT 1		AT 2		AT 3		AT 4		AT 5		AT 6		AT 7		AT 8		AT 9		AT 10		AT 11		AT 12		AT 13		AT 14		AT 15		AT 16		AT 17		AT 18		AT 19		AT 20		
	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	
100	17.8	.34	16.9	.34	14.9	.33	13.3	.31	15.0	.33	14.0	.33	11.3	.33	11.0	.32	14.9	.33	12.1	.30	8.5	.26	6.3	.23	14.9	.33	11.8	.29	7.5	.25	7.5	.25	14.1	.31	11.4	.28	8.5	.26	6.0	.22	100
95	17.5	.34	16.5	.34	14.4	.33	12.5	.29	14.7	.33	13.5	.33	10.7	.32	10.4	.30	14.4	.33	11.4	.28	7.9	.24	5.8	.21	14.4	.33	11.0	.27	7.0	.23	7.0	.23	13.3	.29	10.7	.26	7.9	.24	5.5	.20	95
90	17.1	.34	16.2	.33	13.6	.31	11.7	.28	14.3	.33	12.8	.31	10.0	.30	9.8	.29	13.6	.31	10.6	.27	7.3	.22	5.3	.19	13.6	.31	10.3	.26	6.5	.21	6.5	.21	12.5	.28	9.9	.24	7.3	.22	5.1	.18	90
85	16.7	.33	15.9	.33	12.7	.29	10.9	.26	13.5	.31	12.0	.29	9.4	.28	9.1	.27	12.7	.29	9.9	.25	6.7	.21	4.8	.17	12.7	.29	9.5	.24	5.9	.20	5.9	.20	11.6	.26	9.2	.23	6.7	.21	4.6	.16	85
80	16.3	.33	15.5	.33	11.9	.27	10.1	.24	12.6	.29	11.2	.27	8.8	.26	8.5	.25	11.9	.27	9.2	.23	6.1	.19	4.3	.16	11.9	.27	8.8	.22	5.4	.18	5.4	.18	10.8	.24	8.5	.21	6.2	.19	4.1	.15	80
	Maximum Result Against a Routed Unit																																								
75	15.9	.33	14.6	.32	11.0	.26	9.4	.22	11.8	.28	10.4	.26	8.1	.24	7.8	.23	11.0	.26	8.4	.21	5.6	.17	3.9	.14	11.0	.26	8.1	.20	4.8	.16	4.8	.16	9.9	.22	7.7	.19	5.6	.17	3.6	.13	75
70	15.1	.32	13.7	.30	10.2	.24	8.6	.21	11.0	.26	9.6	.24	7.5	.23	7.2	.22	10.2	.24	7.7	.20	5.0	.15	3.4	.12	10.2	.24	7.3	.19	4.3	.14	4.3	.14	9.1	.21	7.0	.17	5.0	.15	3.1	.11	70
65	14.1	.30	12.8	.28	9.4	.22	7.8	.19	10.1	.24	8.8	.22	6.8	.21	6.6	.20	9.4	.22	6.9	.18	4.4	.14	2.9	.10	9.4	.22	6.6	.17	3.8	.13	3.8	.13	8.3	.19	6.2	.16	4.4	.14	2.6	.09	65
	Maximum Result Against a Disordered Unit																																								
60	13.2	.29	11.8	.27	8.5	.20	7.0	.17	9.3	.22	8.0	.20	6.2	.19	5.9	.18	8.5	.20	6.2	.16	3.8	.12	2.4	.09	8.5	.20	5.8	.15	3.2	.11	3.2	.11	7.4	.17	5.5	.14	3.8	.12	2.1	.08	60
55	12.2	.27	10.9	.25	7.7	.19	6.2	.15	8.4	.21	7.2	.19	5.6	.17	5.3	.16	7.7	.19	5.5	.14	3.2	.10	1.9	.07	7.7	.19	5.1	.13	2.7	.09	2.7	.09	6.6	.15	4.8	.12	3.2	.10	1.6	.06	55
50	11.2	.25	10.0	.23	6.9	.17	5.5	.14	7.7	.19	6.5	.17	5.0	.16	4.7	.15	6.9	.17	4.8	.13	2.7	.09	1.4	.05	6.9	.17	4.4	.12	2.2	.07	2.2	.07	5.8	.14	4.1	.11	2.7	.09	1.2	.04	50
	Normal Maximum Result for an Attack																																								
45	10.3	.24	9.1	.21	6.1	.15	4.7	.12	6.9	.17	5.7	.15	4.4	.14	4.1	.13	6.1	.15	4.1	.11	2.1	.07	1.0	.04	6.1	.15	3.7	.10	1.7	.06	1.7	.06	5.0	.12	3.4	.09	2.1	.07	.7	.03	45
40	9.4	.22	8.2	.20	5.3	.13	4.0	.10	6.1	.16	5.0	.13	3.8	.12	3.5	.11	5.3	.13	3.4	.09	1.5	.05	.5	.02	5.3	.13	3.0	.08	1.2	.04	1.1	.04	4.2	.10	2.7	.07	1.6	.05	.5	.02	40
35	8.5	.20	7.4	.18	4.6	.12	3.3	.09	5.3	.14	4.3	.12	3.2	.11	2.9	.10	4.6	.12	2.7	.07	1.0	.03	.5	.02	4.6	.12	2.4	.06	.7	.02	.7	.02	3.5	.09	2.0	.05	1.0	.03	.5	.02	35
30	7.6	.18	6.6	.16	3.8	.10	2.6	.07	4.6	.12	3.6	.10	2.6	.09	2.4	.08	3.8	.10	2.1	.06	.6	.02	.5	.02	3.8	.10	1.7	.05	.5	.02	.5	.02	2.7	.07	1.4	.04	.6	.02	.5	.02	30
25	6.8	.17	5.8	.14	3.1	.08	1.9	.05	3.9	.10	3.0	.08	2.1	.07	1.8	.06	3.1	.08	1.5	.04	.6	.02	.4	.02	3.1	.08	1.1	.03	.5	.02	.5	.02	2.0	.05	.8	.02	.6	.02	.4	.02	25
20	6.0	.15	5.0	.13	2.5	.06	1.3	.03	3.2	.09	2.3	.06	1.6	.05	1.3	.04	2.5	.06	.9	.02	.5	.02	.4	.02	2.5	.06	.7	.02	.5	.02	.5	.02	1.4	.03	.7	.02	.5	.02	.4	.01	20
15	5.2	.13	4.3	.11	1.8	.05	.8	.02	2.5	.07	1.7	.05	1.1	.04	.8	.03	1.8	.05	.7	.02	.5	.02	.4	.01	1.8	.05	.7	.02	.5	.02	.5	.02	.8	.02	.7	.02	.5	.02	.4	.01	15
10	4.4	.11	3.6	.09	1.2	.03	.8	.02	1.9	.05	1.1	.03	.6	.02	.6	.02	1.2	.03	.7	.02	.5	.01	.4	.01	1.2	.03	.7	.02	.4	.01	.4	.01	.8	.02	.7	.02	.5	.01	.4	.01	10
5	3.7	.10	2.9	.07	.8	.02	.7	.02	1.3	.03	.8	.02	.6	.02	.6	.02	.8	.02	.6	.02	.5	.01	.3	.01	.8	.02	.6	.02	.4	.01	.4	.01	.8	.02	.6	.02	.5	.01	.3	.01	5
0	3.0	.08	2.2	.06	.8	.02	.7	.02	.8	.02	.7	.02	.6	.02	.6	.02	.8	.02	.6	.02	.4	.01	.3	.01	.8	.02	.6	.01	.4	.01	.4	.01	.7	.02	.6	.01	.4	.01	.3	.01	0
-5	2.4	.06	1.6	.04	.7	.02	.6	.01	.8	.02	.7	.02	.5	.02	.5	.02	.7	.02	.6	.01	.4	.01	.3	.01	.7	.02	.6	.01	.4	.01	.4	.01	.7	.01	.5	.01	.4	.01	.3	.01	-5
-10	1.7	.04	1.0	.02	.7	.02	.6	.01	.7	.02	.6	.02	.5	.02	.5	.01	.7	.02	.5	.01	.4	.01	.3	.01	.7	.02	.5	.01	.3	.01	.3	.01	.6	.01	.5	.01	.4	.01	.3	.01	-10
-15	1.1	.03	.8	.02	.6	.01	.6	.01	.7	.02	.6	.01	.5	.01	.5	.01	.6	.01	.5	.01	.3	.01	.2	.01	.6	.01	.5	.01	.3	.01	.3	.01	.6	.01	.5	.01	.3	.01	.2	.01	-15
-20	0.9	.02	.8	.02	.6	.01	.5	.01	.6	.01	.6	.01	.4	.01	.4	.01	.6	.01	.5	.01	.3	.01	.2	.01	.6	.01	.4	.01	.3	.01	.3	.01	.5	.01	.4	.01	.3	.01	.2	.01	-20
-25	0.8	.02	.7	.02	.6	.01	.5	.01	.6	.01	.5	.01	.4	.01	.4	.01	.6	.01	.4	.01	.3	.01	.2	.01	.6	.01	.4	.01	.2	.01	.2	.01	.5	.01	.4	.01	.3	.01	.2	.01	-25
-30	0.8	.02	.7	.02	.5	.01	.4	.01	.6	.01	.5	.01	.4	.01	.4	.01	.5	.01	.4	.01	.3	.01	.2	.01	.5	.01	.4	.01	.2	.01	.2	.01	.5	.01	.4	.01	.3	.01	.2	.01	-30
-35	0.7	.02	.6	.01	.5	.01	.4	.01	.5	.01	.4	.01	.3	.01	.3	.01	.5	.01	.4	.01	.2	.01	.1	.01	.5	.01	.3	.01	.2	.01	.2	.01	.4	.01	.3	.01	.2	.01	.1	.00	-35
-40	0.7	.01	.6	.01	.4	.01	.4	.01	.5	.01	.4	.01	.3	.01	.3	.01	.4	.01	.3	.01	.2	.01	.1	.00	.4	.01	.3	.01	.2	.01	.2	.01	.4	.01	.3	.01	.2	.01	.1	.00	-40
-45	0.6	.01	.6	.01	.4	.01	.3	.01	.4	.01	.4	.01	.3	.01	.3	.01	.4	.01	.3	.01	.2	.01	.1	.00	.4	.01	.3	.01	.1	.00	.1	.00	.3	.01	.2	.01	.2	.01	.1	.00	-45
-50	0.6	.01	.5	.01	.3	.01	.3	.01	.4	.01	.3	.01	.2	.01	.2	.01	.3	.01	.2	.01	.1	.00	.1	.00	.3	.01	.2	.01	.1	.00	.1	.00	.3	.01	.2	.01	.1	.00	.1	.00	-50
-55	0.5	.01	.5	.01	.3	.01	.2	.01	.3	.01	.3	.01	.2	.01	.2	.01	.3	.01	.2	.01	.1	.00	.0	.00	.3	.01	.2	.00	.1	.00	.1	.00	.2	.01	.2	.00	.1	.00	.0	.00	-55
-60	0.5	.01	.4	.01	.3	.01	.2	.01	.3	.01	.2	.01	.2	.01	.2	.01	.3	.01	.2	.00	.1	.00	.0	.00	.3	.01	.1	.00	.1	.00	.1	.00	.2	.01	.1	.00	.1	.00	.0	.00	-60
-65	0.4	.01	.4	.01	.2	.01	.2	.00	.3	.01	.2	.01	.2	.01	.1	.00	.2	.01	.1	.00	.0	.00	.0	.00	.2	.01	.1	.00	.0	.00	.0	.00	.2	.00	.1	.00	.0	.00	.0	.00	-65
-70	0.4	.01	.3	.01	.2	.00	.1	.00	.2	.01	.2	.00	.1	.00	.1	.00	.2	.00	.1	.00	.0	.00	.0	.00	.2	.00	.1	.00	.0	.00	.0	.00	.1	.00	.1	.00	.0	.00	.0	.00	-70
-75	0.3	.01	.3	.01	.2	.00	.1	.00	.2	.01	.1	.00	.1	.00	.1	.00	.2	.00	.1	.00	.0	.00	.0	.00	.2	.00	.1	.00	.0	.00	.0	.00	.1	.00	.0	.00	.0	.00	.0	.00	-75
-80	0.3	.01	.2	.01	.1	.00	.1	.00	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	.0	.00	.1	.00	.0	.00	.0	.00	.0	.00	.1	.00	.0	.00	.0	.00	.0	.00	-80
-85	0.3	.01	.2	.01	.1	.00	.0	.00	.1	.00	.1	.00	.1	.00	.0	.00	.1	.00	.0	.00	.0	.00	.0	.00	.1	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	-85
-90	0.2	.01	.2	.00	.1	.00	.0	.00	.1	.00	.1	.00	.0	.00	.0	.00	.1	.00	.0	.00	.0	.00	.0	.00	.1	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	-90
-95	0.2	.00	.1	.00	.0	.00	.0	.00	.1	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	-95
-100	0.1	.00	.1	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	-100

The maximum result on this table is used against a unit unable to defend itself, for example, a unit sleeping, a unit of captives tied up, a group of wounded, etc.

TRAMPLE/STOMP UNIT ATTACK TABLE

A–1.9

	AT 1		AT 2		AT 3		AT 4		AT 5		AT 6		AT 7		AT 8		AT 9		AT 10		AT 11		AT 12		AT 13		AT 14		AT 15		AT 16		AT 17		AT 18		AT 19		AT 20		
	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	
100	43.7	.52	41.8	.52	37.1	.51	35.1	.51	40.7	.51	37.8	.51	35.7	.50	33.9	.50	35.3	.51	28.7	.50	23.7	.48	20.9	.47	32.5	.51	27.0	.49	23.2	.48	23.0	.47	30.6	.50	25.0	.48	22.8	.47	19.0	.47	100
95	42.7	.51	40.9	.51	36.2	.51	34.2	.50	39.8	.51	36.9	.50	34.7	.50	32.9	.49	34.5	.50	27.9	.49	23.0	.47	20.3	.46	31.8	.50	26.3	.48	22.5	.47	22.3	.46	29.9	.49	24.2	.47	22.1	.46	18.3	.46	95
90	41.7	.50	39.9	.50	35.3	.50	33.2	.49	38.8	.50	35.9	.50	33.6	.49	31.9	.48	33.6	.50	27.0	.48	22.2	.45	19.5	.45	30.9	.49	25.5	.47	21.8	.46	21.6	.45	29.0	.48	23.5	.46	21.3	.45	17.5	.44	90
85	40.6	.50	38.8	.50	34.2	.49	32.1	.48	37.6	.49	34.8	.49	32.5	.48	30.8	.47	32.5	.49	26.1	.47	21.4	.44	18.5	.43	29.9	.48	24.7	.46	21.1	.45	20.8	.44	28.0	.47	22.7	.45	20.5	.44	16.4	.41	85
80	39.4	.49	37.6	.49	33.1	.48	30.9	.47	36.4	.48	33.6	.48	31.2	.47	29.6	.46	31.4	.47	25.1	.46	20.3	.43	17.2	.40	28.9	.47	23.8	.45	20.3	.44	19.8	.42	27.0	.46	21.8	.44	19.4	.42	15.2	.39	80
	Maximum Result for Large Attacks																																							
75	38.1	.48	36.4	.48	31.8	.47	29.7	.46	35.1	.48	32.3	.47	29.9	.46	28.3	.45	30.2	.46	24.0	.45	18.9	.40	16.0	.37	27.7	.46	22.9	.44	19.1	.41	18.4	.40	25.9	.45	20.5	.42	18.1	.40	14.1	.36	75
70	36.7	.47	35.0	.47	30.5	.46	28.4	.45	33.7	.46	30.9	.46	28.5	.44	27.0	.44	29.0	.45	22.6	.43	17.5	.37	14.7	.35	26.6	.45	21.9	.43	17.7	.39	17.1	.37	24.8	.44	19.0	.39	16.7	.37	12.9	.33	70
65	35.2	.46	33.5	.46	29.1	.45	27.0	.44	32.2	.45	29.4	.45	27.0	.43	25.6	.43	27.6	.44	21.0	.40	16.1	.34	13.5	.32	25.3	.44	20.3	.40	16.4	.36	15.7	.34	23.0	.41	17.6	.36	15.4	.34	11.8	.30	65
	Maximum Result for Medium Attacks																																							
60	33.6	.45	32.0	.45	27.6	.44	25.4	.42	30.6	.44	27.9	.44	25.3	.42	23.7	.40	25.8	.42	19.3	.37	14.7	.32	12.2	.29	23.9	.42	18.8	.37	15.0	.33	14.4	.31	21.3	.39	16.1	.33	14.0	.31	10.6	.28	60
55	31.9	.44	30.3	.44	26.1	.43	23.4	.40	28.9	.43	26.0	.41	23.3	.39	21.8	.38	23.8	.39	17.7	.34	13.3	.29	11.0	.26	22.1	.40	17.2	.35	13.7	.30	13.0	.29	19.5	.36	14.7	.31	12.7	.29	9.5	.25	55
50	30.3	.43	28.8	.43	24.1	.40	21.6	.37	27.3	.42	24.0	.39	21.4	.37	20.0	.35	21.9	.36	16.1	.32	12.0	.26	9.8	.24	20.4	.37	15.8	.32	12.4	.28	11.8	.26	17.9	.33	13.3	.28	11.4	.26	8.4	.22	50
	Maximum Result for Small Attacks																																							
45	28.6	.42	27.1	.42	22.1	.37	19.7	.34	25.2	.40	21.9	.36	19.4	.34	18.1	.32	20.0	.34	14.6	.29	10.7	.24	8.7	.21	18.6	.34	14.3	.29	11.1	.25	10.5	.24	16.3	.30	12.0	.25	10.1	.24	7.3	.20	45
40	26.9	.41	25.4	.41	20.2	.34	17.8	.31	23.1	.37	19.9	.33	17.6	.31	16.3	.29	18.2	.31	13.1	.26	9.5	.21	7.6	.19	16.9	.31	12.9	.27	9.9	.23	9.3	.21	14.6	.28	10.6	.23	9.0	.21	6.3	.17	40
35	24.7	.38	23.3	.38	18.3	.32	16.1	.29	21.1	.34	18.1	.31	15.8	.29	14.6	.27	16.4	.28	11.6	.24	8.3	.19	6.5	.17	15.3	.29	11.6	.24	8.8	.20	8.2	.19	13.1	.25	9.4	.21	7.9	.19	5.4	.15	35
30	22.6	.35	21.3	.35	16.6	.29	14.4	.26	19.1	.32	16.3	.28	14.1	.26	13.1	.24	14.7	.26	10.3	.21	7.2	.17	5.6	.14	13.7	.26	10.3	.22	7.7	.18	7.1	.17	11.6	.23	8.3	.18	6.8	.17	4.6	.13	30
25	20.6	.33	19.4	.33	14.9	.27	12.9	.24	17.3	.29	14.5	.26	12.6	.24	11.6	.22	13.1	.23	9.0	.19	6.2	.15	4.7	.12	12.3	.24	9.1	.20	6.7	.16	6.2	.15	10.3	.20	7.1	.16	5.9	.15	3.8	.11	25
20	18.7	.30	17.6	.30	13.3	.24	11.4	.22	15.5	.27	12.9	.23	11.1	.22	10.2	.20	11.6	.21	7.8	.17	5.3	.13	3.9	.10	10.9	.22	7.9	.18	5.7	.14	5.2	.13	9.0	.18	6.1	.14	5.0	.13	3.2	.09	20
15	16.9	.28	15.9	.28	11.8	.22	10.0	.19	13.9	.25	11.4	.21	9.7	.19	8.8	.18	10.1	.19	6.7	.14	4.4	.11	3.2	.09	9.6	.19	6.9	.15	4.8	.12	4.4	.11	7.8	.16	5.2	.12	4.2	.11	2.5	.08	15
10	15.2	.26	14.2	.26	10.4	.20	8.7	.17	12.3	.22	10.0	.19	8.4	.17	7.6	.16	8.8	.16	5.6	.12	3.6	.09	2.5	.07	8.3	.17	5.9	.13	4.0	.10	3.6	.09	6.6	.14	4.3	.10	3.4	.09	2.0	.06	10
5	13.6	.24	12.7	.24	9.0	.17	7.5	.15	10.8	.20	8.6	.16	7.2	.15	6.5	.14	7.5	.14	4.7	.10	2.9	.07	1.9	.05	7.2	.15	5.0	.11	3.3	.08	2.9	.07	5.6	.12	3.5	.08	2.7	.07	1.4	.04	5
0	12.0	.21	11.2	.21	7.8	.15	6.3	.13	9.4	.18	7.4	.14	6.1	.13	5.5	.12	6.3	.12	3.8	.09	2.2	.05	1.3	.03	6.1	.13	4.1	.10	2.6	.06	2.2	.05	4.6	.10	2.7	.06	2.1	.05	1.0	.03	0
-5	10.5	.19	9.9	.19	6.6	.13	5.3	.11	8.2	.16	6.2	.12	5.1	.11	4.6	.10	5.2	.10	3.0	.07	1.6	.04	1.1	.02	5.1	.11	3.3	.08	1.9	.05	1.5	.04	3.7	.08	2.0	.05	1.5	.04	.9	.02	-5
-10	9.2	.17	8.6	.17	5.6	.11	4.4	.09	7.0	.14	5.2	.10	4.2	.09	3.7	.08	4.3	.08	2.3	.05	1.2	.02	1.0	.02	4.2	.09	2.6	.06	1.3	.03	1.1	.02	2.9	.06	1.4	.03	1.1	.02	.9	.02	-10
-15	7.9	.15	7.4	.15	4.6	.10	3.5	.07	5.8	.12	4.2	.09	3.4	.07	2.9	.06	3.4	.06	1.6	.03	1.1	.02	.9	.02	3.4	.07	1.9	.04	1.1	.02	1.1	.02	2.1	.04	1.2	.02	1.1	.02	.8	.02	-15
-20	6.7	.13	6.3	.13	3.7	.08	2.7	.06	4.9	.10	3.4	.07	2.6	.06	2.2	.05	2.5	.05	1.3	.02	1.0	.02	.9	.02	2.6	.06	1.3	.02	1.0	.02	1.0	.02	1.4	.03	1.1	.02	1.0	.02	.8	.02	-20
-25	5.7	.11	5.3	.11	2.9	.06	2.0	.04	4.0	.08	2.6	.05	2.0	.04	1.6	.03	1.7	.03	1.2	.02	1.0	.02	.8	.02	1.9	.04	1.2	.02	1.0	.02	.9	.02	1.3	.02	1.0	.02	.9	.02	.7	.02	-25
-30	4.7	.10	4.4	.10	2.2	.04	1.5	.02	3.1	.06	1.9	.03	1.5	.02	1.4	.02	1.5	.02	1.1	.02	.9	.02	.7	.02	1.4	.02	1.1	.02	.9	.02	.9	.02	1.3	.02	1.0	.02	.8	.02	.7	.02	-30
-35	3.8	.08	3.5	.08	1.5	.02	1.4	.02	2.4	.05	1.5	.02	1.4	.02	1.3	.02	1.4	.02	1.1	.02	.8	.02	.7	.02	1.3	.02	1.0	.02	.8	.02	.8	.02	1.2	.02	.9	.02	.8	.02	.6	.02	-35
-40	3.0	.06	2.8	.06	1.4	.02	1.3	.02	1.7	.03	1.4	.02	1.3	.02	1.2	.02	1.3	.02	1.0	.02	.7	.02	.6	.01	1.2	.02	1.0	.02	.8	.02	.7	.02	1.1	.02	.8	.02	.7	.02	.5	.01	-40
-45	2.3	.04	2.1	.04	1.3	.02	1.2	.02	1.5	.02	1.3	.02	1.2	.02	1.1	.02	1.2	.02	.9	.02	.7	.01	.6	.01	1.1	.02	.9	.02	.7	.02	.7	.01	1.0	.02	.7	.02	.6	.01	.5	.01	-45
-50	1.6	.02	1.5	.02	1.2	.02	1.1	.02	1.4	.02	1.2	.02	1.1	.02	1.0	.02	1.1	.02	.8	.02	.6	.01	.5	.01	1.0	.02	.8	.02	.6	.01	.6	.01	.9	.02	.7	.01	.6	.01	.4	.01	-50
-55	1.5	.02	1.4	.02	1.1	.02	1.0	.02	1.3	.02	1.1	.02	1.0	.02	.9	.02	1.0	.02	.7	.01	.5	.01	.4	.01	.9	.02	.7	.01	.6	.01	.5	.01	.8	.02	.6	.01	.5	.01	.4	.01	-55
-60	1.3	.02	1.3	.02	1.0	.02	.9	.02	1.1	.02	1.0	.02	.9	.02	.8	.01	.9	.02	.6	.01	.5	.01	.4	.01	.8	.02	.6	.01	.5	.01	.5	.01	.7	.01	.5	.01	.4	.01	.3	.01	-60
-65	1.2	.02	1.2	.02	.9	.02	.8	.01	1.0	.02	.9	.02	.8	.01	.7	.01	.8	.01	.6	.01	.4	.01	.3	.01	.8	.01	.6	.01	.4	.01	.4	.01	.7	.01	.5	.01	.4	.01	.3	.01	-65
-70	1.1	.02	1.1	.02	.8	.01	.7	.01	.9	.02	.8	.01	.7	.01	.6	.01	.7	.01	.5	.01	.4	.01	.3	.01	.7	.01	.5	.01	.4	.01	.4	.01	.6	.01	.4	.01	.3	.01	.2	.01	-70
-75	1.0	.02	1.0	.02	.7	.01	.6	.01	.9	.01	.7	.01	.6	.01	.6	.01	.6	.01	.4	.01	.3	.01	.2	.01	.6	.01	.4	.01	.3	.01	.3	.01	.5	.01	.4	.01	.3	.01	.2	.01	-75
-80	.9	.02	.9	.02	.7	.01	.6	.01	.8	.01	.6	.01	.5	.01	.5	.01	.6	.01	.4	.01	.3	.01	.2	.01	.5	.01	.4	.01	.3	.01	.3	.01	.4	.01	.3	.01	.2	.01	.2	.00	-80
-85	.8	.01	.8	.01	.6	.01	.5	.01	.7	.01	.6	.01	.5	.01	.4	.01	.5	.01	.3	.01	.2	.01	.2	.00	.5	.01	.3	.01	.2	.01	.2	.01	.4	.01	.3	.01	.2	.01	.1	.00	-85
-90	.8	.01	.7	.01	.5	.01	.4	.01	.6	.01	.5	.01	.4	.01	.4	.01	.4	.01	.3	.01	.2	.00	.1	.00	.4	.01	.3	.01	.2	.00	.2	.00	.3	.01	.2	.00	.2	.00	.1	.00	-90
-95	.7	.01	.6	.01	.4	.01	.4	.01	.5	.01	.4	.01	.4	.01	.3	.01	.4	.01	.2	.01	.1	.00	.1	.00	.4	.01	.2	.01	.2	.00	.1	.00	.3	.01	.2	.00	.1	.00	.1	.00	-95
-100	.6	.01	.6	.01	.4	.01	.3	.01	.5	.01	.4	.01	.3	.01	.3	.01	.3	.01	.2	.00	.1	.00	.1	.00	.3	.01	.2	.00	.1	.00	.1	.00	.2	.00	.1	.00	.1	.00	.0	.00	-100

FALL/CRUSH UNIT ATTACK TABLE

A–2.1

	AT 1		AT 2		AT 3		AT 4		AT 5		AT 6		AT 7		AT 8		AT 9		AT 10		AT 11		AT 12		AT 13		AT 14		AT 15		AT 16		AT 17		AT 18		AT 19		AT 20		
	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	
100	55.3	.56	44.7	.55	41.8	.55	37.3	.54	44.1	.55	48.8	.55	44.2	.54	38.8	.54	45.3	.55	40.5	.54	37.1	.51	33.2	.50	49.6	.55	44.8	.53	40.3	.52	37.5	.52	41.4	.54	36.6	.52	31.8	.51	26.9	.50	100
95	53.9	.55	43.6	.54	40.7	.54	36.3	.54	43.0	.54	47.5	.54	43.0	.53	37.7	.53	44.1	.54	39.4	.53	35.9	.50	32.0	.49	48.3	.54	43.5	.52	39.1	.51	36.3	.51	40.2	.53	35.5	.51	30.7	.50	25.9	.49	95
90	52.4	.54	42.4	.54	39.6	.53	35.2	.53	41.9	.54	46.2	.53	41.7	.52	36.5	.52	42.8	.53	38.2	.52	34.6	.49	30.7	.48	46.9	.53	42.2	.51	37.8	.50	35.1	.50	38.9	.52	34.2	.49	29.5	.49	24.8	.47	90
85	50.8	.53	41.1	.53	38.3	.52	34.0	.52	40.7	.53	44.7	.53	40.3	.51	35.3	.51	41.4	.52	36.8	.51	33.3	.48	29.4	.46	45.4	.52	40.7	.50	36.5	.49	33.8	.49	37.5	.50	33.0	.48	28.3	.47	23.6	.46	85
80	49.1	.52	39.7	.52	36.9	.51	32.7	.51	39.4	.52	43.1	.51	38.8	.50	33.9	.50	39.9	.51	35.4	.49	31.8	.46	28.0	.45	43.8	.51	39.2	.48	35.0	.48	32.4	.47	36.0	.49	31.6	.47	27.0	.46	22.4	.45	80
	Maximum Result for Large Attacks and for Falls of 51'–100'																																						
75	47.3	.51	38.2	.51	35.4	.50	31.4	.49	38.0	.51	41.4	.50	37.2	.49	32.5	.48	38.3	.50	33.9	.48	30.3	.45	26.6	.44	42.0	.50	37.5	.47	33.5	.46	31.0	.46	34.5	.48	30.2	.45	25.6	.45	21.0	.43	75
70	45.4	.50	36.7	.50	33.9	.49	30.0	.48	36.5	.50	39.6	.49	35.5	.48	30.9	.47	36.6	.49	32.3	.47	28.7	.44	25.0	.42	40.2	.48	35.8	.46	31.9	.45	29.5	.45	32.8	.46	28.7	.44	24.2	.43	19.3	.40	70
65	43.3	.49	35.0	.48	32.2	.47	28.5	.47	34.9	.48	37.7	.48	33.7	.46	29.3	.46	34.7	.48	30.6	.45	27.1	.42	23.0	.39	38.2	.47	33.9	.44	30.2	.44	27.9	.43	31.1	.45	27.1	.43	22.5	.41	17.7	.37	65
	Maximum Result for Medium Attacks and for Falls of 11'–50'																																						
60	41.1	.47	33.2	.47	30.5	.46	26.9	.45	33.3	.47	35.7	.46	31.9	.45	27.7	.44	32.8	.46	28.8	.44	25.2	.41	20.9	.36	36.1	.46	32.0	.43	28.5	.42	26.2	.42	29.3	.44	25.4	.41	20.6	.38	16.0	.34	60
55	38.8	.46	31.4	.46	28.7	.45	25.3	.44	31.5	.46	33.6	.45	29.9	.44	25.9	.43	30.9	.45	27.0	.43	23.0	.38	18.9	.33	34.0	.44	30.0	.42	26.6	.41	24.5	.41	27.5	.42	23.2	.38	18.7	.35	14.3	.31	55
50	36.7	.45	29.7	.45	27.1	.44	23.8	.43	30.0	.45	31.7	.44	28.2	.43	24.4	.42	29.0	.44	25.2	.41	21.0	.35	17.1	.31	32.1	.43	28.3	.40	24.8	.39	22.5	.38	25.3	.40	21.3	.35	17.0	.33	12.8	.28	50
	Maximum Result for Small Attacks and for Falls of 1'–10'																																						
45	34.6	.44	28.1	.43	25.5	.43	22.4	.42	28.5	.43	29.7	.43	26.4	.42	22.8	.41	27.0	.42	23.1	.38	19.1	.32	15.4	.28	30.1	.42	26.1	.38	22.8	.37	20.6	.35	23.2	.37	19.4	.33	15.4	.30	11.4	.26	45
40	32.5	.43	26.4	.42	23.9	.41	20.8	.40	26.9	.42	27.8	.42	24.6	.40	21.3	.40	24.8	.39	21.1	.36	17.3	.30	13.8	.26	27.8	.40	23.9	.36	20.8	.34	18.7	.33	21.1	.34	17.6	.30	13.8	.27	10.2	.23	40
35	30.4	.42	24.7	.41	22.1	.40	19.0	.37	25.4	.41	25.9	.41	22.8	.39	19.4	.37	22.7	.37	19.2	.33	15.6	.27	12.3	.23	25.5	.37	21.8	.33	18.9	.32	17.0	.30	19.2	.31	15.9	.28	12.4	.25	9.0	.21	35
30	28.3	.40	23.0	.40	20.2	.37	17.3	.34	23.8	.40	23.7	.38	20.8	.36	17.7	.35	20.6	.34	17.4	.30	14.0	.25	10.9	.21	23.2	.35	19.8	.31	17.1	.29	15.4	.28	17.3	.29	14.3	.26	11.0	.23	7.9	.19	30
25	26.0	.38	21.1	.37	18.4	.34	15.7	.32	21.8	.37	21.6	.36	18.9	.34	16.0	.32	18.7	.31	15.7	.28	12.5	.23	9.6	.19	21.1	.32	17.9	.28	15.5	.27	13.8	.26	15.6	.26	12.8	.23	9.7	.21	6.9	.17	25
20	23.7	.36	19.2	.35	16.7	.32	14.2	.29	20.0	.35	19.6	.33	17.1	.31	14.5	.30	16.8	.29	14.0	.25	11.0	.21	8.4	.17	19.0	.30	16.1	.26	13.8	.25	12.3	.23	13.9	.24	11.4	.21	8.5	.19	5.9	.15	20
15	21.4	.33	17.4	.32	15.1	.29	12.7	.27	18.2	.32	17.6	.31	15.4	.29	13.0	.27	15.0	.26	12.5	.23	9.7	.19	7.2	.15	17.1	.27	14.4	.24	12.3	.22	10.9	.21	12.3	.22	10.0	.19	7.4	.16	5.0	.13	15
10	19.3	.31	15.7	.30	13.5	.27	11.4	.25	16.5	.30	15.8	.28	13.8	.27	11.6	.25	13.3	.24	11.0	.21	8.4	.17	6.2	.13	15.2	.25	12.7	.22	10.9	.20	9.6	.19	10.8	.19	8.7	.17	6.4	.14	4.3	.11	10
5	17.4	.29	14.1	.27	12.0	.25	10.1	.22	14.9	.27	14.1	.26	12.2	.24	10.3	.23	11.8	.22	9.6	.18	7.3	.15	5.2	.12	13.5	.22	11.2	.19	9.6	.18	8.4	.17	9.4	.17	7.5	.15	5.4	.13	3.5	.09	5
0	15.5	.26	12.6	.25	10.6	.22	8.9	.20	13.3	.25	12.5	.24	10.8	.22	9.0	.21	10.3	.19	8.4	.16	6.2	.13	4.3	.10	11.8	.20	9.8	.17	8.3	.16	7.3	.15	8.1	.15	6.5	.13	4.6	.11	2.8	.08	0
-5	13.7	.24	11.1	.23	9.3	.20	7.7	.18	11.9	.23	10.9	.21	9.5	.20	7.9	.19	8.9	.17	7.2	.14	5.2	.11	3.5	.08	10.3	.18	8.4	.15	7.1	.14	6.2	.13	7.0	.13	5.4	.11	3.8	.09	2.2	.06	-5
-10	12.0	.22	9.8	.21	8.1	.18	6.7	.16	10.5	.21	9.6	.19	8.2	.18	6.9	.17	7.6	.15	6.1	.13	4.3	.09	2.8	.06	8.9	.16	7.2	.14	6.1	.12	5.3	.11	5.9	.12	4.5	.09	3.0	.07	1.7	.04	-10
-15	10.5	.20	8.6	.18	7.0	.16	5.7	.14	9.2	.18	8.3	.17	7.1	.16	5.9	.15	6.5	.13	5.1	.11	3.5	.07	2.1	.04	7.6	.14	6.1	.12	5.1	.11	4.4	.10	4.9	.10	3.6	.07	2.3	.05	1.2	.02	-15
-20	9.1	.17	7.4	.16	6.0	.14	4.9	.12	8.0	.16	7.1	.15	6.1	.14	5.1	.13	5.5	.11	4.2	.09	2.7	.06	1.5	.02	6.4	.12	5.1	.10	4.2	.09	3.5	.08	4.0	.08	2.8	.06	1.7	.04	1.2	.02	-20
-25	7.8	.16	6.4	.15	5.1	.12	4.1	.10	6.9	.15	6.1	.14	5.1	.12	4.2	.11	4.5	.09	3.4	.07	2.0	.04	1.4	.02	5.4	.10	4.2	.08	3.4	.07	2.8	.06	3.1	.06	2.1	.04	1.3	.02	1.1	.02	-25
-30	6.7	.14	5.4	.13	4.3	.11	3.3	.09	5.9	.13	5.1	.12	4.3	.11	3.5	.10	3.6	.08	2.6	.05	1.5	.02	1.3	.02	4.4	.09	3.3	.06	2.6	.05	2.1	.04	2.3	.04	1.5	.02	1.2	.02	1.0	.02	-30
-35	5.6	.12	4.5	.11	3.5	.09	2.7	.07	5.0	.11	4.2	.10	3.5	.09	2.8	.08	2.9	.06	1.9	.04	1.4	.02	1.2	.02	3.5	.07	2.5	.04	1.9	.03	1.5	.02	1.6	.02	1.4	.02	1.1	.02	.9	.02	-35
-40	4.7	.10	3.7	.09	2.8	.07	2.0	.05	4.1	.09	3.4	.08	2.8	.07	2.3	.06	2.1	.04	1.5	.02	1.3	.02	1.1	.02	2.7	.05	1.8	.03	1.5	.02	1.4	.02	1.5	.02	1.3	.02	1.0	.02	.8	.02	-40
-45	3.8	.08	3.0	.07	2.2	.05	1.5	.03	3.3	.07	2.7	.06	2.2	.05	1.7	.04	1.6	.02	1.4	.02	1.2	.02	1.0	.02	2.0	.03	1.6	.02	1.4	.02	1.2	.02	1.4	.02	1.2	.02	1.0	.02	.7	.02	-45
-50	3.0	.07	2.3	.06	1.6	.03	1.2	.02	2.5	.06	2.1	.04	1.7	.03	1.2	.02	1.5	.02	1.3	.02	1.0	.02	.8	.02	1.6	.02	1.4	.02	1.2	.02	1.1	.02	1.3	.02	1.1	.02	.8	.02	.6	.01	-50
-55	2.4	.05	1.8	.04	1.3	.02	1.1	.02	1.9	.04	1.6	.03	1.3	.02	1.2	.02	1.3	.02	1.1	.02	.9	.02	.8	.01	1.5	.02	1.3	.02	1.1	.02	1.0	.02	1.2	.02	1.0	.02	.8	.01	.6	.01	-55
-60	1.8	.03	1.4	.02	1.2	.02	1.0	.02	1.4	.02	1.4	.02	1.2	.02	1.1	.02	1.2	.02	1.0	.02	.9	.01	.7	.01	1.4	.02	1.2	.02	1.0	.02	.9	.02	1.1	.02	.9	.02	.7	.01	.5	.01	-60
-65	1.5	.02	1.2	.02	1.1	.02	.9	.02	1.3	.02	1.3	.02	1.1	.02	1.0	.02	1.1	.02	1.0	.02	.8	.01	.6	.01	1.3	.02	1.1	.02	.9	.02	.8	.01	1.0	.02	.8	.01	.6	.01	.4	.01	-65
-70	1.4	.02	1.1	.02	1.0	.02	.9	.02	1.2	.02	1.2	.02	1.0	.02	.9	.02	1.0	.02	.9	.02	.7	.01	.5	.01	1.2	.02	1.0	.02	.8	.01	.8	.01	.9	.01	.7	.01	.5	.01	.4	.01	-70
-75	1.3	.02	1.0	.02	.9	.02	.8	.02	1.1	.02	1.1	.02	.9	.02	.8	.02	.9	.02	.8	.01	.6	.01	.5	.01	1.0	.02	.9	.01	.8	.01	.7	.01	.8	.01	.6	.01	.5	.01	.3	.01	-75
-80	1.2	.02	1.0	.02	.8	.02	.7	.01	1.0	.02	1.0	.02	.8	.02	.7	.01	.8	.01	.7	.01	.5	.01	.4	.01	.9	.01	.8	.01	.7	.01	.6	.01	.7	.01	.6	.01	.4	.01	.3	.01	-80
-85	1.1	.02	.9	.02	.7	.01	.6	.01	.9	.02	.9	.02	.8	.01	.6	.01	.7	.01	.6	.01	.5	.01	.4	.01	.8	.01	.7	.01	.6	.01	.5	.01	.6	.01	.5	.01	.4	.01	.2	.01	-85
-90	1.0	.02	.8	.01	.7	.01	.6	.01	.8	.01	.8	.01	.7	.01	.6	.01	.7	.01	.5	.01	.4	.01	.3	.01	.8	.01	.6	.01	.5	.01	.5	.01	.5	.01	.4	.01	.3	.01	.2	.01	-90
-95	.9	.01	.7	.01	.6	.01	.5	.01	.7	.01	.7	.01	.6	.01	.5	.01	.6	.01	.5	.01	.4	.01	.3	.01	.7	.01	.6	.01	.5	.01	.4	.01	.5	.01	.4	.01	.3	.01	.2	.00	-95
-100	.8	.01	.6	.01	.5	.01	.4	.01	.7	.01	.6	.01	.5	.01	.4	.01	.5	.01	.4	.01	.3	.01	.2	.00	.6	.01	.5	.01	.4	.01	.4	.01	.4	.01	.3	.01	.2	.01	.1	.00	-100

Note: The maximum results are for huge attacks and falls over 100'.

MARTIAL ARTS STRIKING UNIT ATTACK TABLE

A–2.2

	AT 1		AT 2		AT 3		AT 4		AT 5		AT 6		AT 7		AT 8		AT 9		AT 10		AT 11		AT 12		AT 13		AT 14		AT 15		AT 16		AT 17		AT 18		AT 19		AT 20		
	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	
100	30.2	.51	29.3	.51	27.4	.51	25.4	.50	29.2	.51	27.5	.51	24.8	.51	23.0	.51	24.5	.50	22.7	.50	20.5	.48	18.6	.48	27.2	.50	25.4	.50	22.8	.50	21.8	.50	23.6	.50	20.6	.48	18.7	.48	15.6	.46	100
95	29.5	.50	28.6	.50	26.8	.50	24.8	.49	28.5	.50	26.9	.51	24.2	.50	22.4	.50	23.9	.49	22.1	.49	19.9	.47	18.0	.47	26.5	.49	24.7	.49	22.2	.49	21.2	.49	23.0	.49	20.0	.47	18.1	.47	14.9	.45	95
90	28.7	.49	27.9	.49	26.1	.49	24.0	.48	27.7	.49	26.2	.50	23.5	.49	21.8	.49	23.2	.48	21.5	.48	19.3	.46	17.3	.45	25.7	.48	24.0	.48	21.6	.48	20.6	.47	22.3	.47	19.4	.46	17.5	.46	14.0	.42	90
85	27.9	.48	27.1	.48	25.3	.48	23.2	.47	26.9	.48	25.5	.49	22.8	.48	21.2	.48	22.4	.47	20.8	.46	18.6	.45	16.2	.43	24.9	.47	23.2	.47	20.9	.46	19.9	.46	21.5	.46	18.7	.45	16.6	.44	13.0	.39	85
80	27.0	.47	26.2	.47	24.4	.47	22.4	.46	26.0	.47	24.7	.48	22.0	.47	20.4	.47	21.7	.45	20.0	.45	17.7	.43	15.1	.40	24.0	.46	22.4	.45	20.1	.45	19.2	.45	20.8	.45	17.9	.43	15.5	.41	12.1	.36	80
	Maximum Result for Rank 3 Attacks																																							
75	26.0	.46	25.3	.46	23.5	.46	21.5	.44	25.1	.46	23.8	.47	21.2	.46	19.7	.46	20.8	.44	19.2	.44	16.5	.40	14.0	.37	23.1	.44	21.5	.44	19.4	.44	18.3	.44	19.8	.44	16.7	.40	14.4	.38	11.1	.34	75
70	25.0	.45	24.3	.45	22.5	.45	20.6	.43	24.0	.45	22.9	.46	20.3	.45	18.8	.45	19.9	.43	18.1	.42	15.3	.38	12.9	.34	22.1	.43	20.6	.43	18.3	.42	17.1	.41	18.5	.41	15.5	.38	13.3	.35	10.2	.31	70
65	23.9	.44	23.2	.44	21.5	.44	19.7	.42	23.0	.44	21.9	.45	19.4	.44	18.0	.44	18.8	.42	16.8	.39	14.1	.35	11.8	.32	21.1	.42	19.1	.41	17.0	.39	15.8	.38	17.1	.38	14.3	.35	12.2	.33	9.2	.28	65
	Maximum Result for Rank 2 Attacks																																							
60	22.8	.43	22.1	.43	20.5	.43	18.3	.40	21.9	.43	20.8	.44	18.4	.43	17.0	.42	17.4	.39	15.5	.37	12.9	.32	10.7	.29	19.7	.40	17.7	.38	15.7	.37	14.6	.36	15.8	.36	13.1	.32	11.1	.30	8.3	.25	60
55	21.6	.42	21.0	.42	19.1	.41	16.9	.37	20.7	.42	19.7	.43	17.2	.41	15.7	.40	16.0	.36	14.2	.34	11.7	.29	9.6	.26	18.1	.37	16.2	.35	14.4	.34	13.3	.33	14.4	.33	11.9	.29	10.0	.27	7.3	.23	55
50	20.5	.41	19.7	.40	17.6	.38	15.5	.35	19.4	.40	18.6	.42	15.9	.38	14.5	.37	14.7	.33	13.0	.31	10.6	.27	8.6	.24	16.7	.35	14.9	.32	13.2	.31	12.2	.30	13.2	.30	10.7	.27	9.0	.25	6.5	.20	50
	Maximum Result for Rank 1 Attacks																																							
45	18.9	.39	18.1	.37	16.2	.35	14.1	.32	17.8	.37	17.5	.41	14.6	.35	13.2	.34	13.4	.31	11.8	.29	9.4	.24	7.6	.21	15.2	.32	13.5	.30	11.9	.29	11.0	.28	11.9	.28	9.6	.24	7.9	.22	5.6	.17	45
40	17.3	.36	16.6	.35	14.7	.33	12.8	.29	16.3	.34	16.2	.39	13.3	.33	12.0	.32	12.1	.28	10.6	.26	8.3	.22	6.6	.18	13.8	.29	12.2	.27	10.7	.26	9.8	.25	10.6	.25	8.5	.22	6.9	.19	4.7	.15	40
35	15.8	.33	15.2	.32	13.4	.30	11.5	.27	14.9	.32	14.8	.36	12.0	.30	10.9	.29	10.9	.26	9.4	.23	7.3	.19	5.6	.16	12.4	.27	10.9	.25	9.6	.23	8.7	.22	9.5	.22	7.5	.19	6.0	.17	4.0	.13	35
30	14.4	.31	13.8	.30	12.0	.28	10.3	.24	13.5	.29	13.5	.34	10.8	.28	9.8	.27	9.7	.23	8.4	.21	6.3	.17	4.8	.14	11.1	.24	9.7	.22	8.5	.21	7.7	.20	8.3	.20	6.5	.17	5.1	.15	3.3	.11	30
25	13.0	.28	12.4	.27	10.8	.25	9.2	.22	12.2	.27	12.2	.31	9.7	.25	8.7	.24	8.6	.21	7.3	.19	5.4	.15	4.0	.12	9.9	.22	8.6	.20	7.4	.19	6.7	.18	7.3	.18	5.6	.15	4.3	.13	2.7	.09	25
20	11.7	.26	11.1	.25	9.6	.23	8.1	.20	10.9	.25	11.1	.29	8.6	.23	7.7	.22	7.5	.19	6.4	.16	4.6	.13	3.2	.09	8.7	.20	7.5	.18	6.5	.16	5.8	.15	6.3	.15	4.8	.13	3.6	.11	2.2	.07	20
15	10.5	.24	9.9	.23	8.5	.21	7.1	.18	9.7	.23	9.9	.27	7.6	.21	6.8	.19	6.6	.16	5.5	.14	3.9	.11	2.6	.08	7.7	.18	6.5	.15	5.6	.14	4.9	.13	5.3	.13	4.0	.11	2.9	.09	1.7	.05	15
10	9.3	.21	8.8	.20	7.4	.18	6.2	.16	8.6	.20	8.9	.25	6.7	.18	5.9	.17	5.7	.14	4.6	.12	3.2	.09	2.0	.06	6.7	.16	5.5	.13	4.7	.12	4.1	.11	4.5	.11	3.3	.09	2.3	.07	1.2	.04	10
5	8.2	.19	7.7	.18	6.5	.16	5.3	.14	7.5	.18	7.8	.22	5.8	.16	5.1	.15	4.8	.13	3.9	.10	2.6	.07	1.4	.04	5.7	.14	4.7	.11	3.9	.10	3.4	.09	3.7	.09	2.6	.07	1.7	.05	.9	.03	5
0	7.2	.17	6.7	.16	5.5	.14	4.5	.12	6.6	.16	6.9	.20	5.0	.14	4.3	.13	4.1	.11	3.2	.09	1.9	.05	1.0	.03	4.9	.12	3.9	.10	3.2	.09	2.7	.08	3.0	.08	2.0	.05	1.2	.03	.8	.02	0
-5	6.2	.15	5.8	.14	4.7	.12	3.8	.10	5.6	.14	6.0	.18	4.2	.12	3.6	.11	3.4	.09	2.5	.07	1.4	.04	.9	.02	4.1	.10	3.1	.08	2.6	.07	2.1	.06	2.3	.06	1.4	.04	1.0	.02	.8	.02	-5
-10	5.4	.13	5.0	.12	3.9	.10	3.1	.08	4.8	.12	5.2	.16	3.5	.10	3.0	.09	2.7	.07	1.9	.05	1.0	.02	.9	.02	3.3	.08	2.4	.06	1.9	.05	1.5	.04	1.6	.04	1.0	.02	.9	.02	.7	.02	-10
-15	4.5	.12	4.2	.11	3.2	.09	2.4	.06	4.0	.11	4.4	.14	2.9	.09	2.4	.07	2.0	.05	1.3	.03	1.0	.02	.8	.02	2.6	.06	1.8	.04	1.3	.03	1.1	.02	1.1	.02	1.0	.02	.8	.02	.7	.02	-15
-20	3.8	.10	3.4	.09	2.6	.07	1.8	.05	3.3	.09	3.7	.12	2.3	.07	1.9	.06	1.5	.04	1.0	.02	.9	.02	.8	.02	1.9	.05	1.2	.02	1.1	.02	1.0	.02	1.1	.02	.9	.02	.8	.02	.6	.02	-20
-25	3.1	.08	2.7	.07	1.9	.05	1.2	.03	2.7	.07	3.1	.10	1.8	.05	1.4	.04	1.1	.02	1.0	.02	.8	.02	.7	.02	1.3	.03	1.1	.02	1.0	.02	.9	.02	1.0	.02	.8	.02	.7	.02	.6	.02	-25
-30	2.4	.06	2.1	.05	1.4	.03	1.1	.02	2.1	.05	2.6	.08	1.2	.03	1.0	.02	1.0	.02	.9	.02	.8	.02	.7	.02	1.2	.02	1.0	.02	.9	.02	.9	.02	.9	.02	.8	.02	.7	.02	.5	.02	-30
-35	1.8	.04	1.5	.03	1.1	.02	1.0	.02	1.5	.03	2.1	.07	1.0	.02	.9	.02	1.0	.02	.9	.02	.7	.02	.6	.02	1.1	.02	1.0	.02	.9	.02	.8	.02	.9	.02	.7	.02	.6	.02	.5	.01	-35
-40	1.3	.03	1.2	.02	1.0	.02	.9	.02	1.1	.02	1.6	.05	.9	.02	.9	.02	.9	.02	.8	.02	.7	.02	.5	.01	1.0	.02	.9	.02	.8	.02	.7	.02	.8	.02	.7	.02	.6	.02	.4	.01	-40
-45	1.1	.02	1.1	.02	1.0	.02	.9	.02	1.1	.02	1.2	.03	.9	.02	.8	.02	.8	.02	.7	.02	.6	.01	.5	.01	.9	.02	.8	.02	.7	.02	.7	.02	.7	.02	.6	.01	.5	.01	.4	.01	-45
-50	1.0	.02	1.0	.02	.9	.02	.8	.02	1.0	.02	1.0	.02	.8	.02	.7	.02	.7	.02	.6	.02	.5	.01	.4	.01	.8	.02	.7	.02	.7	.02	.6	.02	.7	.02	.5	.01	.4	.01	.3	.01	-50
-55	.9	.02	.9	.02	.8	.02	.7	.02	.9	.02	.9	.02	.7	.02	.7	.02	.7	.02	.6	.01	.5	.01	.4	.01	.8	.02	.7	.01	.6	.01	.5	.01	.6	.01	.5	.01	.4	.01	.3	.01	-55
-60	.9	.02	.8	.02	.7	.02	.6	.01	.8	.02	.8	.02	.7	.02	.6	.02	.6	.01	.5	.01	.4	.01	.3	.01	.7	.01	.6	.01	.5	.01	.5	.01	.5	.01	.4	.01	.3	.01	.2	.01	-60
-65	.8	.02	.8	.02	.7	.01	.6	.01	.7	.02	.7	.02	.6	.01	.5	.01	.5	.01	.5	.01	.4	.01	.3	.01	.6	.01	.5	.01	.5	.01	.4	.01	.5	.01	.4	.01	.3	.01	.2	.01	-65
-70	.7	.02	.7	.01	.6	.01	.5	.01	.7	.01	.7	.02	.5	.01	.5	.01	.5	.01	.4	.01	.3	.01	.2	.01	.6	.01	.5	.01	.4	.01	.4	.01	.4	.01	.3	.01	.3	.01	.2	.01	-70
-75	.6	.01	.6	.01	.5	.01	.5	.01	.6	.01	.6	.02	.5	.01	.4	.01	.4	.01	.4	.01	.3	.01	.2	.01	.5	.01	.4	.01	.4	.01	.3	.01	.4	.01	.3	.01	.2	.01	.1	.00	-75
-80	.6	.01	.6	.01	.5	.01	.4	.01	.5	.01	.5	.01	.4	.01	.4	.01	.4	.01	.3	.01	.2	.01	.2	.00	.4	.01	.4	.01	.3	.01	.3	.01	.3	.01	.2	.01	.2	.01	.1	.00	-80
-85	.5	.01	.5	.01	.4	.01	.4	.01	.5	.01	.5	.01	.4	.01	.3	.01	.3	.01	.3	.01	.2	.01	.1	.00	.4	.01	.3	.01	.3	.01	.2	.01	.3	.01	.2	.01	.1	.00	.1	.00	-85
-90	.5	.01	.4	.01	.4	.01	.3	.01	.4	.01	.4	.01	.3	.01	.3	.01	.3	.01	.2	.01	.2	.00	.1	.00	.3	.01	.3	.01	.2	.01	.2	.01	.2	.01	.2	.00	.1	.00	.1	.00	-90
-95	.4	.01	.4	.01	.3	.01	.3	.01	.4	.01	.4	.01	.3	.01	.3	.01	.2	.01	.2	.01	.1	.00	.1	.00	.3	.01	.2	.01	.2	.01	.2	.00	.2	.00	.1	.00	.1	.00	.0	.00	-95
-100	.4	.01	.3	.01	.3	.01	.2	.01	.3	.01	.3	.01	.2	.01	.2	.01	.2	.01	.2	.00	.1	.00	.0	.00	.2	.01	.2	.00	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	-100

The maximum results are for Rank 4 attacks.

MARTIAL ARTS SWEEPS & THROWS UNIT ATTACK TABLE

A–2.3

	AT 1		AT 2		AT 3		AT 4		AT 5		AT 6		AT 7		AT 8		AT 9		AT 10		AT 11		AT 12		AT 13		AT 14		AT 15		AT 16		AT 17		AT 18		AT 19		AT 20		
	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	
100	30.2	.51	29.3	.51	27.4	.51	25.4	.50	29.2	.51	27.5	.51	24.8	.51	23.0	.51	24.5	.50	22.7	.50	20.5	.48	18.6	.48	27.2	.50	25.4	.50	22.8	.50	21.8	.50	23.6	.50	20.6	.48	18.7	.48	15.6	.46	100
95	29.5	.50	28.6	.50	26.8	.50	24.8	.49	28.5	.50	26.9	.51	24.2	.50	22.4	.50	23.9	.49	22.1	.49	19.9	.47	18.0	.47	26.5	.49	24.7	.49	22.2	.49	21.2	.49	23.0	.49	20.0	.47	18.1	.47	14.9	.45	95
90	28.7	.49	27.9	.49	26.1	.49	24.0	.48	27.7	.49	26.2	.50	23.5	.49	21.8	.49	23.2	.48	21.5	.48	19.3	.46	17.3	.45	25.7	.48	24.0	.48	21.6	.48	20.6	.47	22.3	.47	19.4	.46	17.5	.46	14.0	.42	90
85	27.9	.48	27.1	.48	25.3	.48	23.2	.47	26.9	.48	25.5	.49	22.8	.48	21.2	.48	22.4	.47	20.8	.46	18.6	.45	16.2	.43	24.9	.47	23.2	.47	20.9	.46	19.9	.46	21.5	.46	18.7	.45	16.6	.44	13.0	.39	85
80	27.0	.47	26.2	.47	24.4	.47	22.4	.46	26.0	.47	24.7	.48	22.0	.47	20.4	.47	21.7	.45	20.0	.45	17.7	.43	15.1	.40	24.0	.46	22.4	.45	20.1	.45	19.2	.45	20.8	.45	17.9	.43	15.5	.41	12.1	.36	80
	Maximum Result for Rank 3 Attacks																																							
75	26.0	.46	25.3	.46	23.5	.46	21.5	.44	25.1	.46	23.8	.47	21.2	.46	19.7	.46	20.8	.44	19.2	.44	16.5	.40	14.0	.37	23.1	.44	21.5	.44	19.4	.44	18.3	.44	19.8	.44	16.7	.40	14.4	.38	11.1	.34	75
70	25.0	.45	24.3	.45	22.5	.45	20.6	.43	24.0	.45	22.9	.46	20.3	.45	18.8	.45	19.9	.43	18.1	.42	15.3	.38	12.9	.34	22.1	.43	20.6	.43	18.3	.42	17.1	.41	18.5	.41	15.5	.38	13.3	.35	10.2	.31	70
65	23.9	.44	23.2	.44	21.5	.44	19.7	.42	23.0	.44	21.9	.45	19.4	.44	18.0	.44	18.8	.42	16.8	.39	14.1	.35	11.8	.32	21.1	.42	19.1	.41	17.0	.39	15.8	.38	17.1	.38	14.3	.35	12.2	.33	9.2	.28	65
	Maximum Result for Rank 2 Attacks																																							
60	22.8	.43	22.1	.43	20.5	.43	18.3	.40	21.9	.43	20.8	.44	18.4	.43	17.0	.42	17.4	.39	15.5	.37	12.9	.32	10.7	.29	19.7	.40	17.7	.38	15.7	.37	14.6	.36	15.8	.36	13.1	.32	11.1	.30	8.3	.25	60
55	21.6	.42	21.0	.42	19.1	.41	16.9	.37	20.7	.42	19.7	.43	17.2	.41	15.7	.40	16.0	.36	14.2	.34	11.7	.29	9.6	.26	18.1	.37	16.2	.35	14.4	.34	13.3	.33	14.4	.33	11.9	.29	10.0	.27	7.3	.23	55
50	20.5	.41	19.7	.40	17.6	.38	15.5	.35	19.4	.40	18.6	.42	15.9	.38	14.5	.37	14.7	.33	13.0	.31	10.6	.27	8.6	.24	16.7	.35	14.9	.32	13.2	.31	12.2	.30	13.2	.30	10.7	.27	9.0	.25	6.5	.20	50
	Maximum Result for Rank 1 Attacks																																							
45	18.9	.39	18.1	.37	16.2	.35	14.1	.32	17.8	.37	17.5	.41	14.6	.35	13.2	.34	13.4	.31	11.8	.29	9.4	.24	7.6	.21	15.2	.32	13.5	.30	11.9	.29	11.0	.28	11.9	.28	9.6	.24	7.9	.22	5.6	.17	45
40	17.3	.36	16.6	.35	14.7	.33	12.8	.29	16.3	.34	16.2	.39	13.3	.33	12.0	.32	12.1	.28	10.6	.26	8.3	.22	6.6	.18	13.8	.29	12.2	.27	10.7	.26	9.8	.25	10.6	.25	8.5	.22	6.9	.19	4.7	.15	40
35	15.8	.33	15.2	.32	13.4	.30	11.5	.27	14.9	.32	14.8	.36	12.0	.30	10.9	.29	10.9	.26	9.4	.23	7.3	.19	5.6	.16	12.4	.27	10.9	.25	9.6	.23	8.7	.22	9.5	.22	7.5	.19	6.0	.17	4.0	.13	35
30	14.4	.31	13.8	.30	12.0	.28	10.3	.24	13.5	.29	13.5	.34	10.8	.28	9.8	.27	9.7	.23	8.4	.21	6.3	.17	4.8	.14	11.1	.24	9.7	.22	8.5	.21	7.7	.20	8.3	.20	6.5	.17	5.1	.15	3.3	.11	30
25	13.0	.28	12.4	.27	10.8	.25	9.2	.22	12.2	.27	12.2	.31	9.7	.25	8.7	.24	8.6	.21	7.3	.19	5.4	.15	4.0	.12	9.9	.22	8.6	.20	7.4	.19	6.7	.18	7.3	.18	5.6	.15	4.3	.13	2.7	.09	25
20	11.7	.26	11.1	.25	9.6	.23	8.1	.20	10.9	.25	11.1	.29	8.6	.23	7.7	.22	7.5	.19	6.4	.16	4.6	.13	3.2	.09	8.7	.20	7.5	.18	6.5	.16	5.8	.15	6.3	.15	4.8	.13	3.6	.11	2.2	.07	20
15	10.5	.24	9.9	.23	8.5	.21	7.1	.18	9.7	.23	9.9	.27	7.6	.21	6.8	.19	6.6	.16	5.5	.14	3.9	.11	2.6	.08	7.7	.18	6.5	.15	5.6	.14	4.9	.13	5.3	.13	4.0	.11	2.9	.09	1.7	.05	15
10	9.3	.21	8.8	.20	7.4	.18	6.2	.16	8.6	.20	8.9	.25	6.7	.18	5.9	.17	5.7	.14	4.6	.12	3.2	.09	2.0	.06	6.7	.16	5.5	.13	4.7	.12	4.1	.11	4.5	.11	3.3	.09	2.3	.07	1.2	.04	10
5	8.2	.19	7.7	.18	6.5	.16	5.3	.14	7.5	.18	7.8	.22	5.8	.16	5.1	.15	4.8	.13	3.9	.10	2.6	.07	1.4	.04	5.7	.14	4.7	.11	3.9	.10	3.4	.09	3.7	.09	2.6	.07	1.7	.05	.9	.03	5
0	7.2	.17	6.7	.16	5.5	.14	4.5	.12	6.6	.16	6.9	.20	5.0	.14	4.3	.13	4.1	.11	3.2	.09	1.9	.05	1.0	.03	4.9	.12	3.9	.10	3.2	.09	2.7	.08	3.0	.08	2.0	.05	1.2	.03	.8	.02	0
-5	6.2	.15	5.8	.14	4.7	.12	3.8	.10	5.6	.14	6.0	.18	4.2	.12	3.6	.11	3.4	.09	2.5	.07	1.4	.04	.9	.02	4.1	.10	3.1	.08	2.6	.07	2.1	.06	2.3	.06	1.4	.04	1.0	.02	.8	.02	-5
-10	5.4	.13	5.0	.12	3.9	.10	3.1	.08	4.8	.12	5.2	.16	3.5	.10	3.0	.09	2.7	.07	1.9	.05	1.0	.02	.9	.02	3.3	.08	2.4	.06	1.9	.05	1.5	.04	1.6	.04	1.0	.02	.9	.02	.7	.02	-10
-15	4.5	.12	4.2	.11	3.2	.09	2.4	.06	4.0	.11	4.4	.14	2.9	.09	2.4	.07	2.0	.05	1.3	.03	1.0	.02	.8	.02	2.6	.06	1.8	.04	1.3	.03	1.1	.02	1.1	.02	1.0	.02	.8	.02	.7	.02	-15
-20	3.8	.10	3.4	.09	2.6	.07	1.8	.05	3.3	.09	3.7	.12	2.3	.07	1.9	.06	1.5	.04	1.0	.02	.9	.02	.8	.02	1.9	.05	1.2	.02	1.1	.02	1.0	.02	1.1	.02	.9	.02	.8	.02	.6	.02	-20
-25	3.1	.08	2.7	.07	1.9	.05	1.2	.03	2.7	.07	3.1	.10	1.8	.05	1.4	.04	1.1	.02	1.0	.02	.8	.02	.7	.02	1.3	.03	1.1	.02	1.0	.02	.9	.02	1.0	.02	.8	.02	.7	.02	.6	.02	-25
-30	2.4	.06	2.1	.05	1.4	.03	1.1	.02	2.1	.05	2.6	.08	1.2	.03	1.0	.02	1.0	.02	.9	.02	.8	.02	.7	.02	1.2	.02	1.0	.02	.9	.02	.9	.02	.9	.02	.8	.02	.7	.02	.5	.02	-30
-35	1.8	.04	1.5	.03	1.1	.02	1.0	.02	1.5	.03	2.1	.07	1.0	.02	.9	.02	1.0	.02	.9	.02	.7	.02	.6	.02	1.1	.02	1.0	.02	.9	.02	.8	.02	.9	.02	.7	.02	.6	.02	.5	.01	-35
-40	1.3	.03	1.2	.02	1.0	.02	.9	.02	1.1	.02	1.6	.05	.9	.02	.9	.02	.9	.02	.8	.02	.7	.02	.5	.01	1.0	.02	.9	.02	.8	.02	.7	.02	.8	.02	.7	.02	.6	.02	.4	.01	-40
-45	1.1	.02	1.1	.02	1.0	.02	.9	.02	1.1	.02	1.2	.03	.9	.02	.8	.02	.8	.02	.7	.02	.6	.01	.5	.01	.9	.02	.8	.02	.7	.02	.7	.02	.7	.02	.6	.01	.5	.01	.4	.01	-45
-50	1.0	.02	1.0	.02	.9	.02	.8	.02	1.0	.02	1.0	.02	.8	.02	.7	.02	.7	.02	.6	.02	.5	.01	.4	.01	.8	.02	.7	.02	.7	.02	.6	.02	.7	.02	.5	.01	.4	.01	.3	.01	-50
-55	.9	.02	.9	.02	.8	.02	.7	.02	.9	.02	.9	.02	.7	.02	.7	.02	.7	.02	.6	.01	.5	.01	.4	.01	.8	.02	.7	.01	.6	.01	.5	.01	.6	.01	.5	.01	.4	.01	.3	.01	-55
-60	.9	.02	.8	.02	.7	.02	.6	.01	.8	.02	.8	.02	.7	.02	.6	.02	.6	.01	.5	.01	.4	.01	.3	.01	.7	.01	.6	.01	.5	.01	.5	.01	.5	.01	.4	.01	.3	.01	.2	.01	-60
-65	.8	.02	.8	.02	.7	.01	.6	.01	.7	.02	.7	.02	.6	.01	.5	.01	.5	.01	.5	.01	.4	.01	.3	.01	.6	.01	.5	.01	.5	.01	.4	.01	.5	.01	.4	.01	.3	.01	.2	.01	-65
-70	.7	.02	.7	.01	.6	.01	.5	.01	.7	.01	.7	.02	.5	.01	.5	.01	.5	.01	.4	.01	.3	.01	.2	.01	.6	.01	.5	.01	.4	.01	.4	.01	.4	.01	.3	.01	.3	.01	.2	.01	-70
-75	.6	.01	.6	.01	.5	.01	.5	.01	.6	.01	.6	.02	.5	.01	.4	.01	.4	.01	.4	.01	.3	.01	.2	.01	.5	.01	.4	.01	.4	.01	.3	.01	.4	.01	.3	.01	.2	.01	.1	.00	-75
-80	.6	.01	.6	.01	.5	.01	.4	.01	.5	.01	.5	.01	.4	.01	.4	.01	.4	.01	.3	.01	.2	.01	.2	.00	.4	.01	.4	.01	.3	.01	.3	.01	.3	.01	.2	.01	.2	.01	.1	.00	-80
-85	.5	.01	.5	.01	.4	.01	.4	.01	.5	.01	.5	.01	.4	.01	.3	.01	.3	.01	.3	.01	.2	.01	.1	.00	.4	.01	.3	.01	.3	.01	.2	.01	.3	.01	.2	.01	.1	.00	.1	.00	-85
-90	.5	.01	.4	.01	.4	.01	.3	.01	.4	.01	.4	.01	.3	.01	.3	.01	.3	.01	.2	.01	.2	.00	.1	.00	.3	.01	.3	.01	.2	.01	.2	.01	.2	.01	.2	.00	.1	.00	.1	.00	-90
-95	.4	.01	.4	.01	.3	.01	.3	.01	.4	.01	.4	.01	.3	.01	.3	.01	.2	.01	.2	.01	.1	.00	.1	.00	.3	.01	.2	.01	.2	.01	.2	.00	.2	.00	.1	.00	.1	.00	.0	.00	-95
-100	.4	.01	.3	.01	.3	.01	.2	.01	.3	.01	.3	.01	.2	.01	.2	.01	.2	.01	.2	.00	.1	.00	.0	.00	.2	.01	.2	.00	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	-100

The maximum results are for Rank 4 attacks.

DAGGER UNIT ATTACK TABLE

A–3.1

	AT 1		AT 2		AT 3		AT 4		AT 5		AT 6		AT 7		AT 8		AT 9		AT 10		AT 11		AT 12		AT 13		AT 14		AT 15		AT 16		AT 17		AT 18		AT 19		AT 20		
	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	
100	23.4	.50	22.3	.50	18.9	.48	15.9	.47	21.6	.49	19.2	.49	15.0	.49	14.9	.48	17.7	.48	17.4	.47	13.6	.45	11.6	.43	15.3	.45	14.0	.40	11.2	.38	10.6	.36	11.0	.40	8.5	.36	6.7	.27	5.7	.25	100
95	22.8	.49	21.8	.50	18.3	.47	15.1	.45	21.0	.48	18.7	.48	14.7	.48	14.5	.47	17.1	.47	16.5	.44	12.8	.42	10.8	.40	14.4	.42	13.1	.37	10.4	.35	9.8	.33	10.3	.37	7.9	.33	6.2	.24	5.2	.22	95
90	22.0	.47	21.3	.49	17.4	.45	14.1	.42	20.4	.47	18.1	.47	14.3	.47	14.1	.46	16.4	.46	15.4	.42	11.9	.39	10.1	.37	13.4	.39	12.1	.35	9.6	.33	9.0	.30	9.5	.35	7.2	.30	5.6	.22	4.7	.20	90
85	20.8	.45	20.7	.48	16.3	.42	13.2	.40	19.6	.46	17.5	.46	13.9	.46	13.4	.43	15.5	.44	14.4	.39	11.1	.37	9.3	.34	12.5	.36	11.2	.32	8.8	.30	8.2	.28	8.8	.32	6.6	.28	5.0	.20	4.1	.18	85
80	19.5	.42	20.0	.47	15.2	.39	12.2	.37	18.9	.45	16.9	.45	13.1	.43	12.5	.41	14.4	.41	13.3	.36	10.2	.34	8.6	.32	11.5	.34	10.2	.29	8.0	.27	7.4	.25	8.0	.29	5.9	.25	4.5	.18	3.6	.16	80
75	18.1	.40	18.9	.44	14.0	.37	11.3	.34	18.0	.44	15.9	.42	12.3	.40	11.7	.38	13.4	.38	12.3	.33	9.4	.31	7.8	.29	10.6	.31	9.3	.26	7.2	.24	6.6	.22	7.3	.26	5.3	.22	3.9	.15	3.1	.13	75
70	16.8	.37	17.7	.41	12.9	.34	10.3	.31	16.9	.42	14.8	.40	11.4	.38	10.8	.35	12.3	.35	11.2	.31	8.5	.28	7.1	.26	9.6	.28	8.3	.24	6.4	.22	5.8	.19	6.5	.24	4.6	.19	3.3	.13	2.6	.11	70
65	15.4	.34	16.4	.39	11.9	.31	9.4	.29	15.6	.39	13.7	.37	10.6	.35	10.0	.32	11.3	.33	10.2	.28	7.7	.26	6.3	.23	8.7	.25	7.4	.21	5.6	.19	5.0	.17	5.8	.21	4.0	.17	2.8	.11	2.1	.09	65
60	14.1	.31	15.2	.36	10.8	.28	8.4	.26	14.4	.36	12.6	.34	9.7	.32	9.1	.30	10.2	.30	9.1	.25	6.8	.23	5.6	.20	7.7	.23	6.4	.18	4.8	.16	4.2	.14	5.0	.18	3.3	.14	2.2	.09	1.5	.07	60
55	12.7	.29	13.9	.33	9.7	.26	7.5	.23	13.1	.34	11.5	.31	8.9	.29	8.3	.27	9.2	.27	8.1	.22	6.0	.20	4.8	.18	6.8	.20	5.5	.15	4.0	.13	3.4	.11	4.3	.15	2.7	.11	1.6	.06	1.0	.05	55
50	11.5	.26	12.7	.31	8.6	.23	6.6	.20	12.0	.31	10.5	.29	8.1	.27	7.5	.24	8.2	.24	7.1	.20	5.2	.18	4.1	.15	5.9	.17	4.6	.13	3.3	.11	2.7	.09	3.6	.13	2.1	.09	1.1	.04	0.6	.03	50
45	10.2	.23	11.5	.28	7.6	.20	5.7	.18	10.8	.28	9.4	.26	7.2	.24	6.7	.22	7.2	.22	6.1	.17	4.4	.15	3.5	.13	5.0	.15	3.8	.11	2.6	.09	2.0	.07	2.9	.11	1.6	.07	0.7	.03	0.5	.02	45
40	8.9	.20	10.4	.25	6.6	.18	4.8	.15	9.6	.26	8.4	.24	6.5	.22	5.9	.19	6.3	.19	5.3	.15	3.7	.13	2.8	.11	4.2	.13	3.0	.09	2.0	.07	1.5	.05	2.3	.09	1.2	.05	0.6	.02	0.5	.02	40
35	7.7	.18	9.2	.22	5.6	.15	4.1	.13	8.6	.23	7.4	.21	5.7	.19	5.1	.17	5.4	.17	4.4	.13	3.1	.11	2.3	.09	3.5	.11	2.3	.07	1.4	.05	0.9	.03	1.8	.07	0.7	.03	0.5	.02	0.5	.02	35
30	6.6	.15	8.1	.20	4.7	.13	3.3	.11	7.6	.21	6.5	.19	5.0	.17	4.4	.15	4.6	.15	3.6	.11	2.4	.09	1.7	.07	2.8	.08	1.7	.05	0.9	.03	0.8	.03	1.3	.05	0.6	.03	0.5	.02	0.4	.02	30
25	5.6	.13	7.1	.17	3.9	.11	2.6	.09	6.6	.19	5.7	.17	4.3	.15	3.7	.13	3.9	.13	2.9	.08	1.9	.07	1.3	.05	2.1	.07	1.1	.03	0.8	.03	0.7	.03	0.8	.03	0.6	.03	0.5	.02	0.4	.02	25
20	4.6	.11	6.1	.15	3.1	.09	2.0	.07	5.7	.16	4.9	.14	3.6	.13	3.1	.10	3.2	.10	2.2	.07	1.4	.05	0.8	.03	1.6	.05	0.9	.03	0.7	.02	0.7	.02	0.7	.03	0.6	.02	0.5	.02	0.4	.02	20
15	3.7	.09	5.1	.13	2.4	.07	1.5	.05	4.9	.14	4.1	.12	3.0	.10	2.5	.08	2.5	.08	1.6	.05	0.9	.03	0.7	.03	1.0	.03	0.9	.02	0.7	.02	0.7	.02	0.7	.02	0.5	.02	0.4	.02	0.4	.02	15
10	2.8	.07	4.2	.11	1.8	.05	1.0	.03	4.1	.12	3.4	.10	2.4	.08	1.9	.07	2.0	.07	1.1	.03	0.8	.03	0.7	.02	0.9	.03	0.8	.02	0.6	.02	0.6	.02	0.6	.02	0.5	.02	0.4	.02	0.3	.01	10
5	2.1	.05	3.4	.09	1.1	.03	0.9	.03	3.4	.10	2.7	.08	1.9	.07	1.4	.05	1.5	.05	0.9	.03	0.7	.02	0.6	.02	0.8	.02	0.8	.02	0.6	.02	0.6	.02	0.6	.02	0.5	.02	0.4	.01	0.3	.01	5
0	1.4	.03	2.6	.07	1.0	.03	0.8	.02	2.7	.08	2.2	.06	1.4	.05	0.9	.03	1.0	.03	0.9	.02	0.7	.02	0.6	.02	0.8	.02	0.7	.02	0.6	.02	0.5	.02	0.6	.02	0.4	.02	0.3	.01	0.3	.01	0
-5	1.2	.03	1.9	.05	0.9	.02	0.8	.02	2.2	.06	1.6	.05	0.9	.03	0.8	.02	0.9	.02	0.8	.02	0.6	.02	0.5	.02	0.7	.02	0.7	.02	0.5	.02	0.5	.02	0.5	.02	0.4	.02	0.3	.01	0.3	.01	-5
-10	1.1	.02	1.3	.03	0.9	.02	0.7	.02	1.6	.05	1.1	.03	0.7	.02	0.7	.02	0.8	.02	0.8	.02	0.6	.02	0.5	.02	0.7	.02	0.6	.02	0.5	.02	0.5	.02	0.5	.02	0.4	.02	0.3	.01	0.2	.01	-10
-15	1.1	.02	1.1	.03	0.8	.02	0.7	.02	1.1	.03	0.9	.02	0.7	.02	0.7	.02	0.8	.02	0.7	.02	0.6	.02	0.5	.02	0.6	.02	0.6	.02	0.4	.02	0.4	.01	0.4	.02	0.3	.01	0.3	.01	0.2	.01	-15
-20	1.0	.02	1.0	.02	0.8	.02	0.6	.02	1.0	.02	0.9	.02	0.7	.02	0.6	.02	0.7	.02	0.7	.02	0.5	.02	0.4	.02	0.6	.02	0.5	.01	0.4	.01	0.4	.01	0.4	.01	0.3	.01	0.2	.01	0.2	.01	-20
-25	0.9	.02	1.0	.02	0.7	.02	0.6	.02	0.9	.02	0.8	.02	0.6	.02	0.6	.02	0.7	.02	0.6	.02	0.5	.02	0.4	.01	0.5	.02	0.5	.01	0.4	.01	0.3	.01	0.4	.01	0.3	.01	0.2	.01	0.2	.01	-25
-30	0.9	.02	0.9	.02	0.7	.02	0.5	.02	0.9	.02	0.8	.02	0.6	.02	0.5	.02	0.6	.02	0.6	.02	0.4	.01	0.4	.01	0.5	.01	0.4	.01	0.3	.01	0.3	.01	0.3	.01	0.2	.01	0.2	.01	0.1	.01	-30
-35	0.8	.02	0.8	.02	0.6	.02	0.5	.01	0.8	.02	0.7	.02	0.5	.02	0.5	.02	0.6	.02	0.5	.01	0.4	.01	0.3	.01	0.4	.01	0.4	.01	0.3	.01	0.3	.01	0.3	.01	0.2	.01	0.1	.01	0.1	.00	-35
-40	0.7	.02	0.8	.02	0.5	.01	0.4	.01	0.7	.02	0.6	.02	0.5	.02	0.5	.02	0.5	.02	0.5	.01	0.4	.01	0.3	.01	0.4	.01	0.3	.01	0.2	.01	0.2	.01	0.3	.01	0.2	.01	0.1	.00	0.1	.00	-40
-45	0.6	.01	0.7	.02	0.5	.01	0.4	.01	0.7	.02	0.6	.02	0.5	.01	0.4	.01	0.5	.01	0.4	.01	0.3	.01	0.2	.01	0.3	.01	0.3	.01	0.2	.01	0.2	.01	0.2	.01	0.1	.01	0.1	.00	0.1	.00	-45
-50	0.6	.01	0.6	.02	0.4	.01	0.3	.01	0.6	.02	0.5	.01	0.4	.01	0.4	.01	0.4	.01	0.4	.01	0.3	.01	0.2	.01	0.3	.01	0.2	.01	0.2	.01	0.1	.00	0.2	.01	0.1	.00	0.1	.00	0.0	.00	-50
-55	0.5	.01	0.6	.01	0.4	.01	0.3	.01	0.5	.01	0.5	.01	0.4	.01	0.3	.01	0.4	.01	0.3	.01	0.2	.01	0.2	.01	0.2	.01	0.2	.01	0.1	.00	0.1	.00	0.1	.01	0.1	.00	0.0	.00	0.0	.00	-55
-60	0.4	.01	0.5	.01	0.3	.01	0.2	.01	0.5	.01	0.4	.01	0.3	.01	0.3	.01	0.3	.01	0.3	.01	0.2	.01	0.1	.01	0.2	.01	0.1	.00	0.1	.00	0.1	.00	0.1	.00	0.1	.00	0.0	.00	0.0	.00	-60
-65	0.4	.01	0.5	.01	0.3	.01	0.2	.01	0.4	.01	0.4	.01	0.3	.01	0.3	.01	0.3	.01	0.2	.01	0.2	.01	0.1	.00	0.2	.01	0.1	.00	0.1	.00	0.0	.00	0.1	.00	0.0	.00	0.0	.00	0.0	.00	-65
-70	0.3	.01	0.4	.01	0.2	.01	0.2	.01	0.4	.01	0.3	.01	0.2	.01	0.2	.01	0.2	.01	0.2	.01	0.1	.00	0.1	.00	0.1	.00	0.1	.00	0.0	.00	0.0	.00	0.1	.00	0.0	.00	0.0	.00	0.0	.00	-70
-75	0.3	.01	0.3	.01	0.2	.01	0.1	.00	0.3	.01	0.3	.01	0.2	.01	0.2	.01	0.2	.01	0.1	.00	0.1	.00	0.1	.00	0.1	.00	0.1	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	-75
-80	0.2	.01	0.3	.01	0.2	.00	0.1	.00	0.3	.01	0.2	.01	0.2	.01	0.2	.01	0.2	.01	0.1	.00	0.1	.00	0.0	.00	0.1	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	-80
-85	0.2	.00	0.3	.01	0.1	.00	0.1	.00	0.2	.01	0.2	.01	0.1	.01	0.1	.00	0.1	.00	0.1	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	-85
-90	0.1	.00	0.2	.01	0.1	.00	0.0	.00	0.2	.01	0.2	.01	0.1	.00	0.1	.00	0.1	.00	0.1	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	-90
-95	0.1	.00	0.2	.00	0.1	.00	0.0	.00	0.2	.01	0.1	.00	0.1	.00	0.1	.00	0.1	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	-95
-100	0.1	.00	0.1	.00	0.0	.00	0.0	.00	0.1	.00	0.1	.00	0.1	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	-100

Range: 10' (-10), 25' (-20), 50' (-30)

FALCHION UNIT ATTACK TABLE

A–3.2

	AT 1		AT 2		AT 3		AT 4		AT 5		AT 6		AT 7		AT 8		AT 9		AT 10		AT 11		AT 12		AT 13		AT 14		AT 15		AT 16		AT 17		AT 18		AT 19		AT 20		
	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	
100	37.1	.52	36.0	.52	32.6	.51	29.8	.50	35.6	.51	33.2	.51	29.1	.51	29.0	.49	31.9	.51	31.9	.50	28.3	.49	26.7	.49	28.6	.50	28.4	.49	25.8	.48	25.8	.48	25.0	.49	22.9	.47	19.6	.43	17.2	.40	100
95	36.0	.51	35.2	.52	31.6	.50	28.8	.49	34.7	.51	32.4	.50	28.4	.50	28.3	.49	31.0	.50	31.0	.49	27.4	.49	26.0	.48	27.8	.49	27.5	.47	25.1	.47	24.3	.45	24.3	.48	21.6	.44	18.4	.40	16.1	.38	95
90	34.8	.51	34.2	.51	30.5	.49	27.8	.48	33.6	.50	31.4	.49	27.7	.49	27.5	.48	30.0	.49	30.0	.48	26.5	.48	25.1	.47	26.9	.48	26.7	.46	23.6	.44	22.8	.42	23.5	.47	20.2	.41	17.1	.37	14.9	.35	90
85	33.5	.50	33.2	.50	29.2	.48	26.1	.46	32.4	.49	30.4	.48	26.8	.48	26.7	.47	28.9	.49	29.0	.47	25.5	.47	24.3	.45	25.9	.47	25.0	.44	22.1	.41	21.3	.39	22.1	.44	18.9	.39	15.9	.34	13.8	.32	85
80	32.1	.49	32.0	.50	27.4	.46	24.4	.43	31.2	.48	29.3	.47	25.9	.47	25.8	.45	27.7	.48	27.8	.46	24.4	.46	22.7	.43	24.7	.46	23.4	.41	20.6	.39	19.8	.37	20.6	.41	17.5	.36	14.6	.32	12.6	.29	80
75	30.0	.46	30.8	.49	25.5	.43	22.6	.40	29.8	.47	28.1	.46	25.0	.46	24.3	.43	26.4	.47	26.5	.45	22.7	.43	21.2	.40	23.1	.43	21.7	.38	19.1	.36	18.3	.34	19.2	.38	16.2	.33	13.4	.29	11.5	.27	75
70	27.9	.43	29.4	.48	23.6	.40	20.9	.38	28.3	.46	26.8	.45	23.4	.44	22.6	.40	25.0	.46	24.7	.43	21.1	.40	19.6	.37	21.4	.40	20.1	.35	17.6	.33	16.8	.31	17.7	.36	14.8	.30	12.1	.26	10.3	.24	70
65	25.7	.41	27.5	.45	21.7	.37	19.1	.35	26.7	.45	25.0	.43	21.8	.41	21.0	.38	23.5	.45	22.8	.40	19.4	.37	18.1	.34	19.8	.37	18.4	.33	16.1	.30	15.3	.28	16.3	.33	13.5	.28	10.9	.23	9.2	.21	65
60	23.6	.38	25.4	.42	19.8	.35	17.4	.32	24.7	.42	23.1	.40	20.1	.38	19.3	.35	21.7	.42	21.0	.37	17.8	.35	16.5	.32	18.1	.35	16.8	.30	14.6	.28	13.8	.26	14.8	.30	12.1	.25	9.6	.21	8.0	.18	60
55	21.4	.35	23.4	.40	17.9	.32	15.6	.29	22.6	.40	21.2	.37	18.5	.35	17.7	.32	19.8	.39	19.1	.34	16.1	.32	15.0	.29	16.5	.32	15.1	.27	13.1	.25	12.3	.23	13.4	.27	10.8	.22	8.4	.18	6.9	.16	55
50	19.4	.33	21.5	.37	16.2	.29	14.0	.27	20.7	.37	19.4	.35	16.9	.33	16.1	.29	18.1	.37	17.4	.32	14.6	.29	13.5	.26	15.0	.29	13.6	.25	11.7	.22	10.9	.20	12.0	.25	9.5	.19	7.2	.15	5.8	.13	50
45	17.4	.30	19.5	.34	14.4	.27	12.4	.24	18.8	.34	17.6	.32	15.4	.30	14.6	.27	16.4	.34	15.6	.29	13.1	.26	12.0	.24	13.4	.26	12.0	.22	10.3	.20	9.4	.18	10.6	.22	8.3	.17	6.0	.13	4.7	.11	45
40	15.5	.27	17.7	.32	12.7	.24	10.8	.21	16.9	.31	15.9	.29	13.9	.27	13.0	.24	14.7	.31	14.0	.26	11.6	.24	10.6	.21	11.9	.24	10.5	.19	8.9	.17	8.1	.15	9.3	.19	7.1	.15	4.9	.10	3.7	.08	40
35	13.7	.24	15.9	.29	11.1	.21	9.3	.19	15.2	.29	14.3	.27	12.4	.25	11.6	.22	13.1	.29	12.4	.24	10.2	.21	9.3	.19	10.5	.21	9.1	.17	7.6	.15	6.8	.13	8.1	.17	5.9	.12	3.9	.08	2.8	.06	35
30	11.9	.22	14.1	.26	9.6	.19	7.9	.16	13.5	.26	12.7	.24	11.0	.22	10.2	.19	11.7	.26	10.9	.21	8.9	.19	8.1	.17	9.1	.19	7.8	.15	6.4	.12	5.5	.10	6.9	.15	4.9	.10	3.0	.06	2.0	.05	30
25	10.3	.19	12.5	.23	8.1	.16	6.6	.14	11.9	.24	11.2	.22	9.7	.20	8.9	.17	10.2	.24	9.5	.19	7.6	.17	6.9	.14	7.9	.16	6.5	.12	5.2	.10	4.4	.08	5.8	.12	3.9	.08	2.1	.05	1.2	.03	25
20	8.8	.16	11.0	.21	6.8	.14	5.4	.11	10.4	.21	9.8	.19	8.4	.17	7.6	.15	8.9	.21	8.2	.17	6.5	.14	5.8	.12	6.7	.14	5.4	.10	4.2	.08	3.3	.06	4.7	.10	3.0	.06	1.2	.03	1.1	.03	20
15	7.3	.14	9.5	.18	5.6	.11	4.3	.09	9.0	.19	8.5	.17	7.2	.15	6.5	.13	7.7	.19	7.0	.14	5.4	.12	4.8	.10	5.6	.12	4.3	.08	3.2	.06	2.4	.04	3.8	.08	2.1	.04	1.2	.03	1.0	.02	15
10	6.0	.11	8.1	.16	4.4	.09	3.3	.07	7.7	.16	7.2	.15	6.1	.13	5.4	.11	6.6	.17	5.8	.12	4.5	.10	3.8	.08	4.5	.10	3.3	.06	2.3	.04	1.5	.03	2.9	.06	1.3	.03	1.1	.02	1.0	.02	10
5	4.8	.09	6.8	.13	3.4	.07	2.5	.05	6.5	.14	6.1	.13	5.0	.11	4.3	.08	5.6	.14	4.8	.10	3.6	.08	2.9	.06	3.6	.08	2.4	.04	1.4	.03	1.4	.03	2.1	.04	1.2	.03	1.1	.02	0.9	.02	5
0	3.7	.07	5.6	.11	2.6	.05	1.7	.03	5.5	.12	5.0	.11	4.1	.09	3.3	.07	4.6	.12	3.8	.08	2.7	.06	2.1	.04	2.8	.06	1.5	.03	1.3	.03	1.3	.02	1.3	.03	1.2	.02	1.0	.02	0.9	.02	0
-5	2.8	.05	4.5	.09	1.8	.03	1.5	.03	4.5	.10	4.0	.09	3.1	.07	2.5	.05	3.8	.10	3.0	.06	2.0	.04	1.4	.03	2.0	.04	1.4	.02	1.3	.02	1.2	.02	1.3	.02	1.1	.02	0.9	.02	0.8	.02	-5
-10	2.0	.03	3.5	.07	1.6	.03	1.4	.02	3.6	.08	3.1	.07	2.3	.05	1.6	.03	3.0	.08	2.2	.04	1.4	.03	1.3	.02	1.4	.03	1.3	.02	1.2	.02	1.2	.02	1.2	.02	1.0	.02	0.9	.02	0.8	.02	-10
-15	1.7	.03	2.6	.05	1.5	.02	1.3	.02	2.8	.06	2.4	.05	1.6	.03	1.4	.02	2.4	.06	1.5	.03	1.3	.02	1.2	.02	1.3	.02	1.3	.02	1.1	.02	1.1	.02	1.1	.02	1.0	.02	0.8	.02	0.7	.02	-15
-20	1.6	.02	1.8	.03	1.4	.02	1.2	.02	2.1	.04	1.7	.03	1.4	.02	1.3	.02	1.8	.04	1.4	.02	1.2	.02	1.2	.02	1.3	.02	1.2	.02	1.0	.02	1.0	.02	1.0	.02	0.9	.02	0.7	.02	0.6	.01	-20
-25	1.5	.02	1.6	.03	1.3	.02	1.1	.02	1.6	.03	1.5	.02	1.3	.02	1.2	.02	1.4	.03	1.3	.02	1.2	.02	1.1	.02	1.2	.02	1.1	.02	1.0	.02	0.9	.02	1.0	.02	0.8	.02	0.7	.01	0.6	.01	-25
-30	1.4	.02	1.5	.02	1.2	.02	1.1	.02	1.5	.02	1.4	.02	1.2	.02	1.1	.02	1.3	.02	1.3	.02	1.1	.02	1.0	.02	1.1	.02	1.0	.02	0.9	.02	0.9	.02	0.9	.02	0.8	.02	0.6	.01	0.5	.01	-30
-35	1.3	.02	1.4	.02	1.1	.02	1.0	.02	1.4	.02	1.3	.02	1.1	.02	1.1	.02	1.2	.02	1.2	.02	1.0	.02	0.9	.02	1.0	.02	0.9	.02	0.8	.02	0.8	.01	0.8	.02	0.7	.01	0.6	.01	0.5	.01	-35
-40	1.2	.02	1.3	.02	1.0	.02	0.9	.02	1.3	.02	1.2	.02	1.0	.02	1.0	.02	1.1	.02	1.1	.02	0.9	.02	0.8	.02	0.9	.02	0.9	.02	0.7	.01	0.7	.01	0.8	.02	0.6	.01	0.5	.01	0.4	.01	-40
-45	1.1	.02	1.2	.02	0.9	.02	0.8	.01	1.2	.02	1.1	.02	0.9	.02	0.9	.02	1.0	.02	1.0	.02	0.8	.02	0.8	.01	0.8	.02	0.8	.01	0.7	.01	0.6	.01	0.7	.01	0.6	.01	0.4	.01	0.4	.01	-45
-50	1.0	.02	1.1	.02	0.8	.01	0.7	.01	1.0	.02	1.0	.02	0.8	.02	0.8	.01	0.9	.02	0.9	.02	0.7	.01	0.7	.01	0.7	.01	0.7	.01	0.6	.01	0.5	.01	0.6	.01	0.5	.01	0.4	.01	0.3	.01	-50
-55	0.9	.01	1.0	.02	0.7	.01	0.6	.01	0.9	.02	0.9	.02	0.8	.01	0.7	.01	0.8	.02	0.8	.01	0.6	.01	0.6	.01	0.7	.01	0.6	.01	0.5	.01	0.5	.01	0.5	.01	0.4	.01	0.3	.01	0.2	.01	-55
-60	0.8	.01	0.9	.02	0.6	.01	0.5	.01	0.8	.02	0.8	.01	0.7	.01	0.6	.01	0.7	.02	0.7	.01	0.6	.01	0.5	.01	0.6	.01	0.5	.01	0.4	.01	0.4	.01	0.5	.01	0.3	.01	0.2	.01	0.2	.00	-60
-65	0.7	.01	0.8	.01	0.5	.01	0.5	.01	0.8	.01	0.7	.01	0.6	.01	0.6	.01	0.7	.01	0.6	.01	0.5	.01	0.5	.01	0.5	.01	0.5	.01	0.4	.01	0.3	.01	0.4	.01	0.3	.01	0.2	.00	0.1	.00	-65
-70	0.6	.01	0.7	.01	0.5	.01	0.4	.01	0.7	.01	0.6	.01	0.5	.01	0.5	.01	0.6	.01	0.5	.01	0.4	.01	0.4	.01	0.5	.01	0.4	.01	0.3	.01	0.3	.01	0.3	.01	0.2	.00	0.1	.00	0.1	.00	-70
-75	0.5	.01	0.6	.01	0.4	.01	0.3	.01	0.6	.01	0.6	.01	0.5	.01	0.4	.01	0.5	.01	0.5	.01	0.4	.01	0.3	.01	0.4	.01	0.3	.01	0.3	.01	0.2	.00	0.3	.01	0.2	.00	0.1	.00	0.1	.00	-75
-80	0.4	.01	0.5	.01	0.3	.01	0.3	.01	0.5	.01	0.5	.01	0.4	.01	0.4	.01	0.4	.01	0.4	.01	0.3	.01	0.3	.01	0.3	.01	0.3	.00	0.2	.00	0.2	.00	0.2	.00	0.1	.00	0.1	.00	0.1	.00	-80
-85	0.4	.01	0.5	.01	0.3	.01	0.2	.00	0.4	.01	0.4	.01	0.4	.01	0.3	.01	0.4	.01	0.3	.01	0.3	.01	0.2	.00	0.3	.01	0.2	.00	0.2	.00	0.1	.00	0.2	.00	0.1	.00	0.1	.00	0.0	.00	-85
-90	0.3	.01	0.4	.01	0.2	.00	0.2	.00	0.4	.01	0.4	.01	0.3	.01	0.3	.01	0.3	.01	0.3	.01	0.2	.00	0.2	.00	0.2	.00	0.2	.00	0.1	.00	0.1	.00	0.1	.00	0.1	.00	0.1	.00	0.0	.00	-90
-95	0.2	.00	0.3	.01	0.2	.00	0.1	.00	0.3	.01	0.3	.01	0.2	.01	0.2	.00	0.3	.01	0.2	.01	0.2	.00	0.1	.00	0.2	.00	0.1	.00	0.1	.00	0.1	.00	0.1	.00	0.1	.00	0.1	.00	0.0	.00	-95
-100	0.2	.00	0.3	.01	0.1	.00	0.1	.00	0.3	.01	0.2	.01	0.2	.00	0.2	.00	0.2	.01	0.2	.00	0.1	.00	0.1	.00	0.1	.00	0.1	.00	0.1	.00	0.1	.00	0.1	.00	0.1	.00	0.1	.00	0.0	.00	-100

HANDAXE UNIT ATTACK TABLE

A–3.3

	AT 1		AT 2		AT 3		AT 4		AT 5		AT 6		AT 7		AT 8		AT 9		AT 10		AT 11		AT 12		AT 13		AT 14		AT 15		AT 16		AT 17		AT 18		AT 19		AT 20		
	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	
100	32.3	.51	31.2	.52	27.7	.50	24.9	.49	30.7	.51	28.2	.51	24.0	.50	23.8	.49	28.7	.51	28.7	.50	25.1	.50	23.5	.49	26.2	.50	26.0	.49	23.4	.48	23.3	.48	22.6	.49	20.5	.47	17.4	.43	15.1	.41	100
95	31.5	.51	30.5	.51	27.0	.49	24.1	.48	29.9	.50	27.5	.50	23.5	.49	23.3	.48	28.0	.50	27.9	.49	24.4	.49	22.9	.48	25.5	.49	25.3	.48	22.8	.47	22.2	.45	22.0	.48	19.4	.44	16.3	.40	14.1	.38	95
90	30.5	.50	29.8	.51	26.1	.48	22.8	.46	29.1	.50	26.8	.49	22.9	.49	22.7	.47	27.1	.50	27.1	.49	23.7	.48	22.2	.47	24.8	.48	24.6	.47	21.6	.45	20.8	.43	21.3	.47	18.2	.42	15.2	.37	13.1	.35	90
85	29.5	.49	28.9	.50	24.6	.46	21.3	.43	28.2	.49	26.0	.48	22.3	.48	22.0	.46	26.2	.49	26.2	.48	22.8	.47	21.3	.46	23.9	.47	23.2	.44	20.2	.42	19.5	.40	20.2	.44	17.0	.39	14.1	.34	12.1	.33	85
80	27.8	.46	28.0	.49	23.0	.43	19.9	.40	27.1	.48	25.1	.47	21.6	.47	20.8	.44	25.2	.48	25.2	.47	21.8	.46	20.0	.43	23.1	.46	21.7	.41	18.9	.39	18.1	.37	18.9	.41	15.8	.36	13.0	.32	11.1	.30	80
75	25.9	.43	27.0	.48	21.4	.40	18.4	.38	26.0	.47	24.1	.46	20.4	.44	19.5	.41	24.1	.47	24.0	.45	20.3	.43	18.6	.40	21.7	.43	20.2	.39	17.5	.36	16.8	.34	17.6	.39	14.6	.33	11.9	.29	10.1	.27	75
70	24.1	.41	25.4	.45	19.8	.38	17.0	.35	24.9	.46	22.7	.43	19.0	.41	18.1	.38	22.9	.46	22.3	.42	18.9	.40	17.3	.37	20.2	.41	18.7	.36	16.2	.34	15.4	.32	16.3	.36	13.4	.31	10.8	.26	9.1	.24	70
65	22.2	.38	23.7	.43	18.2	.35	15.5	.32	23.2	.43	21.1	.41	17.7	.39	16.8	.35	21.6	.45	20.7	.40	17.4	.37	15.9	.35	18.7	.38	17.2	.33	14.8	.31	14.1	.29	15.0	.33	12.2	.28	9.7	.23	8.1	.21	65
60	20.4	.35	21.9	.40	16.6	.32	14.1	.29	21.5	.40	19.5	.38	16.3	.36	15.4	.33	20.0	.42	19.0	.37	16.0	.35	14.6	.32	17.2	.35	15.7	.30	13.5	.28	12.7	.26	13.7	.30	11.0	.25	8.6	.21	7.1	.19	60
55	18.5	.32	20.2	.37	15.0	.29	12.6	.27	19.7	.38	17.9	.35	15.0	.33	14.1	.30	18.3	.39	17.4	.34	14.5	.32	13.2	.29	15.7	.32	14.2	.28	12.1	.25	11.4	.23	12.4	.28	9.8	.22	7.5	.18	6.1	.16	55
50	16.8	.30	18.6	.34	13.5	.27	11.3	.24	18.1	.35	16.4	.33	13.7	.31	12.8	.27	16.8	.37	15.9	.32	13.2	.29	12.0	.26	14.3	.30	12.8	.25	10.9	.23	10.1	.21	11.2	.25	8.7	.20	6.4	.15	5.2	.13	50
45	15.0	.27	16.9	.32	12.0	.24	9.9	.21	16.4	.32	14.9	.30	12.4	.28	11.5	.24	15.2	.34	14.3	.29	11.8	.27	10.7	.24	12.9	.27	11.4	.22	9.6	.20	8.8	.18	9.9	.22	7.6	.17	5.4	.13	4.3	.11	45
40	13.4	.24	15.3	.29	10.6	.21	8.6	.19	14.8	.30	13.4	.27	11.1	.25	10.3	.22	13.7	.31	12.8	.26	10.5	.24	9.4	.21	11.5	.24	10.0	.20	8.4	.18	7.6	.16	8.7	.20	6.5	.15	4.4	.11	3.4	.09	40
35	11.7	.22	13.7	.26	9.2	.19	7.3	.16	13.3	.27	12.0	.25	9.9	.23	9.0	.19	12.3	.28	11.4	.24	9.2	.21	8.2	.19	10.2	.22	8.7	.17	7.2	.15	6.4	.13	7.6	.17	5.5	.13	3.6	.09	2.6	.07	35
30	10.2	.19	12.2	.23	7.9	.16	6.1	.14	11.8	.24	10.6	.22	8.8	.20	7.9	.17	10.9	.26	10.0	.21	8.0	.19	7.2	.16	8.9	.19	7.5	.15	6.1	.13	5.3	.11	6.5	.15	4.5	.10	2.8	.07	1.8	.05	30
25	8.7	.16	10.7	.21	6.6	.14	5.0	.11	10.5	.22	9.3	.20	7.6	.18	6.8	.15	9.7	.23	8.7	.19	6.9	.17	6.1	.14	7.8	.17	6.3	.13	5.0	.11	4.2	.09	5.5	.13	3.6	.08	2.0	.05	1.1	.03	25
20	7.3	.14	9.3	.18	5.4	.11	4.0	.09	9.1	.19	8.1	.17	6.6	.15	5.8	.13	8.4	.21	7.5	.16	5.9	.14	5.1	.12	6.6	.15	5.2	.11	4.0	.09	3.2	.07	4.5	.11	2.8	.07	1.2	.03	1.0	.03	20
15	6.0	.11	8.0	.16	4.3	.09	3.1	.07	7.9	.17	6.9	.15	5.6	.13	4.8	.11	7.3	.19	6.4	.14	4.9	.12	4.2	.10	5.6	.13	4.2	.09	3.1	.07	2.3	.05	3.6	.08	2.0	.05	1.0	.03	.9	.02	15
10	4.8	.09	6.8	.13	3.3	.07	2.2	.05	6.7	.15	5.8	.13	4.6	.11	3.9	.09	6.3	.16	5.3	.12	4.0	.10	3.3	.08	4.6	.10	3.2	.07	2.2	.05	1.5	.03	2.8	.07	1.3	.03	1.0	.02	.9	.02	10
5	3.7	.07	5.6	.11	2.4	.05	1.5	.03	5.7	.13	4.9	.11	3.7	.09	3.0	.07	5.3	.14	4.4	.10	3.2	.08	2.5	.06	3.7	.08	2.4	.05	1.4	.03	1.3	.03	2.1	.05	1.1	.03	.9	.02	.8	.02	5
0	2.7	.05	4.5	.09	1.6	.03	1.3	.03	4.7	.11	3.9	.09	2.9	.07	2.2	.05	4.4	.12	3.5	.08	2.4	.06	1.8	.04	2.9	.07	1.5	.03	1.2	.03	1.2	.02	1.3	.03	1.0	.02	.9	.02	.8	.02	0
-5	1.8	.03	3.5	.07	1.4	.03	1.2	.02	3.8	.08	3.0	.07	2.1	.05	1.4	.03	3.6	.10	2.6	.06	1.8	.04	1.2	.03	2.1	.05	1.3	.03	1.2	.02	1.1	.02	1.2	.03	1.0	.02	.8	.02	.7	.02	-5
-10	1.6	.03	2.5	.05	1.3	.02	1.2	.02	2.9	.07	2.2	.05	1.4	.03	1.2	.02	2.9	.08	1.9	.04	1.2	.03	1.1	.02	1.4	.03	1.3	.02	1.1	.02	1.1	.02	1.1	.02	.9	.02	.8	.02	.7	.02	-10
-15	1.5	.02	1.7	.03	1.2	.02	1.1	.02	2.2	.05	1.5	.03	1.2	.03	1.1	.02	2.2	.06	1.4	.03	1.2	.02	1.1	.02	1.2	.02	1.2	.02	1.0	.02	1.0	.02	1.0	.02	.9	.02	.7	.02	.6	.02	-15
-20	1.4	.02	1.5	.03	1.2	.02	1.0	.02	1.5	.03	1.3	.02	1.1	.02	1.1	.02	1.7	.04	1.3	.02	1.1	.02	1.0	.02	1.2	.02	1.1	.02	1.0	.02	.9	.02	1.0	.02	.8	.02	.7	.02	.6	.02	-20
-25	1.3	.02	1.4	.02	1.1	.02	.9	.02	1.4	.02	1.2	.02	1.0	.02	1.0	.02	1.3	.03	1.2	.02	1.0	.02	.9	.02	1.1	.02	1.0	.02	.9	.02	.9	.02	.9	.02	.7	.02	.6	.01	.5	.01	-25
-30	1.2	.02	1.3	.02	1.0	.02	.9	.02	1.3	.02	1.1	.02	1.0	.02	.9	.02	1.2	.02	1.1	.02	1.0	.02	.9	.02	1.0	.02	1.0	.02	.8	.02	.8	.02	.8	.02	.7	.02	.5	.01	.5	.01	-30
-35	1.1	.02	1.2	.02	.9	.02	.8	.02	1.2	.02	1.1	.02	.9	.02	.9	.02	1.1	.02	1.1	.02	.9	.02	.8	.02	.9	.02	.9	.02	.8	.02	.7	.01	.8	.02	.6	.01	.5	.01	.4	.01	-35
-40	1.0	.02	1.1	.02	.8	.02	.7	.01	1.1	.02	1.0	.02	.8	.02	.8	.02	1.0	.02	1.0	.02	.8	.02	.7	.02	.9	.02	.8	.02	.7	.01	.6	.01	.7	.02	.6	.01	.4	.01	.4	.01	-40
-45	.9	.02	1.0	.02	.8	.01	.6	.01	1.0	.02	.9	.02	.8	.02	.7	.02	.9	.02	.9	.02	.7	.02	.7	.01	.8	.02	.7	.01	.6	.01	.6	.01	.6	.01	.5	.01	.4	.01	.3	.01	-45
-50	.8	.01	.9	.02	.7	.01	.6	.01	.9	.02	.8	.02	.7	.02	.6	.01	.8	.02	.8	.02	.7	.01	.6	.01	.7	.01	.6	.01	.5	.01	.5	.01	.6	.01	.4	.01	.3	.01	.3	.01	-50
-55	.7	.01	.8	.02	.6	.01	.5	.01	.8	.02	.7	.01	.6	.01	.6	.01	.8	.02	.7	.01	.6	.01	.5	.01	.6	.01	.6	.01	.5	.01	.4	.01	.5	.01	.4	.01	.3	.01	.2	.01	-55
-60	.7	.01	.8	.01	.5	.01	.4	.01	.7	.01	.7	.01	.6	.01	.5	.01	.7	.02	.6	.01	.5	.01	.5	.01	.6	.01	.5	.01	.4	.01	.4	.01	.4	.01	.3	.01	.2	.01	.2	.00	-60
-65	.6	.01	.7	.01	.5	.01	.4	.01	.7	.01	.6	.01	.5	.01	.4	.01	.6	.01	.6	.01	.5	.01	.4	.01	.5	.01	.4	.01	.4	.01	.3	.01	.4	.01	.3	.01	.2	.00	.1	.00	-65
-70	.5	.01	.6	.01	.4	.01	.3	.01	.6	.01	.5	.01	.4	.01	.4	.01	.5	.01	.5	.01	.4	.01	.4	.01	.4	.01	.4	.01	.3	.01	.3	.01	.3	.01	.2	.01	.1	.00	.1	.00	-70
-75	.4	.01	.5	.01	.3	.01	.2	.01	.5	.01	.5	.01	.4	.01	.3	.01	.5	.01	.4	.01	.3	.01	.3	.01	.4	.01	.3	.01	.2	.01	.2	.00	.3	.01	.2	.00	.1	.00	.1	.00	-75
-80	.4	.01	.5	.01	.3	.01	.2	.00	.5	.01	.4	.01	.3	.01	.3	.01	.4	.01	.4	.01	.3	.01	.3	.01	.3	.01	.3	.01	.2	.00	.2	.00	.2	.01	.1	.00	.1	.00	.0	.00	-80
-85	.3	.01	.4	.01	.2	.00	.1	.00	.4	.01	.3	.01	.3	.01	.2	.01	.4	.01	.3	.01	.2	.01	.2	.00	.3	.01	.2	.00	.1	.00	.1	.00	.2	.00	.1	.00	.0	.00	.0	.00	-85
-90	.2	.00	.3	.01	.2	.00	.1	.00	.3	.01	.3	.01	.2	.01	.2	.00	.3	.01	.3	.01	.2	.00	.2	.00	.2	.01	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	-90
-95	.2	.00	.3	.01	.1	.00	.1	.00	.3	.01	.2	.01	.2	.00	.1	.00	.3	.01	.2	.00	.2	.00	.1	.00	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	-95
-100	.1	.00	.2	.00	.1	.00	.1	.00	.2	.01	.2	.00	.1	.00	.1	.00	.2	.01	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	.0	.00	-100

Range: 10' (-15), 25' (-30), 50' (-45)

MAIN GAUCHE UNIT ATTACK TABLE

A–3.4

	AT 1		AT 2		AT 3		AT 4		AT 5		AT 6		AT 7		AT 8		AT 9		AT 10		AT 11		AT 12		AT 13		AT 14		AT 15		AT 16		AT 17		AT 18		AT 19		AT 20		
	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	
100	25.2	.50	24.1	.51	20.7	.49	17.7	.48	23.5	.50	21.0	.49	16.8	.49	16.6	.48	19.7	.49	19.5	.47	15.9	.47	13.8	.45	17.6	.47	16.3	.42	13.3	.40	12.6	.38	14.8	.42	11.9	.38	8.5	.29	6.7	.27	100
95	24.6	.49	23.6	.50	20.1	.48	17.0	.46	22.8	.49	20.4	.48	16.4	.48	16.2	.47	19.1	.48	18.9	.46	15.1	.44	13.0	.42	16.6	.44	15.3	.40	12.4	.37	11.7	.35	13.8	.40	11.1	.35	7.8	.26	6.2	.24	95
90	23.8	.48	23.0	.49	19.2	.46	15.9	.44	22.2	.48	19.8	.47	16.0	.47	15.7	.46	18.4	.47	17.8	.44	14.1	.42	12.1	.39	15.6	.41	14.2	.37	11.5	.35	10.8	.32	12.9	.37	10.2	.32	7.2	.24	5.6	.22	90
85	22.7	.46	22.3	.48	18.0	.43	14.9	.41	21.4	.47	19.2	.46	15.5	.46	15.1	.44	17.7	.45	16.7	.41	13.2	.39	11.3	.36	14.5	.39	13.2	.34	10.6	.32	9.9	.30	11.9	.34	9.4	.30	6.5	.22	5.0	.20	85
80	21.3	.43	21.6	.47	16.8	.40	13.8	.38	20.6	.46	18.5	.45	14.9	.44	14.2	.41	16.6	.43	15.5	.38	12.2	.36	10.4	.34	13.5	.36	12.1	.31	9.7	.29	9.0	.27	11.0	.31	8.5	.27	5.8	.20	4.5	.18	80
75	19.8	.41	20.6	.45	15.6	.38	12.8	.35	19.7	.45	17.6	.43	13.9	.42	13.2	.39	15.5	.40	14.4	.36	11.3	.33	9.6	.31	12.4	.33	11.1	.29	8.8	.26	8.1	.24	10.0	.29	7.7	.24	5.2	.17	3.9	.15	75
70	18.4	.38	19.3	.43	14.4	.35	11.7	.33	18.6	.43	16.4	.41	13.0	.39	12.3	.36	14.3	.38	13.2	.33	10.3	.31	8.7	.28	11.4	.30	10.0	.26	7.9	.23	7.2	.21	9.1	.26	6.8	.21	4.5	.15	3.3	.13	70
65	16.9	.35	17.9	.40	13.2	.32	10.7	.30	17.2	.40	15.2	.38	12.0	.36	11.3	.33	13.2	.35	12.1	.30	9.4	.28	7.9	.25	10.3	.28	9.0	.23	7.0	.21	6.3	.19	8.1	.23	6.0	.19	3.8	.13	2.8	.11	65
60	15.5	.32	16.6	.37	12.0	.29	9.6	.27	15.9	.38	14.0	.35	11.1	.33	10.4	.30	12.0	.32	10.9	.27	8.4	.25	7.0	.23	9.3	.25	7.9	.20	6.1	.18	5.4	.16	7.2	.20	5.1	.16	3.1	.11	2.2	.09	60
55	14.0	.30	15.2	.34	10.8	.27	8.6	.24	14.5	.35	12.8	.32	10.1	.31	9.4	.28	10.9	.29	9.8	.25	7.5	.22	6.2	.20	8.2	.22	6.9	.18	5.2	.15	4.5	.13	6.2	.18	4.3	.13	2.5	.08	1.6	.06	55
50	12.7	.27	14.0	.32	9.7	.24	7.6	.22	13.3	.32	11.7	.30	9.2	.28	8.5	.25	9.8	.27	8.7	.22	6.6	.20	5.4	.17	7.2	.20	5.9	.15	4.4	.13	3.8	.11	5.3	.15	3.5	.11	1.9	.06	1.1	.04	50
45	11.3	.24	12.7	.29	8.5	.21	6.6	.19	12.0	.29	10.5	.27	8.3	.25	7.6	.22	8.7	.24	7.6	.19	5.7	.17	4.6	.15	6.3	.17	5.0	.13	3.6	.11	3.0	.09	4.5	.13	2.8	.09	1.3	.04	0.7	.03	45
40	10.0	.22	11.4	.26	7.4	.19	5.7	.16	10.8	.27	9.4	.25	7.4	.23	6.7	.20	7.7	.21	6.6	.17	4.9	.15	3.9	.13	5.4	.15	4.1	.11	2.9	.09	2.3	.07	3.7	.11	2.1	.07	0.8	.03	0.6	.02	40
35	8.7	.19	10.2	.23	6.4	.16	4.8	.14	9.6	.24	8.4	.22	6.6	.20	5.9	.18	6.7	.19	5.7	.15	4.1	.13	3.2	.11	4.5	.13	3.3	.09	2.2	.07	1.6	.05	2.9	.09	1.5	.05	0.7	.02	0.5	.02	35
30	7.5	.16	9.0	.21	5.4	.14	4.0	.12	8.5	.22	7.4	.20	5.8	.18	5.1	.15	5.8	.17	4.7	.13	3.4	.11	2.6	.09	3.7	.10	2.5	.07	1.6	.05	1.0	.03	2.3	.07	1.0	.03	0.6	.02	0.5	.02	30
25	6.3	.14	7.9	.18	4.5	.12	3.2	.09	7.5	.20	6.5	.17	5.0	.16	4.4	.13	5.0	.15	3.9	.10	2.7	.09	2.0	.07	3.0	.08	1.8	.05	1.0	.03	0.9	.03	1.6	.05	0.8	.03	0.6	.02	0.5	.02	25
20	5.2	.12	6.8	.16	3.6	.09	2.5	.07	6.5	.17	5.6	.15	4.3	.13	3.7	.11	4.2	.12	3.1	.08	2.1	.07	1.4	.05	2.3	.07	1.2	.03	0.9	.03	0.8	.02	1.0	.03	0.8	.02	0.6	.02	0.5	.02	20
15	4.2	.10	5.8	.14	2.8	.07	1.9	.06	5.6	.15	4.7	.13	3.6	.11	3.0	.09	3.5	.10	2.4	.07	1.5	.05	0.9	.03	1.7	.05	1.0	.03	0.8	.02	0.8	.02	0.9	.03	0.7	.02	0.5	.02	0.4	.02	15
10	3.3	.07	4.8	.11	2.1	.06	1.3	.04	4.7	.13	4.0	.11	2.9	.09	2.4	.07	2.8	.08	1.8	.05	1.0	.03	0.8	.03	1.1	.03	0.9	.02	0.8	.02	0.7	.02	0.8	.02	0.7	.02	0.5	.02	0.4	.02	10
5	2.5	.06	3.9	.09	1.5	.04	1.0	.03	3.9	.11	3.2	.09	2.3	.07	1.8	.05	2.2	.07	1.2	.03	0.9	.03	0.7	.02	0.9	.03	0.9	.02	0.7	.02	0.7	.02	0.8	.02	0.6	.02	0.5	.02	0.4	.01	5
0	1.8	.04	3.1	.07	1.1	.03	0.9	.02	3.2	.09	2.6	.07	1.7	.05	1.2	.04	1.6	.05	1.0	.02	0.8	.02	0.7	.02	0.9	.02	0.8	.02	0.7	.02	0.6	.02	0.7	.02	0.6	.02	0.4	.01	0.3	.01	0
-5	1.3	.03	2.3	.06	1.0	.02	0.9	.02	2.5	.07	1.9	.05	1.2	.04	0.9	.03	1.1	.03	1.0	.02	0.8	.02	0.7	.02	0.8	.02	0.8	.02	0.6	.02	0.6	.02	0.7	.02	0.6	.02	0.4	.01	0.3	.01	-5
-10	1.2	.02	1.6	.04	1.0	.02	0.8	.02	2.0	.05	1.4	.04	0.8	.03	0.8	.02	1.0	.02	0.9	.02	0.7	.02	0.6	.02	0.8	.02	0.7	.02	0.6	.02	0.6	.02	0.7	.02	0.5	.02	0.4	.01	0.3	.01	-10
-15	1.2	.02	1.2	.03	0.9	.02	0.8	.02	1.4	.04	1.0	.02	0.8	.02	0.8	.02	0.9	.02	0.8	.02	0.7	.02	0.6	.02	0.7	.02	0.7	.02	0.5	.02	0.5	.02	0.6	.02	0.5	.02	0.3	.01	0.3	.01	-15
-20	1.1	.02	1.1	.02	0.9	.02	0.7	.02	1.1	.02	1.0	.02	0.8	.02	0.7	.02	0.8	.02	0.8	.02	0.6	.02	0.5	.02	0.7	.02	0.6	.02	0.5	.01	0.5	.01	0.6	.02	0.4	.01	0.3	.01	0.2	.01	-20
-25	1.0	.02	1.0	.02	0.8	.02	0.6	.02	1.0	.02	0.9	.02	0.7	.02	0.7	.02	0.8	.02	0.7	.02	0.6	.02	0.5	.02	0.6	.02	0.6	.01	0.4	.01	0.4	.01	0.5	.01	0.4	.01	0.3	.01	0.2	.01	-25
-30	0.9	.02	1.0	.02	0.7	.02	0.6	.02	0.9	.02	0.8	.02	0.7	.02	0.6	.02	0.7	.02	0.7	.02	0.5	.02	0.4	.01	0.6	.02	0.5	.01	0.4	.01	0.4	.01	0.5	.01	0.3	.01	0.2	.01	0.2	.01	-30
-35	0.9	.02	0.9	.02	0.7	.02	0.5	.02	0.9	.02	0.8	.02	0.6	.02	0.6	.02	0.7	.02	0.6	.02	0.5	.01	0.4	.01	0.5	.01	0.5	.01	0.4	.01	0.3	.01	0.4	.01	0.3	.01	0.2	.01	0.1	.01	-35
-40	0.8	.02	0.8	.02	0.6	.01	0.5	.01	0.8	.02	0.7	.02	0.6	.02	0.5	.02	0.6	.02	0.6	.01	0.4	.01	0.4	.01	0.5	.01	0.4	.01	0.3	.01	0.3	.01	0.4	.01	0.3	.01	0.2	.01	0.1	.00	-40
-45	0.7	.02	0.8	.02	0.6	.01	0.4	.01	0.7	.02	0.7	.02	0.5	.02	0.5	.01	0.6	.01	0.5	.01	0.4	.01	0.3	.01	0.4	.01	0.4	.01	0.3	.01	0.2	.01	0.3	.01	0.2	.01	0.1	.00	0.1	.00	-45
-50	0.6	.01	0.7	.02	0.5	.01	0.4	.01	0.7	.02	0.6	.01	0.5	.01	0.4	.01	0.5	.01	0.4	.01	0.3	.01	0.3	.01	0.4	.01	0.3	.01	0.2	.01	0.2	.01	0.3	.01	0.2	.01	0.1	.00	0.1	.00	-50
-55	0.6	.01	0.6	.01	0.4	.01	0.3	.01	0.6	.01	0.5	.01	0.4	.01	0.4	.01	0.4	.01	0.4	.01	0.3	.01	0.2	.01	0.3	.01	0.2	.01	0.2	.01	0.1	.00	0.2	.01	0.1	.00	0.1	.00	0.0	.00	-55
-60	0.5	.01	0.6	.01	0.4	.01	0.3	.01	0.5	.01	0.5	.01	0.4	.01	0.3	.01	0.4	.01	0.3	.01	0.2	.01	0.2	.01	0.3	.01	0.2	.01	0.1	.00	0.1	.00	0.2	.01	0.1	.00	0.0	.00	0.0	.00	-60
-65	0.4	.01	0.5	.01	0.3	.01	0.2	.01	0.5	.01	0.4	.01	0.3	.01	0.3	.01	0.3	.01	0.3	.01	0.2	.01	0.2	.01	0.2	.01	0.2	.00	0.1	.00	0.1	.00	0.1	.00	0.1	.00	0.0	.00	0.0	.00	-65
-70	0.4	.01	0.4	.01	0.3	.01	0.2	.01	0.4	.01	0.4	.01	0.3	.01	0.3	.01	0.3	.01	0.2	.01	0.2	.01	0.1	.00	0.2	.01	0.1	.00	0.1	.00	0.0	.00	0.1	.00	0.0	.00	0.0	.00	0.0	.00	-70
-75	0.3	.01	0.4	.01	0.2	.01	0.2	.00	0.4	.01	0.3	.01	0.2	.01	0.2	.01	0.2	.01	0.2	.01	0.1	.00	0.1	.00	0.1	.00	0.1	.00	0.0	.00	0.0	.00	0.1	.00	0.0	.00	0.0	.00	0.0	.00	-75
-80	0.3	.01	0.3	.01	0.2	.00	0.1	.00	0.3	.01	0.3	.01	0.2	.01	0.2	.01	0.2	.01	0.2	.00	0.1	.00	0.1	.00	0.1	.00	0.1	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	-80
-85	0.2	.00	0.3	.01	0.1	.00	0.1	.00	0.3	.01	0.2	.01	0.2	.01	0.1	.00	0.2	.01	0.1	.00	0.1	.00	0.0	.00	0.1	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	-85
-90	0.2	.00	0.2	.01	0.1	.00	0.1	.00	0.2	.01	0.2	.01	0.1	.00	0.1	.00	0.1	.00	0.1	.00	0.0	.00	0.0	.00	0.1	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	-90
-95	0.1	.00	0.2	.00	0.1	.00	0.0	.00	0.2	.01	0.2	.00	0.1	.00	0.1	.00	0.1	.00	0.1	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	-95
-100	0.1	.00	0.2	.00	0.1	.00	0.0	.00	0.2	.00	0.1	.00	0.1	.00	0.1	.00	0.1	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	0.0	.00	-100

SCIMITAR UNIT ATTACK TABLE

A–3.5

	AT 1		AT 2		AT 3		AT 4		AT 5		AT 6		AT 7		AT 8		AT 9		AT 10		AT 11		AT 12		AT 13		AT 14		AT 15		AT 16		AT 17		AT 18		AT 19		AT 20		
	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	
100	33.5	.52	32.5	.52	29.0	.51	26.2	.50	32.0	.51	29.6	.51	25.5	.50	25.3	.49	26.4	.50	26.4	.49	22.8	.49	21.3	.48	19.7	.48	19.4	.47	16.4	.45	15.8	.43	18.8	.48	13.8	.44	11.8	.40	11.2	.38	100
95	32.5	.51	31.7	.51	28.0	.50	25.3	.49	31.1	.50	28.8	.50	24.9	.49	24.7	.48	25.6	.50	25.6	.48	22.1	.48	20.6	.47	19.1	.47	18.4	.45	15.4	.42	14.8	.40	18.3	.47	13.0	.42	11.0	.37	10.4	.35	95
90	31.4	.50	30.8	.51	27.0	.49	23.9	.46	30.1	.50	27.9	.49	24.2	.49	24.0	.47	24.7	.49	24.7	.47	21.2	.47	19.5	.44	18.4	.46	17.2	.42	14.4	.40	13.8	.38	17.3	.44	12.1	.39	10.2	.34	9.6	.32	90
85	30.1	.49	29.8	.50	25.4	.46	22.3	.44	29.0	.49	27.0	.48	23.5	.48	23.3	.46	23.7	.48	23.7	.46	20.0	.44	18.2	.42	17.4	.44	16.1	.39	13.4	.37	12.8	.35	16.2	.41	11.3	.36	9.4	.32	8.8	.30	85
80	28.3	.47	28.8	.49	23.7	.43	20.8	.41	27.8	.48	25.9	.47	22.6	.47	21.9	.44	22.6	.47	22.2	.44	18.6	.42	17.0	.39	16.2	.41	14.9	.36	12.4	.34	11.8	.32	15.1	.39	10.4	.33	8.6	.29	8.0	.27	80
75	26.3	.44	27.6	.48	22.0	.41	19.2	.38	26.5	.47	24.8	.46	21.3	.44	20.5	.41	21.4	.46	20.7	.41	17.3	.39	15.7	.36	15.1	.38	13.8	.34	11.4	.31	10.8	.29	14.0	.36	9.6	.31	7.8	.26	7.2	.24	75
70	24.4	.41	25.9	.46	20.3	.38	17.7	.36	25.1	.46	23.2	.43	19.9	.41	19.0	.38	19.9	.43	19.1	.38	15.9	.36	14.5	.33	13.9	.36	12.6	.31	10.4	.29	9.8	.27	12.9	.33	8.7	.28	7.0	.23	6.4	.21	70
65	22.4	.39	24.0	.43	18.6	.35	16.1	.33	23.3	.43	21.5	.41	18.4	.39	17.6	.35	18.4	.41	17.6	.36	14.6	.33	13.2	.31	12.8	.33	11.5	.28	9.4	.26	8.8	.24	11.8	.30	7.9	.25	6.2	.21	5.6	.19	65
60	20.5	.36	22.2	.40	16.9	.32	14.6	.30	21.4	.40	19.8	.38	17.0	.36	16.1	.33	16.8	.38	16.0	.33	13.2	.31	12.0	.28	11.6	.30	10.3	.25	8.4	.23	7.8	.21	10.7	.28	7.0	.22	5.4	.18	4.8	.16	60
55	18.5	.33	20.3	.38	15.2	.30	13.0	.27	19.6	.38	18.1	.35	15.5	.33	14.7	.30	15.3	.35	14.5	.30	11.9	.28	10.7	.25	10.5	.27	9.2	.22	7.4	.20	6.8	.18	9.6	.25	6.2	.20	4.6	.15	4.0	.13	55
50	16.7	.31	18.6	.35	13.6	.27	11.6	.25	17.9	.35	16.5	.33	14.2	.31	13.3	.27	13.8	.32	13.0	.28	10.6	.25	9.6	.23	9.4	.25	8.1	.20	6.5	.18	5.8	.16	8.6	.22	5.4	.17	3.9	.13	3.3	.11	50
45	14.9	.28	16.8	.32	12.0	.24	10.2	.22	16.1	.32	14.9	.30	12.8	.28	11.9	.24	12.4	.30	11.6	.25	9.4	.22	8.4	.20	8.3	.22	7.1	.17	5.6	.15	4.9	.13	7.5	.20	4.6	.15	3.2	.11	2.7	.09	45
40	13.2	.25	15.2	.29	10.5	.22	8.8	.19	14.5	.30	13.4	.27	11.4	.25	10.6	.22	11.0	.27	10.2	.22	8.2	.20	7.3	.17	7.3	.19	6.0	.15	4.7	.13	4.0	.11	6.5	.17	3.9	.13	2.5	.09	2.0	.07	40
35	11.5	.22	13.5	.27	9.1	.19	7.5	.17	12.9	.27	11.9	.25	10.2	.23	9.3	.19	9.7	.25	8.9	.20	7.0	.17	6.2	.15	6.3	.17	5.1	.13	3.8	.11	3.2	.09	5.6	.15	3.2	.10	2.0	.07	1.5	.05	35
30	9.9	.20	12.0	.24	7.7	.16	6.3	.14	11.4	.24	10.5	.22	8.9	.20	8.2	.17	8.5	.22	7.7	.17	6.0	.15	5.2	.13	5.4	.15	4.2	.11	3.1	.09	2.4	.07	4.7	.13	2.6	.08	1.4	.05	.9	.03	30
25	8.5	.17	10.5	.21	6.5	.14	5.1	.12	10.0	.22	9.2	.20	7.8	.18	7.0	.15	7.3	.20	6.5	.15	5.0	.13	4.3	.11	4.5	.12	3.3	.09	2.3	.07	1.8	.05	3.9	.10	2.0	.07	.9	.03	.8	.03	25
20	7.1	.14	9.1	.19	5.3	.11	4.1	.09	8.6	.19	7.9	.17	6.7	.15	5.9	.13	6.3	.17	5.5	.13	4.1	.11	3.5	.09	3.7	.10	2.6	.07	1.7	.05	1.1	.03	3.1	.08	1.4	.05	.8	.03	.7	.02	20
15	5.8	.12	7.8	.16	4.2	.09	3.1	.07	7.4	.17	6.8	.15	5.6	.13	4.9	.11	5.3	.15	4.5	.11	3.3	.09	2.7	.07	3.0	.08	1.9	.05	1.1	.03	.9	.03	2.4	.07	.9	.03	.7	.02	.7	.02	15
10	4.6	.09	6.5	.14	3.2	.07	2.3	.05	6.3	.15	5.7	.13	4.6	.11	3.9	.09	4.4	.13	3.6	.09	2.6	.07	1.9	.05	2.3	.07	1.2	.03	.9	.03	.9	.02	1.8	.05	.8	.03	.7	.02	.7	.02	10
5	3.6	.07	5.4	.11	2.4	.05	1.6	.03	5.2	.13	4.7	.11	3.7	.09	3.0	.07	3.6	.11	2.8	.07	1.9	.05	1.3	.03	1.7	.05	1.0	.03	.9	.02	.8	.02	1.1	.03	.7	.02	.6	.02	.6	.02	5
0	2.6	.05	4.3	.09	1.7	.03	1.4	.03	4.3	.11	3.8	.09	2.9	.07	2.2	.05	2.9	.09	2.1	.05	1.3	.03	1.1	.03	1.2	.03	1.0	.02	.8	.02	.8	.02	1.0	.03	.7	.02	.6	.02	.6	.02	0
-5	1.8	.03	3.3	.07	1.5	.03	1.3	.02	3.5	.08	2.9	.07	2.1	.05	1.5	.03	2.3	.07	1.5	.03	1.1	.03	1.0	.02	1.0	.02	.9	.02	.8	.02	.7	.02	.9	.02	.7	.02	.6	.02	.5	.02	-5
-10	1.6	.03	2.5	.05	1.4	.02	1.2	.02	2.7	.07	2.2	.05	1.4	.03	1.3	.02	1.7	.05	1.3	.02	1.1	.02	1.0	.02	.9	.02	.9	.02	.7	.02	.7	.02	.9	.02	.6	.02	.5	.02	.5	.02	-10
-15	1.5	.03	1.7	.03	1.3	.02	1.1	.02	2.1	.05	1.5	.03	1.2	.03	1.2	.02	1.3	.03	1.2	.02	1.0	.02	.9	.02	.9	.02	.8	.02	.7	.02	.6	.02	.8	.02	.6	.02	.5	.02	.5	.02	-15
-20	1.4	.02	1.5	.03	1.2	.02	1.1	.02	1.5	.03	1.3	.02	1.2	.02	1.1	.02	1.2	.02	1.1	.02	.9	.02	.9	.02	.8	.02	.8	.02	.6	.02	.6	.02	.8	.02	.5	.02	.4	.01	.4	.01	-20
-25	1.3	.02	1.4	.02	1.1	.02	1.0	.02	1.4	.02	1.3	.02	1.1	.02	1.0	.02	1.1	.02	1.0	.02	.9	.02	.8	.02	.8	.02	.7	.02	.6	.02	.5	.01	.7	.02	.5	.02	.4	.01	.4	.01	-25
-30	1.2	.02	1.3	.02	1.0	.02	.9	.02	1.3	.02	1.2	.02	1.0	.02	1.0	.02	1.0	.02	1.0	.02	.8	.02	.7	.02	.7	.02	.6	.02	.5	.01	.5	.01	.7	.02	.4	.01	.4	.01	.3	.01	-30
-35	1.1	.02	1.2	.02	.9	.02	.8	.02	1.2	.02	1.1	.02	.9	.02	.9	.02	.9	.02	.9	.02	.7	.02	.7	.02	.7	.02	.6	.01	.5	.01	.4	.01	.6	.02	.4	.01	.3	.01	.3	.01	-35
-40	1.0	.02	1.1	.02	.9	.02	.7	.02	1.1	.02	1.0	.02	.9	.02	.8	.02	.9	.02	.8	.02	.7	.02	.6	.01	.6	.02	.5	.01	.4	.01	.4	.01	.5	.01	.4	.01	.3	.01	.3	.01	-40
-45	.9	.02	1.0	.02	.8	.02	.7	.01	1.0	.02	.9	.02	.8	.02	.7	.02	.8	.02	.7	.02	.6	.01	.5	.01	.5	.01	.5	.01	.4	.01	.3	.01	.5	.01	.3	.01	.2	.01	.2	.01	-45
-50	.8	.02	.9	.02	.7	.01	.6	.01	.9	.02	.8	.02	.7	.02	.7	.01	.7	.02	.6	.01	.5	.01	.5	.01	.5	.01	.4	.01	.3	.01	.3	.01	.4	.01	.3	.01	.2	.01	.2	.01	-50
-55	.7	.01	.8	.02	.6	.01	.5	.01	.8	.02	.7	.01	.6	.01	.6	.01	.6	.01	.6	.01	.5	.01	.4	.01	.4	.01	.3	.01	.3	.01	.2	.01	.4	.01	.2	.01	.2	.01	.1	.00	-55
-60	.7	.01	.8	.01	.5	.01	.4	.01	.7	.01	.7	.01	.6	.01	.5	.01	.5	.01	.5	.01	.4	.01	.4	.01	.4	.01	.3	.01	.2	.01	.2	.01	.3	.01	.2	.01	.1	.00	.1	.00	-60
-65	.6	.01	.7	.01	.4	.01	.4	.01	.6	.01	.6	.01	.5	.01	.5	.01	.5	.01	.4	.01	.3	.01	.3	.01	.3	.01	.3	.01	.2	.01	.2	.00	.3	.01	.2	.01	.1	.00	.1	.00	-65
-70	.5	.01	.6	.01	.4	.01	.3	.01	.6	.01	.5	.01	.4	.01	.4	.01	.4	.01	.4	.01	.3	.01	.3	.01	.3	.01	.2	.01	.2	.00	.1	.00	.2	.01	.1	.00	.1	.00	.0	.00	-70
-75	.4	.01	.5	.01	.3	.01	.3	.01	.5	.01	.5	.01	.4	.01	.3	.01	.4	.01	.3	.01	.2	.01	.2	.01	.2	.01	.2	.00	.1	.00	.1	.00	.2	.01	.1	.00	.0	.00	.0	.00	-75
-80	.3	.01	.5	.01	.3	.01	.2	.00	.4	.01	.4	.01	.3	.01	.3	.01	.3	.01	.3	.01	.2	.01	.2	.00	.2	.01	.1	.00	.1	.00	.1	.00	.2	.00	.1	.00	.0	.00	.0	.00	-80
-85	.3	.01	.4	.01	.2	.00	.2	.00	.4	.01	.3	.01	.3	.01	.2	.01	.3	.01	.2	.01	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.1	.00	.0	.00	.0	.00	.0	.00	-85
-90	.2	.00	.3	.01	.2	.00	.1	.00	.3	.01	.3	.01	.2	.01	.2	.00	.2	.01	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	.1	.00	.0	.00	.0	.00	.0	.00	-90
-95	.2	.00	.3	.01	.1	.00	.1	.00	.3	.01	.2	.01	.2	.00	.1	.00	.2	.01	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	.0	.00	.1	.00	.0	.00	.0	.00	.0	.00	-95
-100	.1	.00	.2	.00	.1	.00	.1	.00	.2	.01	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	-100

RAPIER UNIT ATTACK TABLE

A–3.6

	AT 1		AT 2		AT 3		AT 4		AT 5		AT 6		AT 7		AT 8		AT 9		AT 10		AT 11		AT 12		AT 13		AT 14		AT 15		AT 16		AT 17		AT 18		AT 19		AT 20		
	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	
100	28.2	.52	26.7	.53	23.6	.52	20.7	.51	26.1	.52	23.5	.51	19.2	.51	19.0	.50	20.3	.50	20.1	.49	16.5	.48	14.7	.47	18.3	.49	18.0	.47	15.3	.47	14.8	.45	15.2	.46	12.4	.42	9.5	.35	7.0	.31	100
95	27.7	.52	26.3	.52	23.2	.51	20.3	.51	25.6	.51	23.1	.50	18.9	.50	18.6	.49	19.8	.49	19.6	.48	16.1	.47	14.3	.46	17.8	.48	17.5	.46	14.5	.44	13.9	.42	14.4	.44	11.6	.40	8.8	.33	6.5	.28	95
90	27.2	.52	25.9	.52	22.7	.50	19.9	.50	25.0	.50	22.6	.50	18.5	.49	18.3	.48	19.3	.48	19.1	.47	15.6	.46	13.7	.44	17.3	.47	16.6	.44	13.6	.42	13.0	.39	13.5	.41	10.8	.37	8.1	.30	6.0	.26	90
85	26.7	.51	25.5	.51	22.2	.50	19.3	.49	24.4	.49	22.0	.49	18.2	.49	17.9	.47	18.8	.47	18.5	.45	14.9	.44	12.8	.41	16.8	.46	15.5	.41	12.7	.39	12.1	.37	12.6	.38	10.0	.34	7.4	.28	5.5	.24	85
80	26.1	.51	25.0	.51	21.6	.49	18.8	.48	23.7	.49	21.5	.48	17.8	.48	17.4	.46	18.1	.46	17.5	.43	13.9	.41	12.0	.39	15.8	.43	14.5	.38	11.8	.36	11.2	.34	11.7	.36	9.2	.31	6.8	.25	4.9	.22	80
75	25.4	.50	24.5	.50	21.0	.48	17.7	.46	23.0	.48	20.8	.47	17.3	.47	16.9	.45	17.5	.45	16.4	.41	13.0	.38	11.1	.36	14.8	.40	13.4	.35	10.9	.33	10.3	.31	10.8	.33	8.4	.29	6.1	.23	4.4	.19	75
70	24.6	.49	23.8	.49	19.8	.45	16.6	.43	22.2	.47	20.1	.46	16.8	.46	15.9	.42	16.5	.43	15.2	.38	12.0	.36	10.3	.33	13.7	.38	12.4	.33	10.0	.31	9.4	.28	9.9	.30	7.6	.26	5.4	.20	3.9	.17	70
65	23.2	.46	23.2	.48	18.5	.42	15.4	.40	21.3	.46	19.4	.45	15.8	.43	14.8	.39	15.4	.40	14.1	.35	11.1	.33	9.4	.30	12.7	.35	11.3	.30	9.1	.28	8.5	.26	9.0	.27	6.8	.23	4.7	.18	3.4	.15	65
60	21.6	.44	22.4	.47	17.2	.40	14.3	.37	20.4	.44	18.1	.42	14.7	.40	13.8	.37	14.2	.37	12.9	.32	10.1	.30	8.6	.28	11.6	.32	10.3	.27	8.2	.25	7.6	.23	8.1	.25	6.0	.20	4.1	.15	2.9	.13	60
55	20.1	.41	21.1	.45	15.9	.37	13.1	.35	19.0	.42	16.8	.39	13.7	.38	12.7	.34	13.1	.35	11.8	.30	9.2	.27	7.7	.25	10.6	.29	9.2	.24	7.3	.22	6.7	.20	7.2	.22	5.2	.18	3.4	.13	2.3	.10	55
50	18.6	.38	19.8	.42	14.7	.34	12.0	.32	17.6	.39	15.6	.37	12.7	.35	11.7	.31	12.0	.32	10.7	.27	8.3	.25	6.9	.22	9.6	.27	8.3	.22	6.5	.20	5.9	.18	6.4	.19	4.5	.15	2.8	.11	1.8	.08	50
45	17.1	.35	18.4	.40	13.4	.32	10.9	.29	16.2	.36	14.3	.34	11.6	.32	10.7	.29	10.9	.29	9.6	.24	7.4	.22	6.1	.20	8.6	.24	7.3	.19	5.6	.17	5.1	.15	5.5	.17	3.8	.13	2.2	.08	1.4	.06	45
40	15.7	.33	17.0	.37	12.2	.29	9.8	.27	14.9	.34	13.1	.31	10.6	.29	9.7	.26	9.8	.27	8.6	.22	6.5	.20	5.3	.17	7.6	.22	6.3	.17	4.8	.15	4.3	.13	4.7	.15	3.1	.11	1.7	.06	1.0	.04	40
35	14.2	.30	15.6	.34	11.0	.26	8.8	.24	13.5	.31	11.9	.29	9.7	.27	8.8	.23	8.8	.24	7.6	.20	5.7	.17	4.6	.15	6.7	.19	5.4	.15	4.1	.13	3.5	.11	4.0	.12	2.5	.09	1.2	.05	.6	.03	35
30	12.9	.27	14.3	.31	9.8	.23	7.8	.21	12.3	.28	10.8	.26	8.7	.24	7.8	.21	7.8	.22	6.6	.17	4.9	.15	3.9	.13	5.8	.17	4.6	.12	3.4	.11	2.8	.09	3.3	.10	1.9	.07	.8	.03	.5	.02	30
25	11.5	.24	13.0	.29	8.7	.21	6.8	.19	11.1	.26	9.7	.23	7.8	.22	6.9	.19	6.9	.19	5.7	.15	4.2	.13	3.3	.11	5.0	.15	3.8	.10	2.7	.08	2.2	.07	2.7	.08	1.4	.05	.6	.02	.5	.02	25
20	10.2	.22	11.7	.26	7.6	.18	5.9	.16	9.9	.23	8.6	.21	6.9	.19	6.1	.16	6.0	.17	4.8	.13	3.5	.11	2.7	.09	4.2	.12	3.0	.08	2.1	.07	1.6	.05	2.1	.07	.9	.03	.6	.02	.5	.02	20
15	8.9	.19	10.5	.23	6.6	.16	4.9	.14	8.7	.21	7.6	.19	6.0	.17	5.2	.14	5.2	.15	4.0	.11	2.8	.09	2.1	.07	3.5	.10	2.4	.07	1.5	.05	1.0	.03	1.5	.05	.7	.03	.6	.02	.4	.02	15
10	7.7	.17	9.3	.21	5.5	.13	4.1	.11	7.7	.18	6.6	.16	5.2	.15	4.4	.12	4.4	.13	3.3	.09	2.2	.07	1.5	.05	2.8	.08	1.7	.05	1.0	.03	.8	.03	1.0	.03	.7	.02	.5	.02	.4	.02	10
5	6.6	.14	8.2	.18	4.6	.11	3.3	.09	6.7	.16	5.7	.14	4.4	.13	3.7	.10	3.7	.11	2.6	.07	1.6	.05	1.0	.03	2.2	.07	1.1	.03	.8	.03	.8	.02	.8	.02	.7	.02	.5	.02	.4	.02	5
0	5.4	.12	7.1	.16	3.7	.09	2.5	.07	5.7	.14	4.8	.12	3.6	.10	2.9	.08	3.0	.09	1.9	.05	1.1	.03	.8	.03	1.6	.05	.9	.02	.8	.02	.8	.02	.8	.02	.6	.02	.5	.02	.4	.02	0
-5	4.3	.09	6.0	.13	2.8	.07	1.8	.05	4.8	.12	4.0	.10	2.9	.08	2.2	.06	2.3	.07	1.3	.03	.8	.02	.7	.02	1.1	.03	.9	.02	.7	.02	.7	.02	.7	.02	.6	.02	.4	.02	.3	.01	-5
-10	3.3	.07	5.0	.11	2.0	.05	1.2	.03	4.0	.10	3.2	.08	2.2	.06	1.6	.04	1.7	.05	1.0	.02	.8	.02	.7	.02	.9	.02	.8	.02	.7	.02	.7	.02	.7	.02	.5	.02	.4	.02	.3	.01	-10
-15	2.4	.05	4.0	.09	1.3	.03	1.0	.03	3.2	.08	2.4	.06	1.6	.04	1.0	.03	1.2	.03	.9	.02	.8	.02	.6	.02	.9	.02	.8	.02	.6	.02	.6	.02	.6	.02	.5	.02	.4	.01	.3	.01	-15
-20	1.6	.03	3.1	.07	1.1	.03	1.0	.02	2.5	.06	1.8	.04	1.0	.03	.9	.02	1.0	.02	.9	.02	.7	.02	.6	.02	.8	.02	.7	.02	.6	.02	.6	.02	.6	.02	.5	.02	.3	.01	.3	.01	-20
-25	1.3	.03	2.2	.05	1.1	.02	.9	.02	1.8	.04	1.1	.03	.9	.02	.9	.02	.9	.02	.8	.02	.7	.02	.6	.02	.7	.02	.7	.02	.6	.02	.5	.02	.5	.02	.4	.01	.3	.01	.2	.01	-25
-30	1.3	.02	1.4	.03	1.0	.02	.8	.02	1.2	.03	1.0	.02	.9	.02	.8	.02	.8	.02	.8	.02	.6	.02	.5	.02	.7	.02	.6	.02	.5	.02	.5	.01	.5	.02	.4	.01	.3	.01	.2	.01	-30
-35	1.2	.02	1.2	.03	.9	.02	.8	.02	1.1	.02	1.0	.02	.8	.02	.8	.02	.8	.02	.7	.02	.6	.02	.5	.02	.6	.02	.6	.02	.5	.01	.4	.01	.5	.01	.3	.01	.2	.01	.2	.01	-35
-40	1.1	.02	1.1	.02	.9	.02	.7	.02	1.0	.02	.9	.02	.7	.02	.7	.02	.7	.02	.7	.02	.5	.02	.4	.01	.6	.02	.5	.01	.4	.01	.4	.01	.4	.01	.3	.01	.2	.01	.1	.01	-40
-45	1.0	.02	1.1	.02	.8	.02	.7	.02	1.0	.02	.9	.02	.7	.02	.6	.02	.7	.02	.6	.02	.5	.01	.4	.01	.5	.01	.5	.01	.4	.01	.3	.01	.4	.01	.3	.01	.2	.01	.1	.01	-45
-50	.9	.02	1.0	.02	.7	.02	.6	.02	.9	.02	.8	.02	.6	.02	.6	.02	.6	.02	.5	.01	.4	.01	.3	.01	.5	.01	.4	.01	.3	.01	.3	.01	.3	.01	.2	.01	.1	.01	.1	.00	-50
-55	.9	.02	.9	.02	.7	.02	.5	.01	.8	.02	.7	.02	.6	.02	.5	.01	.5	.01	.5	.01	.4	.01	.3	.01	.4	.01	.4	.01	.3	.01	.2	.01	.3	.01	.2	.01	.1	.00	.1	.00	-55
-60	.8	.02	.8	.02	.6	.01	.5	.01	.7	.02	.7	.02	.5	.01	.5	.01	.5	.01	.4	.01	.3	.01	.3	.01	.4	.01	.3	.01	.2	.01	.2	.01	.2	.01	.2	.01	.1	.00	.0	.00	-60
-65	.7	.01	.8	.02	.5	.01	.4	.01	.7	.02	.6	.01	.5	.01	.4	.01	.4	.01	.4	.01	.3	.01	.2	.01	.3	.01	.3	.01	.2	.01	.2	.01	.2	.01	.1	.00	.1	.00	.0	.00	-65
-70	.6	.01	.7	.02	.5	.01	.4	.01	.6	.01	.5	.01	.4	.01	.4	.01	.4	.01	.3	.01	.2	.01	.2	.01	.3	.01	.2	.01	.2	.01	.1	.00	.2	.01	.1	.00	.0	.00	.0	.00	-70
-75	.6	.01	.6	.01	.4	.01	.3	.01	.5	.01	.5	.01	.4	.01	.3	.01	.3	.01	.3	.01	.2	.01	.2	.01	.2	.01	.2	.01	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	-75
-80	.5	.01	.6	.01	.4	.01	.3	.01	.5	.01	.4	.01	.3	.01	.3	.01	.3	.01	.2	.01	.2	.01	.1	.00	.2	.01	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	.0	.00	-80
-85	.4	.01	.5	.01	.3	.01	.2	.01	.4	.01	.4	.01	.3	.01	.3	.01	.3	.01	.2	.01	.1	.00	.1	.00	.2	.01	.1	.00	.1	.00	.0	.00	.1	.00	.0	.00	.0	.00	.0	.00	-85
-90	.4	.01	.5	.01	.3	.01	.2	.01	.4	.01	.3	.01	.3	.01	.2	.01	.2	.01	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	-90
-95	.3	.01	.4	.01	.2	.01	.2	.00	.3	.01	.3	.01	.2	.01	.2	.00	.2	.01	.1	.00	.1	.00	.0	.00	.1	.00	.1	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	-95
-100	.3	.01	.3	.01	.2	.00	.1	.00	.3	.01	.2	.01	.2	.01	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.1	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	-100

BROADSWORD UNIT ATTACK TABLE

A–3.7

	AT 1		AT 2		AT 3		AT 4		AT 5		AT 6		AT 7		AT 8		AT 9		AT 10		AT 11		AT 12		AT 13		AT 14		AT 15		AT 16		AT 17		AT 18		AT 19		AT 20		
	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	
100	34.1	.52	32.9	.52	29.5	.51	26.8	.51	32.4	.51	30.0	.51	25.8	.51	25.6	.49	26.9	.51	26.8	.49	23.2	.49	21.5	.48	23.3	.49	23.1	.48	20.3	.47	19.8	.45	19.7	.48	17.1	.45	14.1	.40	12.0	.38	100
95	33.2	.51	32.2	.52	28.8	.50	26.0	.50	31.7	.51	29.3	.50	25.2	.50	25.1	.49	26.1	.50	26.0	.49	22.6	.48	20.9	.47	22.7	.48	22.4	.47	19.3	.44	18.6	.42	19.1	.47	16.1	.42	13.1	.37	11.1	.35	95
90	32.3	.51	31.4	.51	27.9	.49	25.1	.49	30.7	.50	28.5	.49	24.6	.49	24.4	.48	25.3	.49	25.2	.48	21.8	.47	20.3	.46	21.9	.47	21.2	.44	18.1	.41	17.4	.39	18.1	.44	15.0	.39	12.2	.34	10.3	.32	90
85	31.2	.50	30.6	.51	26.9	.48	23.7	.46	29.7	.49	27.6	.48	23.9	.48	23.7	.47	24.4	.48	24.3	.47	21.0	.46	19.1	.44	21.2	.46	19.8	.41	16.9	.39	16.2	.37	16.9	.41	14.0	.36	11.2	.32	9.4	.30	85
80	30.0	.49	29.7	.50	25.3	.46	22.1	.44	28.7	.48	26.7	.47	23.2	.47	23.0	.45	23.5	.47	23.4	.46	19.8	.44	17.9	.41	19.9	.44	18.5	.39	15.7	.36	15.0	.34	15.8	.39	12.9	.34	10.3	.29	8.6	.27	80
75	28.2	.47	28.6	.49	23.6	.43	20.6	.41	27.5	.47	25.7	.46	22.4	.46	21.7	.43	22.4	.46	21.9	.43	18.4	.41	16.6	.38	18.6	.41	17.1	.36	14.5	.33	13.8	.31	14.6	.36	11.9	.31	9.3	.26	7.7	.24	75
70	26.3	.44	27.5	.48	21.9	.41	19.0	.38	26.2	.46	24.6	.45	21.1	.44	20.2	.40	21.3	.45	20.4	.40	17.1	.38	15.4	.35	17.2	.38	15.8	.33	13.3	.30	12.6	.28	13.5	.33	10.8	.28	8.4	.23	6.9	.21	70
65	24.3	.41	25.8	.45	20.2	.38	17.5	.35	24.9	.45	23.0	.43	19.6	.41	18.8	.38	19.8	.43	18.8	.38	15.7	.36	14.1	.33	15.9	.35	14.4	.30	12.1	.28	11.4	.26	12.3	.30	9.8	.25	7.4	.21	6.0	.19	65
60	22.4	.38	23.9	.43	18.5	.35	15.9	.33	23.2	.43	21.3	.40	18.2	.38	17.3	.35	18.2	.40	17.3	.35	14.4	.33	12.9	.30	14.5	.33	13.1	.28	10.9	.25	10.2	.23	11.2	.28	8.7	.22	6.5	.18	5.2	.16	60
55	20.4	.36	22.1	.40	16.8	.32	14.4	.30	21.3	.40	19.6	.37	16.7	.35	15.9	.32	16.7	.37	15.7	.32	13.0	.30	11.6	.27	13.2	.30	11.7	.25	9.7	.22	9.0	.20	10.0	.25	7.7	.20	5.5	.15	4.3	.13	55
50	18.6	.33	20.4	.37	15.2	.30	13.0	.27	19.6	.37	18.0	.35	15.4	.33	14.5	.29	15.3	.35	14.3	.30	11.8	.27	10.5	.24	11.9	.27	10.5	.22	8.6	.20	7.8	.18	8.9	.22	6.7	.17	4.7	.13	3.6	.11	50
45	16.8	.30	18.6	.35	13.6	.27	11.5	.25	17.8	.35	16.4	.32	14.0	.30	13.1	.27	13.8	.32	12.8	.27	10.5	.25	9.3	.22	10.6	.25	9.2	.20	7.4	.17	6.7	.15	7.9	.20	5.7	.15	3.9	.11	2.8	.09	45
40	15.0	.28	16.9	.32	12.1	.24	10.1	.22	16.2	.32	14.8	.29	12.6	.27	11.8	.24	12.4	.29	11.4	.24	9.3	.22	8.2	.19	9.4	.22	8.0	.17	6.4	.15	5.6	.13	6.8	.17	4.8	.13	3.1	.09	2.2	.07	40
35	13.3	.25	15.2	.29	10.6	.21	8.8	.19	14.5	.29	13.3	.27	11.3	.25	10.5	.22	11.1	.27	10.1	.22	8.1	.20	7.1	.17	8.2	.19	6.9	.15	5.4	.13	4.7	.11	5.8	.15	4.0	.10	2.4	.07	1.6	.05	35
30	11.7	.22	13.6	.26	9.2	.19	7.5	.17	13.0	.27	11.9	.24	10.1	.22	9.3	.19	9.8	.24	8.8	.20	7.0	.17	6.1	.15	7.1	.17	5.8	.13	4.4	.10	3.7	.09	4.9	.13	3.2	.08	1.7	.05	1.0	.03	30
25	10.1	.19	12.1	.24	7.9	.16	6.3	.14	11.5	.24	10.5	.22	8.9	.20	8.1	.17	8.6	.22	7.7	.17	6.0	.15	5.1	.13	6.1	.15	4.8	.11	3.6	.08	2.9	.07	4.0	.10	2.5	.07	1.1	.03	.8	.03	25
20	8.7	.17	10.7	.21	6.6	.14	5.2	.12	10.1	.22	9.2	.19	7.7	.17	7.0	.15	7.5	.19	6.6	.15	5.0	.13	4.3	.11	5.1	.13	3.8	.09	2.8	.07	2.1	.05	3.2	.08	1.8	.05	.9	.03	.8	.02	20
15	7.3	.14	9.3	.19	5.4	.11	4.1	.09	8.8	.19	8.0	.17	6.7	.15	5.9	.13	6.4	.17	5.5	.13	4.2	.11	3.4	.08	4.2	.11	3.0	.07	2.0	.05	1.3	.03	2.5	.07	1.1	.03	.9	.02	.7	.02	15
10	6.0	.12	8.0	.16	4.3	.09	3.2	.07	7.6	.17	6.9	.15	5.6	.13	4.9	.11	5.5	.15	4.5	.11	3.3	.09	2.6	.07	3.4	.08	2.2	.05	1.3	.03	1.1	.03	1.8	.05	1.0	.03	.8	.02	.7	.02	10
5	4.8	.09	6.7	.14	3.3	.07	2.3	.05	6.5	.15	5.8	.13	4.7	.11	3.9	.08	4.6	.13	3.7	.09	2.6	.07	1.9	.05	2.6	.07	1.4	.03	1.1	.03	1.1	.02	1.2	.03	.9	.02	.8	.02	.6	.02	5
0	3.7	.07	5.5	.11	2.4	.05	1.6	.03	5.4	.12	4.8	.11	3.8	.09	3.0	.07	3.8	.11	2.8	.07	1.9	.05	1.3	.03	2.0	.05	1.2	.03	1.0	.02	1.0	.02	1.0	.03	.9	.02	.7	.02	.6	.02	0
-5	2.7	.05	4.4	.09	1.7	.03	1.4	.03	4.5	.10	3.9	.09	2.9	.07	2.2	.05	3.0	.09	2.1	.05	1.3	.03	1.1	.02	1.3	.03	1.1	.02	1.0	.02	.9	.02	1.0	.02	.8	.02	.7	.02	.6	.02	-5
-10	1.9	.03	3.4	.07	1.5	.03	1.3	.02	3.6	.08	3.0	.07	2.1	.05	1.5	.03	2.4	.07	1.5	.03	1.1	.02	1.0	.02	1.1	.02	1.1	.02	.9	.02	.9	.02	.9	.02	.8	.02	.6	.02	.5	.02	-10
-15	1.6	.03	2.5	.05	1.4	.02	1.2	.02	2.9	.07	2.2	.05	1.4	.03	1.2	.02	1.8	.05	1.3	.02	1.1	.02	1.0	.02	1.1	.02	1.0	.02	.9	.02	.8	.02	.9	.02	.7	.02	.6	.02	.5	.02	-15
-20	1.5	.03	1.7	.03	1.3	.02	1.1	.02	2.2	.05	1.5	.03	1.2	.02	1.2	.02	1.3	.03	1.2	.02	1.0	.02	.9	.02	1.0	.02	.9	.02	.8	.02	.8	.02	.8	.02	.7	.02	.5	.01	.4	.01	-20
-25	1.4	.02	1.5	.03	1.2	.02	1.0	.02	1.6	.03	1.3	.02	1.1	.02	1.1	.02	1.2	.02	1.1	.02	.9	.02	.8	.02	.9	.02	.9	.02	.7	.02	.7	.02	.7	.02	.6	.02	.5	.01	.4	.01	-25
-30	1.3	.02	1.4	.02	1.1	.02	1.0	.02	1.4	.02	1.3	.02	1.1	.02	1.0	.02	1.1	.02	1.0	.02	.9	.02	.8	.02	.9	.02	.8	.02	.7	.02	.6	.01	.7	.02	.6	.01	.4	.01	.4	.01	-30
-35	1.2	.02	1.3	.02	1.0	.02	.9	.02	1.3	.02	1.2	.02	1.0	.02	1.0	.02	1.0	.02	1.0	.02	.8	.02	.7	.02	.8	.02	.7	.02	.6	.01	.6	.01	.6	.02	.5	.01	.4	.01	.3	.01	-35
-40	1.1	.02	1.2	.02	.9	.02	.8	.02	1.2	.02	1.1	.02	.9	.02	.9	.02	.9	.02	.9	.02	.7	.02	.7	.02	.7	.02	.7	.01	.6	.01	.5	.01	.6	.01	.4	.01	.3	.01	.3	.01	-40
-45	1.0	.02	1.1	.02	.9	.02	.7	.02	1.1	.02	1.0	.02	.9	.02	.8	.02	.8	.02	.8	.02	.7	.02	.6	.01	.7	.02	.6	.01	.5	.01	.5	.01	.5	.01	.4	.01	.3	.01	.2	.01	-45
-50	.9	.02	1.0	.02	.8	.01	.6	.01	1.0	.02	.9	.02	.8	.02	.7	.01	.8	.02	.7	.01	.6	.01	.5	.01	.6	.01	.5	.01	.4	.01	.4	.01	.4	.01	.3	.01	.2	.01	.2	.01	-50
-55	.8	.02	.9	.02	.7	.01	.6	.01	.9	.02	.8	.02	.7	.01	.7	.01	.7	.02	.6	.01	.5	.01	.5	.01	.5	.01	.5	.01	.4	.01	.3	.01	.4	.01	.3	.01	.2	.01	.1	.00	-55
-60	.7	.01	.8	.02	.6	.01	.5	.01	.8	.02	.7	.01	.6	.01	.6	.01	.6	.01	.6	.01	.5	.01	.4	.01	.5	.01	.4	.01	.3	.01	.3	.01	.3	.01	.2	.01	.2	.00	.1	.00	-60
-65	.7	.01	.8	.01	.5	.01	.4	.01	.7	.01	.7	.01	.6	.01	.5	.01	.5	.01	.5	.01	.4	.01	.4	.01	.4	.01	.3	.01	.3	.01	.2	.01	.3	.01	.2	.01	.1	.00	.1	.00	-65
-70	.6	.01	.7	.01	.5	.01	.4	.01	.6	.01	.6	.01	.5	.01	.5	.01	.5	.01	.4	.01	.3	.01	.3	.01	.4	.01	.3	.01	.2	.01	.2	.00	.2	.01	.2	.00	.1	.00	.0	.00	-70
-75	.5	.01	.6	.01	.4	.01	.3	.01	.6	.01	.5	.01	.4	.01	.4	.01	.4	.01	.4	.01	.3	.01	.3	.01	.3	.01	.2	.01	.2	.00	.1	.00	.2	.01	.1	.00	.1	.00	.0	.00	-75
-80	.4	.01	.5	.01	.3	.01	.3	.01	.5	.01	.5	.01	.4	.01	.3	.01	.4	.01	.3	.01	.2	.01	.2	.01	.3	.01	.2	.00	.1	.00	.1	.00	.2	.00	.1	.00	.0	.00	.0	.00	-80
-85	.4	.01	.5	.01	.3	.01	.2	.00	.4	.01	.4	.01	.3	.01	.3	.01	.3	.01	.3	.01	.2	.01	.2	.00	.2	.01	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	-85
-90	.3	.01	.4	.01	.2	.00	.2	.00	.4	.01	.3	.01	.3	.01	.2	.01	.3	.01	.2	.01	.2	.00	.1	.00	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	.0	.00	-90
-95	.2	.00	.3	.01	.2	.00	.1	.00	.3	.01	.3	.01	.2	.01	.2	.00	.2	.01	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.1	.00	.0	.00	.0	.00	.0	.00	-95
-100	.2	.00	.3	.01	.1	.00	.1	.00	.3	.01	.2	.01	.2	.00	.1	.00	.2	.01	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	-100

SHORT SWORD UNIT ATTACK TABLE

A–3.8

	AT 1		AT 2		AT 3		AT 4		AT 5		AT 6		AT 7		AT 8		AT 9		AT 10		AT 11		AT 12		AT 13		AT 14		AT 15		AT 16		AT 17		AT 18		AT 19		AT 20		
	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	
100	31.2	.52	29.9	.52	26.6	.51	23.7	.50	29.2	.51	26.7	.50	22.4	.50	22.2	.49	22.7	.50	22.6	.49	19.0	.49	17.1	.47	18.7	.47	18.0	.45	14.8	.42	14.2	.40	16.3	.45	13.4	.40	10.3	.33	7.9	.29	100
95	30.5	.51	29.3	.52	26.0	.50	23.1	.49	28.5	.50	26.1	.50	22.0	.49	21.8	.48	22.1	.49	22.0	.48	18.5	.48	16.7	.46	18.2	.46	16.9	.42	13.9	.40	13.2	.38	15.3	.42	12.5	.37	9.6	.31	7.2	.26	95
90	29.8	.51	28.7	.51	25.3	.49	22.4	.48	27.8	.49	25.5	.49	21.5	.48	21.3	.47	21.5	.48	21.3	.47	17.9	.46	15.8	.44	17.2	.44	15.8	.39	12.9	.37	12.3	.35	14.3	.39	11.6	.35	8.8	.28	6.6	.24	90
85	29.0	.50	28.1	.50	24.5	.48	21.7	.47	27.0	.48	24.8	.48	21.0	.48	20.7	.46	20.8	.47	20.6	.46	16.9	.44	14.8	.41	16.1	.41	14.7	.37	12.0	.34	11.3	.32	13.3	.36	10.7	.32	8.0	.26	6.0	.22	85
80	28.1	.49	27.3	.50	23.7	.47	20.4	.45	26.1	.47	24.0	.47	20.4	.47	20.1	.45	20.0	.46	19.4	.43	15.8	.41	13.8	.38	15.0	.38	13.6	.34	11.0	.31	10.4	.29	12.3	.34	9.8	.29	7.2	.23	5.4	.20	80
75	27.0	.48	26.6	.49	22.3	.45	19.1	.42	25.1	.46	23.2	.46	19.7	.45	19.0	.43	19.2	.45	18.1	.41	14.7	.39	12.8	.35	13.9	.36	12.5	.31	10.1	.29	9.4	.27	11.3	.31	8.9	.26	6.5	.21	4.8	.17	75
70	25.4	.45	25.7	.48	20.8	.42	17.7	.39	24.1	.45	22.3	.45	18.6	.43	17.8	.40	18.0	.43	16.8	.38	13.6	.36	11.8	.33	12.8	.33	11.4	.28	9.1	.26	8.5	.24	10.3	.28	8.0	.24	5.7	.18	4.1	.15	70
65	23.7	.43	24.8	.47	19.3	.39	16.4	.37	23.1	.44	20.9	.42	17.3	.40	16.5	.37	16.7	.40	15.5	.35	12.5	.33	10.8	.30	11.7	.30	10.3	.25	8.2	.23	7.5	.21	9.3	.25	7.1	.21	4.9	.16	3.5	.13	65
60	21.9	.40	23.3	.44	17.8	.37	15.0	.34	21.5	.42	19.4	.40	16.1	.38	15.3	.35	15.4	.37	14.2	.32	11.4	.30	9.8	.27	10.6	.27	9.2	.23	7.2	.20	6.6	.18	8.3	.23	6.2	.18	4.1	.13	2.9	.11	60
55	20.2	.37	21.6	.42	16.3	.34	13.7	.31	19.9	.39	17.9	.37	14.8	.35	14.0	.32	14.1	.35	12.9	.30	10.3	.28	8.8	.24	9.5	.25	8.1	.20	6.3	.18	5.6	.16	7.3	.20	5.3	.15	3.4	.11	2.3	.08	55
50	18.6	.35	20.1	.39	14.9	.31	12.4	.29	18.3	.36	16.6	.34	13.7	.32	12.8	.29	12.8	.32	11.7	.27	9.3	.25	7.9	.22	8.4	.22	7.1	.18	5.4	.15	4.7	.13	6.4	.17	4.4	.13	2.7	.09	1.7	.06	50
45	16.9	.32	18.5	.36	13.5	.28	11.1	.26	16.8	.34	15.1	.32	12.5	.29	11.6	.26	11.6	.29	10.4	.24	8.2	.22	6.9	.19	7.4	.20	6.1	.15	4.5	.13	3.9	.11	5.4	.15	3.6	.11	2.0	.07	1.2	.04	45
40	15.3	.29	16.9	.33	12.1	.26	9.9	.23	15.2	.31	13.7	.29	11.3	.27	10.5	.24	10.4	.27	9.3	.22	7.2	.20	6.0	.17	6.4	.17	5.1	.13	3.7	.11	3.1	.09	4.6	.13	2.9	.09	1.5	.05	.7	.03	40
35	13.7	.26	15.4	.31	10.8	.23	8.7	.21	13.8	.28	12.4	.26	10.2	.24	9.3	.21	9.3	.24	8.1	.19	6.3	.17	5.2	.15	5.5	.15	4.2	.11	3.0	.09	2.4	.07	3.8	.10	2.2	.07	.9	.03	.6	.02	35
30	12.2	.24	14.0	.28	9.5	.20	7.6	.18	12.4	.26	11.1	.24	9.1	.22	8.3	.19	8.2	.22	7.1	.17	5.4	.15	4.4	.13	4.6	.13	3.4	.09	2.3	.07	1.7	.05	3.0	.08	1.6	.05	.8	.02	.6	.02	30
25	10.7	.21	12.5	.25	8.3	.18	6.5	.15	11.0	.23	9.8	.21	8.0	.19	7.2	.17	7.2	.19	6.1	.15	4.5	.13	3.6	.10	3.8	.11	2.6	.07	1.7	.05	1.1	.03	2.3	.07	1.0	.03	.7	.02	.6	.02	25
20	9.4	.18	11.2	.23	7.1	.15	5.4	.13	9.7	.21	8.7	.19	7.0	.17	6.2	.15	6.2	.17	5.1	.13	3.8	.11	2.9	.08	3.1	.08	1.9	.05	1.1	.03	.9	.03	1.7	.05	.9	.03	.7	.02	.5	.02	20
15	8.0	.16	9.9	.20	6.0	.13	4.5	.11	8.5	.19	7.6	.17	6.1	.15	5.3	.12	5.3	.15	4.2	.11	3.0	.09	2.3	.07	2.4	.07	1.2	.03	.9	.03	.9	.02	1.1	.03	.8	.02	.6	.02	.5	.02	15
10	6.7	.13	8.6	.18	4.9	.11	3.6	.09	7.4	.16	6.5	.14	5.1	.13	4.4	.10	4.5	.13	3.4	.08	2.3	.07	1.6	.05	1.7	.05	1.0	.03	.8	.02	.8	.02	.9	.03	.8	.02	.6	.02	.5	.02	10
5	5.6	.11	7.4	.15	4.0	.09	2.8	.07	6.4	.14	5.5	.12	4.3	.11	3.6	.08	3.7	.10	2.6	.07	1.7	.05	1.1	.03	1.1	.03	1.0	.02	.8	.02	.8	.02	.9	.02	.7	.02	.6	.02	.4	.02	5
0	4.5	.09	6.3	.13	3.1	.07	2.0	.05	5.4	.12	4.6	.10	3.4	.09	2.8	.07	3.0	.08	1.9	.05	1.1	.03	.9	.02	1.0	.02	.9	.02	.8	.02	.7	.02	.8	.02	.7	.02	.5	.02	.4	.01	0
-5	3.5	.07	5.2	.11	2.2	.05	1.4	.03	4.4	.10	3.7	.08	2.6	.07	2.0	.05	2.3	.07	1.3	.03	1.0	.03	.8	.02	.9	.02	.9	.02	.7	.02	.7	.02	.8	.02	.6	.02	.5	.02	.4	.01	-5
-10	2.5	.05	4.2	.09	1.5	.03	1.2	.03	3.6	.08	2.9	.06	1.9	.05	1.3	.03	1.7	.05	1.1	.02	.9	.02	.8	.02	.9	.02	.8	.02	.7	.02	.6	.02	.7	.02	.6	.02	.4	.01	.3	.01	-10
-15	1.7	.03	3.2	.07	1.3	.03	1.1	.02	2.8	.06	2.1	.05	1.2	.03	1.1	.02	1.2	.03	1.0	.02	.9	.02	.7	.02	.8	.02	.7	.02	.6	.02	.6	.02	.7	.02	.5	.02	.4	.01	.3	.01	-15
-20	1.5	.03	2.4	.05	1.2	.02	1.0	.02	2.1	.05	1.4	.03	1.1	.02	1.0	.02	1.0	.02	1.0	.02	.8	.02	.7	.02	.8	.02	.7	.02	.6	.02	.5	.01	.6	.02	.5	.01	.4	.01	.3	.01	-20
-25	1.4	.02	1.6	.03	1.1	.02	1.0	.02	1.5	.03	1.2	.02	1.0	.02	1.0	.02	1.0	.02	.9	.02	.7	.02	.6	.02	.7	.02	.6	.02	.5	.01	.5	.01	.6	.02	.5	.01	.3	.01	.2	.01	-25
-30	1.3	.02	1.3	.03	1.1	.02	.9	.02	1.3	.02	1.1	.02	.9	.02	.9	.02	.9	.02	.9	.02	.7	.02	.6	.02	.6	.02	.6	.01	.5	.01	.4	.01	.5	.01	.4	.01	.3	.01	.2	.01	-30
-35	1.2	.02	1.3	.02	1.0	.02	.8	.02	1.2	.02	1.1	.02	.9	.02	.8	.02	.8	.02	.8	.02	.6	.02	.5	.02	.6	.02	.5	.01	.4	.01	.4	.01	.5	.01	.4	.01	.3	.01	.2	.01	-35
-40	1.1	.02	1.2	.02	.9	.02	.8	.02	1.1	.02	1.0	.02	.8	.02	.8	.02	.8	.02	.7	.02	.6	.02	.5	.01	.5	.01	.5	.01	.4	.01	.3	.01	.4	.01	.3	.01	.2	.01	.2	.01	-40
-45	1.0	.02	1.1	.02	.8	.02	.7	.02	1.0	.02	.9	.02	.8	.02	.7	.02	.7	.02	.7	.02	.5	.01	.4	.01	.5	.01	.4	.01	.3	.01	.3	.01	.4	.01	.3	.01	.2	.01	.1	.00	-45
-50	.9	.02	1.0	.02	.7	.02	.6	.01	.9	.02	.8	.02	.7	.02	.6	.01	.6	.02	.6	.01	.5	.01	.4	.01	.4	.01	.3	.01	.3	.01	.2	.01	.3	.01	.2	.01	.1	.00	.1	.00	-50
-55	.8	.02	.9	.02	.7	.01	.6	.01	.8	.02	.8	.02	.6	.01	.6	.01	.6	.01	.5	.01	.4	.01	.3	.01	.4	.01	.3	.01	.2	.01	.2	.01	.3	.01	.2	.01	.1	.00	.1	.00	-55
-60	.8	.01	.8	.02	.6	.01	.5	.01	.8	.02	.7	.01	.6	.01	.5	.01	.5	.01	.5	.01	.4	.01	.3	.01	.3	.01	.3	.01	.2	.01	.2	.00	.2	.01	.1	.00	.1	.00	.0	.00	-60
-65	.7	.01	.8	.02	.5	.01	.4	.01	.7	.01	.6	.01	.5	.01	.5	.01	.5	.01	.4	.01	.3	.01	.3	.01	.3	.01	.2	.01	.1	.00	.1	.00	.2	.01	.1	.00	.0	.00	.0	.00	-65
-70	.6	.01	.7	.01	.5	.01	.4	.01	.6	.01	.5	.01	.4	.01	.4	.01	.4	.01	.3	.01	.3	.01	.2	.01	.2	.01	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	-70
-75	.5	.01	.6	.01	.4	.01	.3	.01	.5	.01	.5	.01	.4	.01	.4	.01	.4	.01	.3	.01	.2	.01	.2	.01	.2	.01	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	.0	.00	-75
-80	.5	.01	.6	.01	.3	.01	.3	.01	.5	.01	.4	.01	.3	.01	.3	.01	.3	.01	.3	.01	.2	.01	.1	.00	.2	.00	.1	.00	.0	.00	.0	.00	.1	.00	.0	.00	.0	.00	.0	.00	-80
-85	.4	.01	.5	.01	.3	.01	.2	.01	.4	.01	.4	.01	.3	.01	.3	.01	.3	.01	.2	.01	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	.1	.00	.0	.00	.0	.00	.0	.00	-85
-90	.3	.01	.4	.01	.2	.01	.2	.00	.4	.01	.3	.01	.3	.01	.2	.01	.2	.01	.2	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	-90
-95	.3	.01	.4	.01	.2	.00	.1	.00	.3	.01	.3	.01	.2	.01	.2	.00	.2	.01	.1	.00	.1	.00	.0	.00	.1	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	-95
-100	.2	.00	.3	.01	.1	.00	.1	.00	.3	.01	.2	.01	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	-100

Range: 10' (-30)

ARMORED FIST UNIT ATTACK TABLE

A–4.1

	AT 1		AT 2		AT 3		AT 4		AT 5		AT 6		AT 7		AT 8		AT 9		AT 10		AT 11		AT 12		AT 13		AT 14		AT 15		AT 16		AT 17		AT 18		AT 19		AT 20		
	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	
100	14.1	.38	13.1	.40	11.2	.36	8.5	.34	13.7	.40	11.7	.38	8.9	.36	8.5	.34	10.0	.38	9.2	.34	6.6	.32	6.2	.30	8.7	.32	7.8	.26	4.8	.24	4.5	.22	7.8	.28	6.1	.22	3.5	.18	3.5	.18	100
95	13.3	.36	12.8	.40	10.5	.34	7.9	.32	13.0	.38	11.0	.36	8.4	.34	7.9	.32	9.4	.36	8.6	.32	6.1	.30	5.7	.28	8.1	.30	7.2	.24	4.4	.22	4.1	.20	7.2	.26	5.6	.20	3.1	.16	3.1	.16	95
90	12.4	.34	12.1	.38	9.8	.32	7.3	.30	12.2	.35	10.3	.33	7.8	.32	7.4	.30	8.8	.34	7.9	.30	5.6	.28	5.3	.26	7.5	.28	6.6	.22	4.0	.20	3.7	.18	6.5	.24	5.0	.18	2.8	.14	2.8	.14	90
85	11.5	.32	11.3	.36	9.1	.30	6.8	.28	11.3	.33	9.5	.31	7.2	.29	6.8	.27	8.2	.31	7.3	.27	5.2	.25	4.8	.23	6.9	.25	6.0	.20	3.6	.18	3.3	.16	5.9	.22	4.5	.16	2.4	.13	2.4	.13	85
80	10.6	.29	10.5	.33	8.3	.27	6.2	.25	10.5	.31	8.8	.29	6.7	.27	6.2	.25	7.6	.29	6.7	.25	4.7	.23	4.3	.21	6.3	.23	5.3	.18	3.2	.16	2.8	.14	5.3	.19	3.9	.14	2.1	.11	2.1	.11	80
75	9.8	.27	9.8	.31	7.6	.25	5.6	.23	9.7	.29	8.1	.27	6.1	.25	5.6	.23	6.9	.27	6.1	.23	4.2	.21	3.9	.19	5.6	.21	4.7	.16	2.8	.14	2.4	.12	4.7	.17	3.4	.12	1.8	.09	1.8	.09	75
70	8.9	.25	9.0	.29	6.9	.23	5.1	.21	8.9	.26	7.4	.24	5.5	.23	5.1	.21	6.3	.24	5.5	.21	3.8	.19	3.4	.17	5.0	.19	4.1	.14	2.4	.12	2.0	.10	4.1	.15	2.8	.10	1.4	.07	1.4	.07	70
65	8.0	.23	8.2	.27	6.2	.21	4.5	.19	8.1	.24	6.7	.22	4.9	.20	4.5	.18	5.7	.22	4.8	.18	3.3	.16	2.9	.14	4.4	.16	3.5	.12	2.0	.10	1.6	.08	3.4	.13	2.3	.08	1.1	.06	1.1	.06	65
60	7.2	.20	7.5	.24	5.5	.18	3.9	.16	7.2	.22	5.9	.20	4.4	.18	3.9	.16	5.1	.20	4.2	.16	2.8	.14	2.4	.12	3.8	.14	2.9	.10	1.6	.08	1.2	.06	2.8	.10	1.7	.06	.7	.04	.7	.04	60
55	6.3	.18	6.7	.22	4.7	.16	3.4	.14	6.4	.20	5.2	.18	3.8	.16	3.4	.14	4.5	.18	3.6	.14	2.3	.12	2.0	.10	3.2	.12	2.3	.08	1.2	.06	.8	.04	2.2	.08	1.1	.04	.4	.02	.4	.02	55
50	5.5	.16	6.0	.20	4.1	.14	2.8	.12	5.7	.18	4.6	.16	3.3	.14	2.9	.12	3.9	.16	3.1	.12	1.9	.10	1.6	.08	2.6	.10	1.8	.06	.8	.04	.5	.02	1.7	.06	.7	.02	.3	.02	.3	.02	50
45	4.7	.14	5.2	.18	3.4	.12	2.3	.10	4.9	.16	3.9	.14	2.8	.12	2.4	.10	3.4	.14	2.5	.10	1.5	.08	1.2	.06	2.1	.08	1.2	.04	.5	.02	.4	.02	1.2	.04	.6	.02	.3	.02	.3	.02	45
40	3.9	.12	4.6	.16	2.8	.10	1.9	.08	4.2	.14	3.3	.12	2.3	.10	1.9	.08	2.8	.12	2.0	.08	1.2	.06	.9	.04	1.6	.06	.7	.02	.4	.02	.4	.02	.7	.03	.5	.02	.3	.02	.3	.02	40
35	3.2	.10	3.9	.14	2.3	.08	1.4	.06	3.5	.11	2.7	.10	1.8	.08	1.5	.06	2.3	.10	1.6	.06	.9	.04	.5	.03	1.1	.04	.6	.02	.4	.02	.4	.02	.6	.02	.5	.02	.3	.02	.3	.02	35
30	2.6	.08	3.3	.12	1.7	.06	1.0	.04	3.0	.10	2.2	.08	1.4	.06	1.1	.04	1.9	.08	1.1	.04	.5	.03	.5	.02	.7	.03	.6	.02	.4	.02	.3	.02	.6	.02	.5	.02	.3	.01	.3	.01	30
25	2.0	.06	2.7	.10	1.3	.04	.6	.03	2.4	.08	1.7	.06	1.0	.04	.6	.03	1.5	.06	.7	.03	.5	.02	.4	.02	.6	.02	.5	.02	.3	.02	.3	.02	.6	.02	.5	.02	.3	.01	.3	.01	25
20	1.5	.04	2.2	.08	.8	.03	.5	.02	1.9	.06	1.2	.04	.6	.03	.5	.02	1.1	.04	.6	.02	.4	.02	.4	.02	.6	.02	.5	.02	.3	.02	.3	.02	.5	.02	.4	.02	.2	.01	.2	.01	20
15	0.9	.03	1.7	.06	.7	.02	.5	.02	1.3	.04	.8	.03	.5	.02	.5	.02	.7	.03	.6	.02	.4	.02	.4	.02	.5	.02	.5	.02	.3	.02	.3	.01	.5	.02	.4	.01	.2	.01	.2	.01	15
10	0.8	.02	1.3	.04	.6	.02	.5	.02	.9	.03	.7	.02	.5	.02	.5	.02	.6	.02	.5	.02	.4	.02	.4	.02	.5	.02	.5	.02	.3	.01	.3	.01	.5	.02	.4	.01	.2	.01	.2	.01	10
5	0.8	.02	.8	.03	.6	.02	.5	.02	.7	.02	.6	.02	.5	.02	.5	.02	.5	.02	.5	.02	.4	.02	.3	.02	.5	.02	.4	.01	.3	.01	.2	.01	.4	.02	.3	.01	.2	.01	.2	.01	5
0	0.7	.02	.7	.02	.6	.02	.4	.02	.7	.02	.6	.02	.5	.02	.4	.02	.5	.02	.5	.02	.3	.02	.3	.02	.4	.02	.4	.01	.2	.01	.2	.01	.4	.01	.3	.01	.2	.01	.2	.01	0
-5	0.7	.02	.7	.02	.5	.02	.4	.02	.7	.02	.6	.02	.4	.02	.4	.02	.5	.02	.4	.02	.3	.02	.3	.01	.4	.02	.4	.01	.2	.01	.2	.01	.4	.01	.3	.01	.2	.01	.2	.01	-5
-10	0.6	.02	.6	.02	.5	.02	.4	.02	.6	.02	.5	.02	.4	.02	.4	.02	.4	.02	.4	.02	.3	.01	.3	.01	.4	.01	.3	.01	.2	.01	.2	.01	.3	.01	.3	.01	.1	.01	.1	.01	-10
-15	0.6	.02	.6	.02	.5	.01	.3	.01	.6	.02	.5	.02	.4	.01	.3	.01	.4	.02	.4	.01	.3	.01	.2	.01	.3	.01	.3	.01	.2	.01	.2	.01	.3	.01	.2	.01	.1	.01	.1	.01	-15
-20	0.5	.01	.5	.02	.4	.01	.3	.01	.5	.02	.4	.01	.3	.01	.3	.01	.4	.01	.3	.01	.2	.01	.2	.01	.3	.01	.3	.01	.2	.01	.1	.01	.3	.01	.2	.01	.1	.01	.1	.01	-20
-25	0.5	.01	.5	.02	.4	.01	.3	.01	.5	.01	.4	.01	.3	.01	.3	.01	.4	.01	.3	.01	.2	.01	.2	.01	.3	.01	.2	.01	.1	.01	.1	.01	.2	.01	.2	.01	.1	.00	.1	.00	-25
-30	0.5	.01	.5	.01	.4	.01	.3	.01	.5	.01	.4	.01	.3	.01	.3	.01	.3	.01	.3	.01	.2	.01	.2	.01	.3	.01	.2	.01	.1	.01	.1	.01	.2	.01	.1	.01	.1	.00	.1	.00	-30
-35	0.4	.01	.4	.01	.3	.01	.2	.01	.4	.01	.3	.01	.3	.01	.2	.01	.3	.01	.2	.01	.2	.01	.2	.01	.2	.01	.2	.01	.1	.01	.1	.00	.2	.01	.1	.00	.1	.00	.1	.00	-35
-40	0.4	.01	.4	.01	.3	.01	.2	.01	.4	.01	.3	.01	.2	.01	.2	.01	.3	.01	.2	.01	.1	.01	.1	.01	.2	.01	.2	.01	.1	.00	.1	.00	.1	.01	.1	.00	.0	.00	.0	.00	-40
-45	0.3	.01	.3	.01	.2	.01	.2	.01	.3	.01	.3	.01	.2	.01	.2	.01	.2	.01	.2	.01	.1	.01	.1	.01	.2	.01	.1	.00	.1	.00	.0	.00	.1	.00	.1	.00	.0	.00	.0	.00	-45
-50	0.3	.01	.3	.01	.2	.01	.1	.01	.3	.01	.2	.01	.2	.01	.1	.01	.2	.01	.2	.01	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	.1	.00	.0	.00	.0	.00	.0	.00	-50
-55	0.2	.01	.3	.01	.2	.01	.1	.00	.2	.01	.2	.01	.1	.01	.1	.00	.2	.01	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	.1	.00	.0	.00	.0	.00	.0	.00	-55
-60	0.2	.01	.2	.01	.1	.00	.1	.00	.2	.01	.2	.01	.1	.00	.1	.00	.1	.01	.1	.00	.1	.00	.0	.00	.1	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	-60
-65	0.2	.00	.2	.01	.1	.00	.1	.00	.2	.01	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	.1	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	-65
-70	0.1	.00	.2	.01	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	-70
-75	0.1	.00	.1	.00	.1	.00	.0	.00	.1	.00	.1	.00	.0	.00	.0	.00	.1	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	-75
-80	0.1	.00	.1	.00	.0	.00	.0	.00	.1	.00	.1	.00	.0	.00	.0	.00	.1	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	-80
-85	0.0	.00	.1	.00	.0	.00	.0	.00	.1	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	-85
-90	0.0	.00	.1	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	-90
-95	0.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	-95
-100	0.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	-100

CLUB UNIT ATTACK TABLE

	AT 1		AT 2		AT 3		AT 4		AT 5		AT 6		AT 7		AT 8		AT 9		AT 10		AT 11		AT 12		AT 13		AT 14		AT 15		AT 16		AT 17		AT 18		AT 19		AT 20		
	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	
100	27.0	.50	25.9	.51	22.4	.49	19.0	.46	26.1	.50	23.6	.49	19.4	.49	19.1	.48	24.0	.49	23.8	.48	20.3	.48	18.6	.47	22.8	.48	22.0	.45	18.8	.42	18.0	.40	19.4	.47	16.3	.42	13.4	.38	11.0	.33	100
95	26.2	.49	25.3	.50	21.2	.46	17.8	.44	25.4	.49	23.0	.48	19.0	.48	18.7	.47	23.2	.49	23.1	.47	19.7	.47	17.6	.44	22.1	.46	20.7	.42	17.6	.40	16.8	.38	18.4	.44	15.3	.39	12.4	.35	10.2	.31	95
90	24.8	.46	24.7	.49	19.9	.43	16.7	.41	24.6	.48	22.3	.47	18.5	.47	17.7	.44	22.5	.48	22.3	.46	18.6	.44	16.5	.42	20.9	.44	19.3	.39	16.4	.37	15.6	.35	17.2	.41	14.2	.37	11.5	.32	9.4	.28	90
85	23.3	.44	24.0	.48	18.6	.41	15.5	.38	23.8	.47	21.6	.46	17.5	.44	16.6	.41	21.6	.47	21.0	.44	17.4	.42	15.4	.39	19.5	.41	18.0	.37	15.2	.34	14.4	.32	16.1	.39	13.2	.34	10.5	.30	8.6	.26	85
80	21.7	.41	22.7	.46	17.3	.38	14.4	.35	22.9	.46	20.4	.44	16.4	.42	15.5	.39	20.6	.45	19.6	.41	16.2	.39	14.3	.36	18.2	.39	16.6	.34	14.0	.31	13.2	.29	14.9	.36	12.1	.31	9.6	.27	7.7	.23	80
75	20.2	.38	21.2	.43	16.0	.35	13.2	.33	21.5	.43	19.0	.41	15.3	.39	14.4	.36	19.3	.43	18.2	.38	15.0	.36	13.2	.33	16.8	.36	15.3	.31	12.8	.29	12.0	.27	13.8	.33	11.1	.28	8.6	.24	6.9	.21	75
70	18.6	.35	19.8	.40	14.7	.32	12.1	.30	20.0	.41	17.7	.38	14.2	.36	13.3	.33	17.9	.40	16.8	.35	13.8	.33	12.1	.31	15.5	.33	13.9	.28	11.6	.26	10.8	.24	12.6	.30	10.0	.26	7.7	.21	6.1	.18	70
65	17.1	.33	18.3	.37	13.4	.30	10.9	.27	18.5	.38	16.3	.35	13.1	.33	12.2	.30	16.5	.38	15.4	.33	12.6	.31	11.0	.28	14.1	.30	12.6	.25	10.4	.23	9.6	.21	11.5	.28	9.0	.23	6.7	.19	5.3	.16	65
60	15.5	.30	16.9	.35	12.1	.27	9.8	.24	17.0	.35	15.0	.33	12.0	.31	11.1	.28	15.1	.35	14.0	.30	11.4	.28	9.9	.25	12.8	.28	11.2	.23	9.2	.20	8.4	.18	10.3	.25	7.9	.20	5.8	.16	4.4	.13	60
55	14.0	.27	15.4	.32	10.8	.24	8.6	.22	15.5	.32	13.6	.30	10.9	.28	10.0	.25	13.7	.32	12.6	.27	10.2	.25	8.8	.22	11.4	.25	9.9	.20	8.0	.18	7.2	.16	9.2	.22	6.9	.17	4.8	.13	3.6	.11	55
50	12.5	.25	14.1	.29	9.6	.22	7.6	.19	14.1	.30	12.4	.27	9.8	.25	9.0	.22	12.4	.29	11.3	.25	9.0	.22	7.8	.20	10.2	.22	8.6	.18	6.9	.15	6.1	.13	8.1	.20	5.9	.15	4.0	.11	2.9	.09	50
45	11.1	.22	12.7	.27	8.3	.19	6.5	.16	12.7	.27	11.1	.25	8.8	.23	7.9	.20	11.1	.27	10.0	.22	7.9	.20	6.7	.17	8.9	.20	7.4	.15	5.8	.13	5.0	.11	7.0	.17	5.0	.13	3.2	.09	2.2	.07	45
40	9.6	.19	11.3	.24	7.1	.16	5.4	.14	11.3	.24	9.8	.22	7.8	.20	6.9	.17	9.9	.24	8.7	.19	6.8	.17	5.8	.15	7.7	.17	6.2	.13	4.7	.11	4.0	.09	6.0	.15	4.1	.11	2.4	.07	1.6	.05	40
35	8.3	.16	10.0	.21	6.0	.14	4.4	.11	10.0	.22	8.6	.19	6.8	.18	6.0	.15	8.7	.22	7.6	.17	5.9	.15	4.9	.13	6.6	.15	5.1	.11	3.8	.09	3.0	.07	5.1	.12	3.3	.08	1.7	.05	1.0	.03	35
30	7.0	.14	8.7	.18	4.9	.11	3.5	.09	8.7	.19	7.5	.17	5.8	.15	5.0	.13	7.6	.19	6.5	.15	4.9	.13	4.0	.11	5.5	.13	4.1	.09	2.9	.07	2.2	.05	4.2	.10	2.6	.07	1.1	.03	.8	.02	30
25	5.7	.11	7.5	.16	3.9	.09	2.7	.07	7.6	.17	6.4	.15	4.9	.13	4.2	.11	6.5	.17	5.4	.13	4.1	.11	3.2	.09	4.6	.11	3.1	.07	2.1	.05	1.4	.03	3.4	.08	1.8	.05	.9	.03	.8	.02	25
20	4.6	.09	6.3	.13	3.0	.07	1.9	.05	6.5	.15	5.4	.13	4.1	.11	3.4	.09	5.5	.15	4.5	.11	3.3	.09	2.5	.07	3.7	.08	2.3	.05	1.3	.03	1.2	.03	2.6	.07	1.2	.03	.9	.02	.7	.02	20
15	3.5	.07	5.2	.11	2.2	.05	1.3	.03	5.5	.13	4.5	.11	3.3	.09	2.6	.07	4.6	.13	3.6	.08	2.5	.07	1.8	.05	2.8	.07	1.5	.03	1.1	.03	1.1	.02	1.9	.05	1.0	.03	.8	.02	.7	.02	15
10	2.5	.05	4.2	.09	1.4	.03	1.1	.03	4.5	.10	3.6	.08	2.5	.07	1.9	.05	3.8	.11	2.8	.07	1.8	.05	1.2	.03	2.1	.05	1.2	.03	1.1	.02	1.0	.02	1.2	.03	.9	.02	.8	.02	.6	.02	10
5	1.6	.03	3.2	.07	1.2	.03	1.0	.02	3.6	.08	2.8	.07	1.8	.05	1.2	.03	3.1	.08	2.1	.05	1.2	.03	1.0	.03	1.4	.03	1.2	.02	1.0	.02	1.0	.02	1.0	.03	.9	.02	.7	.02	.6	.02	5
0	1.4	.03	2.3	.05	1.1	.02	1.0	.02	2.8	.07	2.1	.05	1.2	.03	1.0	.03	2.4	.07	1.4	.03	1.1	.03	.9	.02	1.2	.03	1.1	.02	1.0	.02	.9	.02	1.0	.02	.8	.02	.7	.02	.6	.02	0
-5	1.3	.02	1.5	.03	1.1	.02	.9	.02	2.1	.05	1.4	.03	1.0	.03	1.0	.02	1.8	.05	1.2	.02	1.0	.02	.9	.02	1.1	.02	1.0	.02	.9	.02	.9	.02	.9	.02	.8	.02	.6	.02	.5	.02	-5
-10	1.3	.02	1.3	.03	1.0	.02	.8	.02	1.4	.03	1.2	.02	.9	.02	.9	.02	1.3	.03	1.1	.02	.9	.02	.8	.02	1.1	.02	1.0	.02	.8	.02	.8	.02	.9	.02	.7	.02	.6	.02	.5	.01	-10
-15	1.2	.02	1.2	.02	.9	.02	.8	.02	1.2	.02	1.1	.02	.9	.02	.8	.02	1.1	.02	1.1	.02	.9	.02	.8	.02	1.0	.02	.9	.02	.8	.02	.7	.02	.8	.02	.7	.02	.5	.02	.4	.01	-15
-20	1.1	.02	1.1	.02	.9	.02	.7	.02	1.2	.02	1.0	.02	.8	.02	.8	.02	1.1	.02	1.0	.02	.8	.02	.7	.02	.9	.02	.8	.02	.7	.02	.7	.01	.8	.02	.6	.02	.5	.01	.4	.01	-20
-25	1.0	.02	1.1	.02	.8	.02	.7	.02	1.1	.02	1.0	.02	.8	.02	.7	.02	1.0	.02	.9	.02	.8	.02	.7	.02	.9	.02	.8	.02	.7	.01	.6	.01	.7	.02	.6	.01	.4	.01	.4	.01	-25
-30	.9	.02	1.0	.02	.7	.02	.6	.02	1.0	.02	.9	.02	.7	.02	.7	.02	.9	.02	.9	.02	.7	.02	.6	.02	.8	.02	.7	.01	.6	.01	.6	.01	.6	.02	.5	.01	.4	.01	.3	.01	-30
-35	.9	.02	.9	.02	.7	.02	.6	.01	.9	.02	.8	.02	.7	.02	.6	.02	.8	.02	.8	.02	.6	.02	.6	.01	.7	.02	.6	.01	.5	.01	.5	.01	.6	.01	.5	.01	.3	.01	.3	.01	-35
-40	.8	.02	.9	.02	.6	.01	.5	.01	.9	.02	.8	.02	.6	.02	.6	.01	.8	.02	.7	.02	.6	.01	.5	.01	.7	.01	.6	.01	.5	.01	.4	.01	.5	.01	.4	.01	.3	.01	.2	.01	-40
-45	.7	.01	.8	.02	.6	.01	.4	.01	.8	.02	.7	.02	.6	.01	.5	.01	.7	.02	.6	.01	.5	.01	.5	.01	.6	.01	.5	.01	.4	.01	.4	.01	.5	.01	.4	.01	.3	.01	.2	.01	-45
-50	.6	.01	.7	.01	.5	.01	.4	.01	.7	.01	.6	.01	.5	.01	.4	.01	.6	.01	.6	.01	.4	.01	.4	.01	.5	.01	.4	.01	.3	.01	.3	.01	.4	.01	.3	.01	.2	.01	.1	.00	-50
-55	.5	.01	.6	.01	.4	.01	.3	.01	.6	.01	.5	.01	.4	.01	.4	.01	.6	.01	.5	.01	.4	.01	.3	.01	.4	.01	.4	.01	.3	.01	.2	.01	.3	.01	.2	.01	.2	.00	.1	.00	-55
-60	.5	.01	.6	.01	.4	.01	.3	.01	.6	.01	.5	.01	.4	.01	.3	.01	.5	.01	.4	.01	.3	.01	.3	.01	.4	.01	.3	.01	.2	.01	.2	.00	.3	.01	.2	.01	.1	.00	.1	.00	-60
-65	.4	.01	.5	.01	.3	.01	.2	.01	.5	.01	.4	.01	.3	.01	.3	.01	.4	.01	.4	.01	.3	.01	.2	.01	.3	.01	.3	.01	.2	.00	.1	.00	.2	.01	.2	.00	.1	.00	.0	.00	-65
-70	.3	.01	.4	.01	.2	.01	.2	.00	.4	.01	.4	.01	.3	.01	.2	.01	.4	.01	.3	.01	.2	.01	.2	.01	.3	.01	.2	.00	.1	.00	.1	.00	.2	.01	.1	.00	.1	.00	.0	.00	-70
-75	.3	.01	.4	.01	.2	.00	.1	.00	.4	.01	.3	.01	.2	.01	.2	.01	.3	.01	.3	.01	.2	.01	.2	.00	.2	.01	.2	.00	.1	.00	.1	.00	.2	.00	.1	.00	.0	.00	.0	.00	-75
-80	.2	.00	.3	.01	.1	.00	.1	.00	.3	.01	.3	.01	.2	.01	.2	.00	.3	.01	.2	.01	.2	.00	.1	.00	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	-80
-85	.2	.00	.3	.01	.1	.00	.1	.00	.3	.01	.2	.01	.2	.00	.1	.00	.2	.01	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	.0	.00	-85
-90	.1	.00	.2	.00	.1	.00	.1	.00	.2	.01	.2	.00	.1	.00	.1	.00	.2	.01	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	.1	.00	.0	.00	.0	.00	.0	.00	-90
-95	.1	.00	.2	.00	.1	.00	.0	.00	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.1	.00	.1	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	-95
-100	.1	.00	.1	.00	.1	.00	.0	.00	.1	.00	.1	.00	.1	.00	.0	.00	.1	.00	.1	.00	.0	.00	.0	.00	.1	.00	.1	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	-100

Range: 10'(-40)

WAR HAMMER UNIT ATTACK TABLE

A-4.3

	AT 1		AT 2		AT 3		AT 4		AT 5		AT 6		AT 7		AT 8		AT 9		AT 10		AT 11		AT 12		AT 13		AT 14		AT 15		AT 16		AT 17		AT 18		AT 19		AT 20		
	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	
100	30.5	.51	29.4	.52	26.0	.50	23.1	.50	29.9	.51	27.4	.51	23.2	.50	23.0	.49	28.7	.51	28.7	.50	25.1	.49	23.4	.49	27.1	.50	27.0	.49	24.4	.49	24.3	.48	23.6	.49	21.6	.48	19.1	.45	16.8	.43	100
95	29.7	.51	28.7	.51	25.2	.49	22.4	.48	29.2	.51	26.8	.50	22.7	.50	22.5	.48	28.0	.50	27.9	.49	24.4	.49	22.8	.48	26.4	.50	26.3	.49	23.8	.48	23.7	.47	23.0	.48	21.0	.47	18.0	.43	15.7	.41	95
90	28.8	.50	28.1	.51	24.4	.48	21.1	.46	28.3	.50	26.0	.49	22.2	.49	21.9	.47	27.2	.49	27.1	.48	23.6	.48	22.1	.46	25.7	.49	25.5	.48	23.1	.47	22.5	.45	22.3	.47	19.9	.45	16.8	.40	14.7	.38	90
85	27.8	.49	27.3	.50	23.0	.46	19.8	.43	27.5	.49	25.3	.48	21.6	.48	21.3	.46	26.2	.49	26.2	.47	22.8	.47	20.9	.44	24.8	.48	24.7	.46	21.8	.45	21.1	.42	21.5	.46	18.7	.42	15.7	.37	13.6	.35	85
80	26.2	.47	26.4	.49	21.5	.43	18.4	.41	26.5	.48	24.5	.47	21.0	.47	20.7	.45	25.2	.48	25.2	.46	21.4	.44	19.5	.41	23.9	.47	23.3	.44	20.4	.42	19.7	.39	20.3	.44	17.4	.39	14.5	.34	12.6	.32	80
75	24.4	.44	25.5	.48	20.0	.40	17.1	.38	25.4	.47	23.5	.46	20.3	.46	19.5	.43	24.2	.47	23.6	.44	20.0	.41	18.2	.39	22.9	.46	21.7	.41	19.0	.39	18.3	.37	19.0	.41	16.2	.36	13.4	.32	11.5	.30	75
70	22.7	.41	23.9	.45	18.5	.38	15.7	.35	24.3	.46	22.6	.45	19.1	.43	18.2	.40	23.0	.46	22.0	.41	18.5	.39	16.8	.36	21.5	.43	20.2	.39	17.6	.36	16.9	.34	17.6	.38	14.9	.34	12.2	.29	10.5	.27	70
65	20.9	.38	22.3	.43	17.0	.35	14.4	.32	23.1	.45	21.1	.43	17.8	.41	16.9	.37	21.4	.43	20.3	.38	17.1	.36	15.5	.33	19.9	.40	18.6	.36	16.2	.34	15.5	.31	16.3	.36	13.7	.31	11.1	.26	9.4	.24	65
60	19.2	.36	20.6	.40	15.5	.32	13.0	.30	21.5	.42	19.6	.40	16.5	.38	15.6	.34	19.8	.40	18.7	.35	15.6	.33	14.1	.30	18.4	.38	17.1	.33	14.8	.31	14.1	.28	14.9	.33	12.4	.28	9.9	.23	8.4	.21	60
55	17.4	.33	19.0	.37	14.0	.29	11.7	.27	19.8	.40	18.0	.37	15.2	.35	14.3	.32	18.1	.38	17.0	.33	14.2	.30	12.8	.28	16.8	.35	15.5	.30	13.4	.28	12.7	.26	13.6	.30	11.2	.25	8.8	.21	7.3	.19	55
50	15.8	.30	17.5	.35	12.6	.27	10.4	.24	18.3	.37	16.6	.34	14.0	.33	13.1	.29	16.6	.35	15.5	.30	12.8	.28	11.5	.25	15.4	.32	14.1	.28	12.1	.25	11.4	.23	12.3	.28	10.0	.23	7.7	.18	6.4	.16	50
45	14.2	.27	15.9	.32	11.2	.24	9.2	.21	16.6	.34	15.1	.32	12.7	.30	11.8	.26	15.0	.32	14.0	.27	11.5	.25	10.2	.22	13.9	.30	12.6	.25	10.8	.23	10.0	.20	11.0	.25	8.8	.20	6.6	.15	5.3	.14	45
40	12.6	.25	14.3	.29	9.8	.21	7.9	.19	15.1	.32	13.7	.29	11.5	.27	10.6	.24	13.5	.30	12.5	.25	10.1	.22	9.0	.20	12.5	.27	11.2	.22	9.5	.20	8.7	.18	9.8	.22	7.6	.17	5.6	.13	4.4	.11	40
35	11.0	.22	12.9	.26	8.5	.19	6.8	.16	13.6	.29	12.3	.26	10.3	.25	9.5	.21	12.1	.27	11.0	.22	8.9	.20	7.8	.17	11.1	.24	9.8	.20	8.3	.18	7.5	.15	8.6	.20	6.6	.15	4.6	.11	3.5	.09	35
30	9.6	.19	11.4	.24	7.3	.16	5.7	.14	12.2	.26	11.0	.24	9.2	.22	8.4	.19	10.8	.24	9.7	.20	7.7	.17	6.7	.15	9.8	.22	8.5	.17	7.1	.15	6.3	.13	7.4	.17	5.5	.13	3.7	.09	2.7	.07	30
25	8.2	.17	10.1	.21	6.1	.14	4.7	.11	10.8	.24	9.7	.21	8.1	.20	7.3	.17	9.5	.22	8.4	.17	6.6	.15	5.7	.13	8.6	.19	7.3	.15	6.0	.13	5.2	.11	6.4	.15	4.6	.11	2.8	.07	1.9	.05	25
20	6.9	.14	8.8	.18	5.0	.11	3.7	.09	9.5	.21	8.5	.19	7.1	.17	6.3	.15	8.2	.20	7.2	.15	5.5	.13	4.7	.11	7.5	.17	6.2	.13	4.9	.11	4.2	.09	5.4	.13	3.7	.09	2.0	.05	1.2	.03	20
15	5.7	.12	7.5	.16	4.0	.09	2.8	.07	8.3	.19	7.4	.17	6.1	.15	5.3	.12	7.1	.17	6.0	.13	4.6	.11	3.8	.09	6.4	.15	5.1	.11	4.0	.09	3.2	.07	4.4	.10	2.8	.07	1.3	.03	1.0	.03	15
10	4.5	.09	6.3	.13	3.1	.07	2.1	.05	7.2	.17	6.4	.15	5.2	.13	4.4	.10	6.1	.15	5.0	.11	3.7	.09	2.9	.07	5.3	.13	4.1	.09	3.0	.07	2.3	.05	3.6	.08	2.1	.05	1.1	.03	1.0	.02	10
5	3.5	.07	5.2	.11	2.2	.05	1.4	.03	6.1	.14	5.4	.12	4.3	.11	3.6	.08	5.1	.13	4.0	.09	2.8	.07	2.1	.05	4.4	.10	3.2	.07	2.2	.05	1.5	.03	2.8	.07	1.3	.03	1.0	.02	.9	.02	5
0	2.5	.05	4.2	.09	1.5	.03	1.2	.03	5.2	.12	4.5	.10	3.4	.09	2.8	.07	4.2	.11	3.1	.07	2.1	.05	1.4	.03	3.6	.08	2.3	.05	1.5	.03	1.3	.03	2.0	.05	1.1	.03	1.0	.02	.8	.02	0
-5	1.7	.03	3.2	.07	1.3	.03	1.1	.02	4.3	.10	3.6	.08	2.7	.07	2.0	.05	3.4	.09	2.3	.05	1.4	.03	1.2	.03	2.8	.07	1.5	.03	1.2	.03	1.2	.02	1.4	.03	1.1	.02	.9	.02	.8	.02	-5
-10	1.5	.03	2.4	.05	1.2	.02	1.1	.02	3.4	.08	2.8	.06	1.9	.05	1.3	.03	2.6	.07	1.6	.03	1.2	.03	1.1	.02	2.1	.05	1.3	.03	1.2	.02	1.1	.02	1.2	.02	1.0	.02	.9	.02	.7	.02	-10
-15	1.4	.02	1.6	.03	1.2	.02	1.0	.02	2.7	.06	2.1	.05	1.3	.03	1.1	.02	2.0	.05	1.4	.02	1.2	.02	1.1	.02	1.4	.03	1.3	.02	1.1	.02	1.1	.02	1.1	.02	.9	.02	.8	.02	.7	.02	-15
-20	1.3	.02	1.4	.03	1.1	.02	.9	.02	2.0	.05	1.4	.03	1.1	.02	1.1	.02	1.4	.03	1.3	.02	1.1	.02	1.0	.02	1.2	.02	1.2	.02	1.0	.02	1.0	.02	1.0	.02	.9	.02	.7	.02	.6	.02	-20
-25	1.2	.02	1.3	.02	1.0	.02	.9	.02	1.4	.03	1.2	.02	1.0	.02	1.0	.02	1.3	.02	1.2	.02	1.0	.02	.9	.02	1.2	.02	1.1	.02	1.0	.02	.9	.02	1.0	.02	.8	.02	.7	.02	.6	.02	-25
-30	1.2	.02	1.2	.02	.9	.02	.8	.02	1.3	.02	1.1	.02	1.0	.02	.9	.02	1.2	.02	1.1	.02	.9	.02	.9	.02	1.1	.02	1.0	.02	.9	.02	.9	.02	.9	.02	.8	.02	.6	.01	.5	.01	-30
-35	1.1	.02	1.1	.02	.9	.02	.7	.02	1.2	.02	1.1	.02	.9	.02	.9	.02	1.1	.02	1.0	.02	.9	.02	.8	.02	1.0	.02	.9	.02	.8	.02	.8	.02	.8	.02	.7	.02	.6	.01	.5	.01	-35
-40	1.0	.02	1.0	.02	.8	.02	.7	.02	1.1	.02	1.0	.02	.8	.02	.8	.02	1.0	.02	1.0	.02	.8	.02	.7	.02	.9	.02	.9	.02	.8	.02	.7	.01	.8	.02	.6	.01	.5	.01	.4	.01	-40
-45	.9	.02	1.0	.02	.7	.01	.6	.01	1.0	.02	.9	.02	.8	.02	.7	.02	.9	.02	.9	.02	.7	.02	.7	.01	.9	.02	.8	.02	.7	.01	.6	.01	.7	.02	.6	.01	.5	.01	.4	.01	-45
-50	.8	.01	.9	.02	.6	.01	.5	.01	.9	.02	.8	.02	.7	.02	.7	.01	.8	.02	.8	.01	.6	.01	.6	.01	.8	.02	.7	.01	.6	.01	.6	.01	.6	.01	.5	.01	.4	.01	.3	.01	-50
-55	.7	.01	.8	.02	.6	.01	.5	.01	.8	.02	.8	.02	.6	.01	.6	.01	.7	.02	.7	.01	.6	.01	.5	.01	.7	.01	.6	.01	.5	.01	.5	.01	.5	.01	.4	.01	.3	.01	.3	.01	-55
-60	.6	.01	.7	.01	.5	.01	.4	.01	.7	.02	.7	.01	.6	.01	.5	.01	.7	.01	.6	.01	.5	.01	.4	.01	.6	.01	.6	.01	.5	.01	.4	.01	.5	.01	.4	.01	.3	.01	.2	.01	-60
-65	.5	.01	.6	.01	.4	.01	.3	.01	.7	.01	.6	.01	.5	.01	.5	.01	.6	.01	.5	.01	.4	.01	.4	.01	.6	.01	.5	.01	.4	.01	.4	.01	.4	.01	.3	.01	.2	.01	.2	.00	-65
-70	.5	.01	.6	.01	.4	.01	.3	.01	.6	.01	.5	.01	.5	.01	.4	.01	.5	.01	.5	.01	.4	.01	.3	.01	.5	.01	.4	.01	.3	.01	.3	.01	.4	.01	.3	.01	.2	.00	.1	.00	-70
-75	.4	.01	.5	.01	.3	.01	.2	.01	.5	.01	.5	.01	.4	.01	.4	.01	.5	.01	.4	.01	.3	.01	.3	.01	.4	.01	.4	.01	.3	.01	.3	.01	.3	.01	.2	.01	.1	.00	.1	.00	-75
-80	.3	.01	.4	.01	.2	.01	.2	.00	.5	.01	.4	.01	.4	.01	.3	.01	.4	.01	.4	.01	.3	.01	.2	.01	.4	.01	.3	.01	.2	.01	.2	.00	.3	.01	.2	.00	.1	.00	.1	.00	-80
-85	.3	.01	.4	.01	.2	.00	.1	.00	.4	.01	.4	.01	.3	.01	.3	.01	.4	.01	.3	.01	.2	.01	.2	.00	.3	.01	.2	.01	.2	.00	.2	.00	.2	.01	.1	.00	.1	.00	.0	.00	-85
-90	.2	.00	.3	.01	.1	.00	.1	.00	.4	.01	.3	.01	.3	.01	.2	.01	.3	.01	.2	.01	.2	.00	.1	.00	.3	.01	.2	.00	.1	.00	.1	.00	.2	.00	.1	.00	.1	.00	.0	.00	-90
-95	.2	.00	.3	.01	.1	.00	.1	.00	.3	.01	.3	.01	.2	.01	.2	.00	.2	.01	.2	.00	.1	.00	.1	.00	.2	.01	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	-95
-100	.1	.00	.2	.00	.1	.00	.1	.00	.3	.01	.2	.01	.2	.00	.1	.00	.2	.01	.2	.00	.1	.00	.1	.00	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	-100

Range: 10'(-20), 25'(-40), 50'(-60)

MACE UNIT ATTACK TABLE

A–4.4

	AT 1		AT 2		AT 3		AT 4		AT 5		AT 6		AT 7		AT 8		AT 9		AT 10		AT 11		AT 12		AT 13		AT 14		AT 15		AT 16		AT 17		AT 18		AT 19		AT 20		
	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	
100	27.8	.51	26.7	.51	23.3	.49	20.4	.49	27.9	.50	25.4	.50	21.2	.49	21.1	.49	25.2	.51	25.1	.49	21.5	.49	19.8	.48	27.2	.51	27.0	.49	24.3	.48	24.2	.48	23.5	.49	21.5	.47	18.3	.43	15.9	.41	100
95	27.1	.50	26.2	.51	22.6	.48	19.8	.48	27.1	.49	24.7	.49	20.8	.49	20.6	.47	24.5	.50	24.4	.49	20.9	.48	19.3	.47	26.5	.50	26.2	.48	23.7	.47	23.0	.45	22.9	.48	20.3	.45	17.1	.40	14.9	.38	95
90	26.2	.49	25.5	.50	21.9	.47	18.7	.45	26.3	.49	24.0	.48	20.2	.48	20.0	.46	23.8	.49	23.6	.48	20.2	.47	18.7	.46	25.8	.49	25.5	.47	22.4	.45	21.6	.43	22.3	.47	19.1	.42	16.0	.37	13.8	.35	90
85	25.3	.48	24.8	.49	20.6	.45	17.5	.42	25.4	.48	23.2	.47	19.7	.47	19.5	.45	22.9	.48	22.8	.47	19.5	.46	17.7	.44	24.9	.48	24.1	.44	21.0	.42	20.2	.40	21.0	.44	17.8	.39	14.8	.35	12.8	.33	85
80	23.8	.45	24.0	.48	19.3	.42	16.3	.40	24.5	.47	22.4	.46	19.0	.46	18.4	.43	22.0	.47	21.9	.45	18.3	.43	16.5	.41	24.0	.47	22.5	.42	19.6	.39	18.8	.37	19.7	.42	16.6	.37	13.7	.32	11.7	.30	80
75	22.2	.42	23.2	.47	17.9	.39	15.1	.37	23.4	.45	21.5	.45	17.9	.43	17.2	.40	21.1	.46	20.6	.43	17.1	.41	15.4	.38	22.5	.44	21.0	.39	18.2	.37	17.4	.34	18.3	.39	15.3	.34	12.5	.29	10.7	.27	75
70	20.6	.40	21.8	.44	16.6	.37	13.9	.34	22.3	.44	20.1	.43	16.7	.40	16.0	.37	20.0	.45	19.1	.40	15.8	.38	14.2	.35	20.9	.41	19.4	.36	16.8	.34	16.0	.32	17.0	.36	14.1	.31	11.4	.26	9.6	.24	70
65	19.0	.37	20.3	.42	15.2	.34	12.7	.31	20.8	.42	18.7	.40	15.5	.38	14.8	.35	18.6	.43	17.7	.38	14.6	.35	13.1	.33	19.4	.38	17.9	.33	15.4	.31	14.6	.29	15.6	.33	12.8	.28	10.2	.24	8.6	.22	65
60	17.4	.34	18.8	.39	13.9	.31	11.5	.29	19.2	.39	17.2	.37	14.3	.35	13.6	.32	17.2	.40	16.2	.35	13.3	.32	11.9	.30	17.8	.36	16.3	.31	14.0	.28	13.2	.26	14.3	.31	11.6	.26	9.1	.21	7.5	.19	60
55	15.8	.31	17.3	.36	12.5	.28	10.3	.26	17.6	.36	15.8	.34	13.1	.32	12.4	.29	15.7	.37	14.8	.32	12.1	.30	10.8	.27	16.3	.33	14.8	.28	12.6	.25	11.8	.23	12.9	.28	10.3	.23	7.9	.18	6.5	.16	55
50	14.3	.29	15.9	.34	11.3	.26	9.2	.23	16.2	.34	14.4	.32	12.0	.30	11.3	.27	14.4	.35	13.4	.29	10.9	.27	9.7	.24	14.8	.30	13.3	.25	11.3	.23	10.5	.21	11.7	.25	9.2	.20	6.8	.16	5.5	.14	50
45	12.8	.26	14.5	.31	10.0	.23	8.0	.21	14.6	.31	13.1	.29	10.9	.27	10.1	.24	13.0	.32	12.0	.27	9.7	.24	8.6	.22	13.3	.27	11.9	.22	10.0	.20	9.2	.18	10.4	.23	8.0	.18	5.7	.13	4.5	.11	45
40	11.4	.23	13.1	.28	8.8	.20	6.9	.18	13.2	.28	11.7	.26	9.8	.24	9.0	.21	11.7	.29	10.7	.24	8.6	.22	7.6	.19	11.9	.25	10.4	.20	8.7	.18	7.9	.16	9.1	.20	6.8	.15	4.7	.11	3.6	.09	40
35	9.9	.21	11.7	.25	7.6	.18	5.9	.15	11.8	.26	10.5	.24	8.7	.22	8.0	.19	10.5	.27	9.5	.22	7.5	.19	6.6	.17	10.5	.22	9.1	.17	7.4	.15	6.6	.13	7.9	.17	5.8	.13	3.8	.09	2.7	.07	35
30	8.6	.18	10.4	.23	6.5	.15	5.0	.13	10.5	.23	9.2	.21	7.7	.19	7.0	.17	9.3	.24	8.3	.19	6.5	.17	5.6	.15	9.2	.19	7.8	.15	6.3	.13	5.5	.11	6.8	.15	4.8	.11	2.9	.07	1.9	.05	30
25	7.4	.16	9.2	.20	5.4	.13	4.1	.11	9.2	.21	8.1	.19	6.7	.17	6.0	.15	8.1	.22	7.2	.17	5.6	.15	4.8	.13	8.0	.17	6.6	.13	5.2	.11	4.4	.09	5.7	.13	3.8	.09	2.1	.05	1.2	.03	25
20	6.2	.13	8.0	.18	4.5	.11	3.2	.09	8.0	.19	7.0	.17	5.8	.15	5.1	.12	7.1	.19	6.2	.15	4.7	.13	3.9	.11	6.8	.15	5.4	.11	4.2	.09	3.3	.07	4.7	.11	2.9	.07	1.3	.03	1.0	.03	20
15	5.1	.11	6.8	.15	3.6	.09	2.5	.07	6.9	.16	6.0	.14	4.9	.13	4.2	.10	6.1	.17	5.2	.13	3.9	.11	3.2	.08	5.7	.12	4.4	.09	3.2	.07	2.4	.05	3.8	.09	2.1	.05	1.1	.03	1.0	.02	15
10	4.1	.09	5.8	.13	2.8	.07	1.8	.05	5.9	.14	5.1	.12	4.0	.11	3.4	.08	5.2	.15	4.3	.11	3.1	.08	2.4	.07	4.7	.10	3.4	.07	2.3	.05	1.5	.03	2.9	.07	1.4	.03	1.0	.02	.9	.02	10
5	3.1	.07	4.8	.11	2.0	.05	1.2	.03	5.0	.12	4.2	.10	3.2	.08	2.6	.07	4.4	.13	3.4	.08	2.4	.07	1.8	.05	3.8	.08	2.5	.05	1.5	.03	1.3	.03	2.2	.05	1.2	.03	1.0	.02	.9	.02	5
0	2.3	.05	3.8	.09	1.4	.03	1.1	.03	4.1	.10	3.4	.08	2.5	.07	1.9	.05	3.6	.11	2.7	.07	1.8	.05	1.2	.03	2.9	.06	1.6	.03	1.3	.03	1.2	.02	1.4	.03	1.1	.02	.9	.02	.8	.02	0
-5	1.6	.03	3.0	.07	1.2	.03	1.0	.02	3.3	.08	2.7	.06	1.8	.05	1.2	.03	2.9	.08	2.0	.05	1.2	.03	1.0	.02	2.1	.04	1.4	.03	1.2	.02	1.2	.02	1.2	.03	1.0	.02	.9	.02	.8	.02	-5
-10	1.4	.03	2.2	.05	1.1	.02	.9	.02	2.6	.06	2.0	.05	1.2	.03	1.1	.02	2.3	.07	1.4	.03	1.1	.02	1.0	.02	1.4	.03	1.3	.02	1.1	.02	1.1	.02	1.1	.02	1.0	.02	.8	.02	.7	.02	-10
-15	1.3	.02	1.5	.03	1.0	.02	.9	.02	2.0	.05	1.3	.03	1.0	.02	1.0	.02	1.7	.05	1.2	.02	1.0	.02	.9	.02	1.3	.02	1.2	.02	1.1	.02	1.0	.02	1.1	.02	.9	.02	.8	.02	.6	.02	-15
-20	1.2	.02	1.3	.03	1.0	.02	.8	.02	1.4	.03	1.2	.02	1.0	.02	.9	.02	1.2	.03	1.1	.02	.9	.02	.8	.02	1.2	.02	1.1	.02	1.0	.02	1.0	.02	1.0	.02	.8	.02	.7	.02	.6	.02	-20
-25	1.1	.02	1.2	.02	.9	.02	.8	.02	1.2	.02	1.1	.02	.9	.02	.9	.02	1.1	.02	1.0	.02	.9	.02	.8	.02	1.1	.02	1.1	.02	.9	.02	.9	.02	.9	.02	.8	.02	.6	.01	.5	.01	-25
-30	1.0	.02	1.1	.02	.8	.02	.7	.02	1.1	.02	1.0	.02	.8	.02	.8	.02	1.0	.02	1.0	.02	.8	.02	.7	.02	1.1	.02	1.0	.02	.9	.02	.8	.02	.9	.02	.7	.02	.6	.01	.5	.01	-30
-35	1.0	.02	1.0	.02	.8	.02	.6	.02	1.1	.02	.9	.02	.8	.02	.8	.02	.9	.02	.9	.02	.7	.02	.7	.02	1.0	.02	.9	.02	.8	.02	.7	.01	.8	.02	.7	.01	.5	.01	.4	.01	-35
-40	.9	.02	1.0	.02	.7	.02	.6	.01	1.0	.02	.9	.02	.7	.02	.7	.02	.9	.02	.8	.02	.7	.02	.6	.02	.9	.02	.8	.02	.7	.01	.7	.01	.7	.02	.6	.01	.5	.01	.4	.01	-40
-45	.8	.02	.9	.02	.6	.01	.5	.01	.9	.02	.8	.02	.7	.02	.6	.01	.8	.02	.8	.02	.6	.02	.5	.01	.8	.02	.8	.01	.6	.01	.6	.01	.7	.01	.5	.01	.4	.01	.3	.01	-45
-50	.7	.01	.8	.02	.6	.01	.5	.01	.8	.02	.7	.02	.6	.01	.6	.01	.7	.02	.7	.01	.5	.01	.5	.01	.7	.02	.7	.01	.6	.01	.5	.01	.6	.01	.5	.01	.3	.01	.3	.01	-50
-55	.6	.01	.7	.02	.5	.01	.4	.01	.7	.02	.6	.01	.5	.01	.5	.01	.6	.02	.6	.01	.5	.01	.4	.01	.7	.01	.6	.01	.5	.01	.5	.01	.5	.01	.4	.01	.3	.01	.2	.01	-55
-60	.6	.01	.6	.01	.4	.01	.3	.01	.7	.01	.6	.01	.5	.01	.4	.01	.6	.01	.5	.01	.4	.01	.4	.01	.6	.01	.5	.01	.4	.01	.4	.01	.5	.01	.3	.01	.2	.01	.2	.00	-60
-65	.5	.01	.6	.01	.4	.01	.3	.01	.6	.01	.5	.01	.4	.01	.4	.01	.5	.01	.5	.01	.4	.01	.3	.01	.5	.01	.4	.01	.4	.01	.3	.01	.4	.01	.3	.01	.2	.00	.1	.00	-65
-70	.4	.01	.5	.01	.3	.01	.2	.01	.5	.01	.5	.01	.4	.01	.3	.01	.5	.01	.4	.01	.3	.01	.3	.01	.5	.01	.4	.01	.3	.01	.3	.01	.3	.01	.2	.01	.1	.00	.1	.00	-70
-75	.4	.01	.5	.01	.3	.01	.2	.01	.5	.01	.4	.01	.3	.01	.3	.01	.4	.01	.4	.01	.3	.01	.2	.01	.4	.01	.3	.01	.3	.01	.2	.00	.3	.01	.2	.00	.1	.00	.1	.00	-75
-80	.3	.01	.4	.01	.2	.01	.2	.00	.4	.01	.3	.01	.3	.01	.3	.01	.4	.01	.3	.01	.2	.01	.2	.01	.3	.01	.3	.01	.2	.00	.2	.00	.2	.01	.1	.00	.1	.00	.0	.00	-80
-85	.2	.01	.3	.01	.2	.00	.1	.00	.3	.01	.3	.01	.2	.01	.2	.01	.3	.01	.3	.01	.2	.01	.2	.00	.3	.01	.2	.00	.2	.00	.1	.00	.2	.00	.1	.00	.1	.00	.0	.00	-85
-90	.2	.00	.3	.01	.1	.00	.1	.00	.3	.01	.3	.01	.2	.01	.2	.00	.3	.01	.2	.01	.2	.00	.1	.00	.2	.01	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	-90
-95	.2	.00	.2	.01	.1	.00	.1	.00	.2	.01	.2	.01	.2	.00	.1	.00	.2	.01	.2	.00	.1	.00	.1	.00	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	-95
-100	.1	.00	.2	.00	.1	.00	.0	.00	.2	.01	.2	.00	.1	.00	.1	.00	.2	.01	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	-100

Range: 10'(-35)

MORNING STAR UNIT ATTACK TABLE

A–4.5

	AT 1		AT 2		AT 3		AT 4		AT 5		AT 6		AT 7		AT 8		AT 9		AT 10		AT 11		AT 12		AT 13		AT 14		AT 15		AT 16		AT 17		AT 18		AT 19		AT 20		
	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	
100	38.4	.52	37.3	.52	33.8	.51	31.1	.51	36.9	.52	34.4	.51	30.2	.51	30.1	.50	31.5	.51	31.5	.50	27.9	.50	26.2	.49	29.8	.50	29.6	.49	27.0	.48	26.9	.48	26.2	.49	24.1	.47	21.6	.45	19.1	.43	100
95	37.5	.52	36.5	.52	32.9	.50	30.2	.50	36.0	.51	33.6	.50	29.6	.50	29.4	.49	30.7	.51	30.7	.50	27.2	.49	25.6	.48	29.0	.49	28.9	.48	26.3	.47	26.3	.47	25.5	.48	23.5	.46	20.3	.42	17.9	.40	95
90	36.4	.51	35.6	.51	31.9	.49	29.2	.49	35.0	.50	32.7	.50	28.8	.49	28.7	.48	29.9	.50	29.8	.49	26.4	.48	24.9	.47	28.2	.49	28.1	.47	25.5	.46	24.9	.45	24.8	.47	22.2	.44	19.0	.39	16.7	.38	90
85	35.2	.50	34.6	.51	30.7	.48	27.5	.46	33.9	.50	31.8	.49	28.0	.48	27.9	.47	28.9	.49	28.9	.48	25.5	.48	24.1	.46	27.3	.48	27.1	.46	24.1	.44	23.3	.42	24.0	.46	20.8	.41	17.7	.37	15.5	.35	85
80	33.9	.49	33.5	.50	28.9	.46	25.7	.44	32.7	.49	30.7	.48	27.2	.47	27.0	.46	27.9	.48	27.8	.47	24.5	.46	22.7	.44	26.3	.47	25.6	.44	22.6	.41	21.8	.39	22.6	.44	19.4	.38	16.4	.34	14.3	.32	80
75	31.8	.47	32.4	.49	27.0	.43	23.9	.41	31.4	.48	29.6	.47	26.2	.46	25.5	.44	26.8	.48	26.7	.46	23.0	.44	21.2	.41	25.3	.46	23.9	.41	21.0	.38	20.2	.36	21.1	.41	18.0	.36	15.1	.31	13.1	.29	75
70	29.6	.44	31.1	.48	25.0	.40	22.1	.38	30.0	.47	28.3	.46	24.7	.44	23.8	.41	25.5	.47	25.0	.43	21.4	.41	19.7	.38	23.7	.43	22.2	.38	19.5	.36	18.7	.34	19.6	.38	16.6	.33	13.8	.28	11.9	.27	70
65	27.4	.41	29.1	.46	23.1	.38	20.3	.35	28.5	.46	26.5	.43	23.0	.41	22.1	.38	24.2	.45	23.2	.41	19.8	.39	18.2	.36	22.0	.40	20.5	.35	17.9	.33	17.1	.31	18.1	.35	15.2	.30	12.5	.26	10.7	.24	65
60	25.2	.39	27.0	.43	21.1	.35	18.5	.33	26.6	.43	24.6	.41	21.3	.38	20.4	.35	22.5	.43	21.4	.38	18.2	.36	16.7	.33	20.3	.38	18.8	.33	16.4	.30	15.6	.28	16.6	.33	13.8	.27	11.2	.23	9.5	.21	60
55	23.0	.36	24.9	.40	19.2	.32	16.7	.30	24.5	.40	22.6	.38	19.6	.36	18.7	.33	20.7	.40	19.6	.35	16.6	.33	15.2	.30	18.6	.35	17.1	.30	14.8	.27	14.0	.25	15.1	.30	12.4	.25	9.9	.20	8.3	.18	55
50	21.0	.33	23.0	.38	17.4	.30	15.1	.27	22.5	.38	20.8	.35	18.0	.33	17.1	.30	19.1	.38	18.0	.33	15.2	.30	13.8	.28	17.0	.32	15.5	.27	13.4	.25	12.6	.23	13.7	.27	11.1	.22	8.6	.17	7.2	.16	50
45	18.9	.31	21.0	.35	15.5	.27	13.4	.25	20.5	.35	19.0	.33	16.4	.30	15.4	.27	17.3	.35	16.2	.30	13.6	.28	12.4	.25	15.4	.30	13.9	.25	11.9	.22	11.1	.20	12.3	.25	9.8	.20	7.4	.15	6.1	.13	45
40	16.9	.28	19.0	.32	13.8	.24	11.7	.22	18.6	.32	17.2	.30	14.8	.28	13.9	.25	15.7	.32	14.6	.27	12.2	.25	11.0	.22	13.9	.27	12.4	.22	10.5	.20	9.7	.18	10.9	.22	8.5	.17	6.3	.13	5.0	.11	40
35	15.0	.25	17.2	.29	12.1	.21	10.2	.19	16.8	.30	15.4	.27	13.3	.25	12.3	.22	14.1	.30	13.0	.25	10.8	.22	9.7	.20	12.4	.24	10.9	.20	9.1	.17	8.3	.15	9.6	.19	7.3	.15	5.2	.10	4.0	.09	35
30	13.2	.22	15.4	.27	10.5	.19	8.7	.17	15.0	.27	13.8	.25	11.8	.23	10.9	.19	12.7	.27	11.5	.22	9.4	.20	8.4	.17	11.0	.22	9.5	.17	7.8	.15	7.0	.13	8.3	.17	6.2	.12	4.1	.08	3.1	.07	30
25	11.4	.20	13.6	.24	9.0	.16	7.3	.14	13.4	.25	12.2	.22	10.4	.20	9.5	.17	11.2	.24	10.1	.20	8.2	.18	7.3	.15	9.6	.19	8.1	.15	6.6	.13	5.8	.11	7.2	.15	5.1	.10	3.2	.07	2.2	.05	25
20	9.8	.17	12.0	.21	7.5	.14	6.0	.12	11.8	.22	10.7	.20	9.1	.18	8.2	.15	9.9	.22	8.8	.17	7.0	.15	6.1	.13	8.3	.17	6.9	.13	5.5	.10	4.7	.09	6.0	.12	4.1	.08	2.3	.05	1.4	.03	20
15	8.3	.15	10.5	.19	6.2	.11	4.8	.09	10.3	.20	9.3	.17	7.8	.15	6.9	.13	8.6	.20	7.5	.15	5.9	.13	5.1	.11	7.1	.15	5.7	.11	4.4	.08	3.6	.07	5.0	.10	3.2	.07	1.4	.03	1.1	.03	15
10	6.8	.12	9.0	.16	4.9	.09	3.7	.07	8.9	.17	8.0	.15	6.6	.13	5.7	.11	7.5	.17	6.3	.13	4.9	.11	4.1	.09	6.0	.13	4.6	.09	3.4	.07	2.6	.05	4.0	.08	2.3	.05	1.2	.03	1.1	.02	10
5	5.4	.10	7.5	.14	3.8	.07	2.7	.05	7.6	.15	6.7	.13	5.4	.11	4.6	.09	6.3	.15	5.2	.11	3.9	.09	3.1	.07	5.0	.11	3.5	.07	2.5	.05	1.7	.03	3.1	.07	1.5	.03	1.2	.02	1.0	.02	5
0	4.2	.07	6.2	.11	2.8	.05	1.8	.03	6.3	.13	5.6	.11	4.4	.09	3.6	.07	5.3	.13	4.2	.09	3.0	.07	2.3	.05	4.0	.08	2.6	.05	1.6	.03	1.4	.03	2.3	.05	1.3	.02	1.1	.02	1.0	.02	0
-5	3.1	.05	5.0	.09	1.9	.03	1.6	.03	5.2	.11	4.5	.09	3.4	.07	2.6	.05	4.4	.11	3.3	.07	2.2	.05	1.5	.03	3.1	.07	1.7	.03	1.4	.02	1.3	.02	1.5	.03	1.2	.02	1.0	.02	.9	.02	-5
-10	2.1	.03	3.9	.07	1.7	.03	1.5	.02	4.2	.09	3.5	.07	2.5	.05	1.7	.03	3.5	.09	2.4	.05	1.5	.03	1.3	.02	2.3	.05	1.5	.02	1.3	.02	1.3	.02	1.3	.02	1.1	.02	1.0	.02	.8	.02	-10
-15	1.8	.03	2.8	.05	1.6	.02	1.4	.02	3.3	.07	2.6	.05	1.6	.03	1.5	.02	2.8	.07	1.7	.03	1.3	.03	1.2	.02	1.6	.03	1.4	.02	1.2	.02	1.2	.02	1.2	.02	1.1	.02	.9	.02	.8	.02	-15
-20	1.7	.03	1.9	.03	1.5	.02	1.3	.02	2.5	.05	1.8	.03	1.4	.02	1.4	.02	2.1	.05	1.4	.02	1.2	.02	1.2	.02	1.4	.02	1.3	.02	1.1	.02	1.1	.02	1.1	.02	1.0	.02	.8	.02	.7	.02	-20
-25	1.6	.02	1.7	.03	1.4	.02	1.2	.02	1.8	.03	1.5	.02	1.3	.02	1.3	.02	1.5	.03	1.4	.02	1.2	.02	1.1	.02	1.3	.02	1.2	.02	1.1	.02	1.0	.02	1.1	.02	.9	.02	.8	.02	.7	.01	-25
-30	1.5	.02	1.6	.02	1.3	.02	1.1	.02	1.6	.02	1.4	.02	1.2	.02	1.2	.02	1.3	.02	1.3	.02	1.1	.02	1.0	.02	1.2	.02	1.1	.02	1.0	.02	.9	.02	1.0	.02	.8	.02	.7	.01	.6	.01	-30
-35	1.4	.02	1.5	.02	1.2	.02	1.0	.02	1.5	.02	1.3	.02	1.2	.02	1.1	.02	1.2	.02	1.2	.02	1.0	.02	.9	.02	1.1	.02	1.0	.02	.9	.02	.9	.02	.9	.02	.8	.02	.6	.01	.5	.01	-35
-40	1.3	.02	1.4	.02	1.1	.02	.9	.02	1.3	.02	1.2	.02	1.1	.02	1.0	.02	1.1	.02	1.1	.02	.9	.02	.9	.02	1.0	.02	1.0	.02	.8	.02	.8	.01	.8	.02	.7	.01	.6	.01	.5	.01	-40
-45	1.2	.02	1.3	.02	1.0	.02	.9	.02	1.2	.02	1.2	.02	1.0	.02	.9	.02	1.1	.02	1.0	.02	.8	.02	.8	.02	.9	.02	.9	.02	.8	.01	.7	.01	.8	.02	.6	.01	.5	.01	.4	.01	-45
-50	1.0	.02	1.1	.02	.9	.01	.7	.01	1.1	.02	1.0	.02	.9	.02	.8	.01	.9	.02	.9	.02	.8	.02	.7	.01	.8	.02	.8	.01	.7	.01	.6	.01	.7	.01	.6	.01	.4	.01	.4	.01	-50
-55	.9	.02	1.0	.02	.8	.01	.7	.01	1.0	.02	.9	.02	.8	.02	.8	.01	.9	.02	.8	.01	.7	.01	.6	.01	.8	.01	.7	.01	.6	.01	.6	.01	.6	.01	.5	.01	.4	.01	.3	.01	-55
-60	.8	.01	.9	.02	.7	.01	.6	.01	.9	.02	.9	.01	.7	.01	.7	.01	.8	.02	.7	.01	.6	.01	.5	.01	.7	.01	.6	.01	.5	.01	.5	.01	.5	.01	.4	.01	.3	.01	.2	.01	-60
-65	.7	.01	.9	.01	.6	.01	.5	.01	.8	.01	.8	.01	.7	.01	.6	.01	.7	.01	.6	.01	.5	.01	.5	.01	.6	.01	.5	.01	.5	.01	.4	.01	.5	.01	.4	.01	.3	.01	.2	.00	-65
-70	.7	.01	.8	.01	.5	.01	.4	.01	.7	.01	.7	.01	.6	.01	.5	.01	.6	.01	.6	.01	.5	.01	.4	.01	.5	.01	.5	.01	.4	.01	.3	.01	.4	.01	.3	.01	.2	.00	.1	.00	-70
-75	.6	.01	.7	.01	.4	.01	.4	.01	.7	.01	.6	.01	.5	.01	.5	.01	.6	.01	.5	.01	.4	.01	.4	.01	.5	.01	.4	.01	.3	.01	.3	.01	.4	.01	.3	.01	.2	.00	.1	.00	-75
-80	.5	.01	.6	.01	.4	.01	.3	.01	.6	.01	.5	.01	.4	.01	.4	.01	.5	.01	.4	.01	.3	.01	.3	.01	.4	.01	.3	.01	.3	.01	.2	.00	.3	.01	.2	.00	.1	.00	.1	.00	-80
-85	.4	.01	.5	.01	.3	.01	.2	.00	.5	.01	.5	.01	.4	.01	.3	.01	.4	.01	.4	.01	.3	.01	.2	.01	.4	.01	.3	.01	.2	.00	.2	.00	.2	.01	.2	.00	.1	.00	.1	.00	-85
-90	.3	.01	.4	.01	.2	.00	.2	.00	.4	.01	.4	.01	.3	.01	.3	.01	.4	.01	.3	.01	.2	.01	.2	.00	.3	.01	.2	.00	.2	.00	.1	.00	.2	.00	.1	.00	.1	.00	.1	.00	-90
-95	.3	.00	.4	.01	.2	.00	.1	.00	.4	.01	.3	.01	.3	.01	.2	.00	.3	.01	.3	.01	.2	.00	.2	.00	.2	.01	.2	.00	.1	.00	.1	.00	.2	.00	.1	.00	.1	.00	.0	.00	-95
-100	.2	.00	.3	.01	.1	.00	.1	.00	.3	.01	.3	.01	.2	.00	.2	.00	.3	.01	.2	.00	.1	.00	.1	.00	.2	.00	.1	.00	.1	.00	.1	.00	.2	.00	.1	.00	.1	.00	.0	.00	-100

WHIP UNIT ATTACK TABLE

A–4.6

	AT 1		AT 2		AT 3		AT 4		AT 5		AT 6		AT 7		AT 8		AT 9		AT 10		AT 11		AT 12		AT 13		AT 14		AT 15		AT 16		AT 17		AT 18		AT 19		AT 20		
	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	
100	38.4	.52	37.3	.52	33.8	.51	31.1	.51	36.9	.52	34.4	.51	30.2	.51	30.1	.50	31.5	.51	31.5	.50	27.9	.50	26.2	.49	29.8	.50	29.6	.49	27.0	.48	26.9	.48	26.2	.49	24.1	.47	21.6	.45	19.1	.43	100
95	37.5	.52	36.5	.52	32.9	.50	30.2	.50	36.0	.51	33.6	.50	29.6	.50	29.4	.49	30.7	.51	30.7	.50	27.2	.49	25.6	.48	29.0	.49	28.9	.48	26.3	.47	26.3	.47	25.5	.48	23.5	.46	20.3	.42	17.9	.40	95
90	36.4	.51	35.6	.51	31.9	.49	29.2	.49	35.0	.50	32.7	.50	28.8	.49	28.7	.48	29.9	.50	29.8	.49	26.4	.48	24.9	.47	28.2	.49	28.1	.47	25.5	.46	24.9	.45	24.8	.47	22.2	.44	19.0	.39	16.7	.38	90
85	35.2	.50	34.6	.51	30.7	.48	27.5	.46	33.9	.50	31.8	.49	28.0	.48	27.9	.47	28.9	.49	28.9	.48	25.5	.48	24.1	.46	27.3	.48	27.1	.46	24.1	.44	23.3	.42	24.0	.46	20.8	.41	17.7	.37	15.5	.35	85
80	33.9	.49	33.5	.50	28.9	.46	25.7	.44	32.7	.49	30.7	.48	27.2	.47	27.0	.46	27.9	.48	27.8	.47	24.5	.46	22.7	.44	26.3	.47	25.6	.44	22.6	.41	21.8	.39	22.6	.44	19.4	.38	16.4	.34	14.3	.32	80
75	31.8	.47	32.4	.49	27.0	.43	23.9	.41	31.4	.48	29.6	.47	26.2	.46	25.5	.44	26.8	.48	26.7	.46	23.0	.44	21.2	.41	25.3	.46	23.9	.41	21.0	.38	20.2	.36	21.1	.41	18.0	.36	15.1	.31	13.1	.29	75
70	29.6	.44	31.1	.48	25.0	.40	22.1	.38	30.0	.47	28.3	.46	24.7	.44	23.8	.41	25.5	.47	25.0	.43	21.4	.41	19.7	.38	23.7	.43	22.2	.38	19.5	.36	18.7	.34	19.6	.38	16.6	.33	13.8	.28	11.9	.27	70
65	27.4	.41	29.1	.46	23.1	.38	20.3	.35	28.5	.46	26.5	.43	23.0	.41	22.1	.38	24.2	.45	23.2	.41	19.8	.39	18.2	.36	22.0	.40	20.5	.35	17.9	.33	17.1	.31	18.1	.35	15.2	.30	12.5	.26	10.7	.24	65
60	25.2	.39	27.0	.43	21.1	.35	18.5	.33	26.6	.43	24.6	.41	21.3	.38	20.4	.35	22.5	.43	21.4	.38	18.2	.36	16.7	.33	20.3	.38	18.8	.33	16.4	.30	15.6	.28	16.6	.33	13.8	.27	11.2	.23	9.5	.21	60
55	23.0	.36	24.9	.40	19.2	.32	16.7	.30	24.5	.40	22.6	.38	19.6	.36	18.7	.33	20.7	.40	19.6	.35	16.6	.33	15.2	.30	18.6	.35	17.1	.30	14.8	.27	14.0	.25	15.1	.30	12.4	.25	9.9	.20	8.3	.18	55
50	21.0	.33	23.0	.38	17.4	.30	15.1	.27	22.5	.38	20.8	.35	18.0	.33	17.1	.30	19.1	.38	18.0	.33	15.2	.30	13.8	.28	17.0	.32	15.5	.27	13.4	.25	12.6	.23	13.7	.27	11.1	.22	8.6	.17	7.2	.16	50
45	18.9	.31	21.0	.35	15.5	.27	13.4	.25	20.5	.35	19.0	.33	16.4	.30	15.4	.27	17.3	.35	16.2	.30	13.6	.28	12.4	.25	15.4	.30	13.9	.25	11.9	.22	11.1	.20	12.3	.25	9.8	.20	7.4	.15	6.1	.13	45
40	16.9	.28	19.0	.32	13.8	.24	11.7	.22	18.6	.32	17.2	.30	14.8	.28	13.9	.25	15.7	.32	14.6	.27	12.2	.25	11.0	.22	13.9	.27	12.4	.22	10.5	.20	9.7	.18	10.9	.22	8.5	.17	6.3	.13	5.0	.11	40
35	15.0	.25	17.2	.29	12.1	.21	10.2	.19	16.8	.30	15.4	.27	13.3	.25	12.3	.22	14.1	.30	13.0	.25	10.8	.22	9.7	.20	12.4	.24	10.9	.20	9.1	.17	8.3	.15	9.6	.19	7.3	.15	5.2	.10	4.0	.09	35
30	13.2	.22	15.4	.27	10.5	.19	8.7	.17	15.0	.27	13.8	.25	11.8	.23	10.9	.19	12.7	.27	11.5	.22	9.4	.20	8.4	.17	11.0	.22	9.5	.17	7.8	.15	7.0	.13	8.3	.17	6.2	.12	4.1	.08	3.1	.07	30
25	11.4	.20	13.6	.24	9.0	.16	7.3	.14	13.4	.25	12.2	.22	10.4	.20	9.5	.17	11.2	.24	10.1	.20	8.2	.18	7.3	.15	9.6	.19	8.1	.15	6.6	.13	5.8	.11	7.2	.15	5.1	.10	3.2	.07	2.2	.05	25
20	9.8	.17	12.0	.21	7.5	.14	6.0	.12	11.8	.22	10.7	.20	9.1	.18	8.2	.15	9.9	.22	8.8	.17	7.0	.15	6.1	.13	8.3	.17	6.9	.13	5.5	.10	4.7	.09	6.0	.12	4.1	.08	2.3	.05	1.4	.03	20
15	8.3	.15	10.5	.19	6.2	.11	4.8	.09	10.3	.20	9.3	.17	7.8	.15	6.9	.13	8.6	.20	7.5	.15	5.9	.13	5.1	.11	7.1	.15	5.7	.11	4.4	.08	3.6	.07	5.0	.10	3.2	.07	1.4	.03	1.1	.03	15
10	6.8	.12	9.0	.16	4.9	.09	3.7	.07	8.9	.17	8.0	.15	6.6	.13	5.7	.11	7.5	.17	6.3	.13	4.9	.11	4.1	.09	6.0	.13	4.6	.09	3.4	.07	2.6	.05	4.0	.08	2.3	.05	1.2	.03	1.1	.02	10
5	5.4	.10	7.5	.14	3.8	.07	2.7	.05	7.6	.15	6.7	.13	5.4	.11	4.6	.09	6.3	.15	5.2	.11	3.9	.09	3.1	.07	5.0	.11	3.5	.07	2.5	.05	1.7	.03	3.1	.07	1.5	.03	1.2	.02	1.0	.02	5
0	4.2	.07	6.2	.11	2.8	.05	1.8	.03	6.3	.13	5.6	.11	4.4	.09	3.6	.07	5.3	.13	4.2	.09	3.0	.07	2.3	.05	4.0	.08	2.6	.05	1.6	.03	1.4	.03	2.3	.05	1.3	.02	1.1	.02	1.0	.02	0
-5	3.1	.05	5.0	.09	1.9	.03	1.6	.03	5.2	.11	4.5	.09	3.4	.07	2.6	.05	4.4	.11	3.3	.07	2.2	.05	1.5	.03	3.1	.07	1.7	.03	1.4	.02	1.3	.02	1.5	.03	1.2	.02	1.0	.02	.9	.02	-5
-10	2.1	.03	3.9	.07	1.7	.03	1.5	.02	4.2	.09	3.5	.07	2.5	.05	1.7	.03	3.5	.09	2.4	.05	1.5	.03	1.3	.02	2.3	.05	1.5	.02	1.3	.02	1.3	.02	1.3	.02	1.1	.02	1.0	.02	.8	.02	-10
-15	1.8	.03	2.8	.05	1.6	.02	1.4	.02	3.3	.07	2.6	.05	1.6	.03	1.5	.02	2.8	.07	1.7	.03	1.3	.03	1.2	.02	1.6	.03	1.4	.02	1.2	.02	1.2	.02	1.2	.02	1.1	.02	.9	.02	.8	.02	-15
-20	1.7	.03	1.9	.03	1.5	.02	1.3	.02	2.5	.05	1.8	.03	1.4	.02	1.4	.02	2.1	.05	1.4	.02	1.2	.02	1.2	.02	1.4	.02	1.3	.02	1.1	.02	1.1	.02	1.1	.02	1.0	.02	.8	.02	.7	.02	-20
-25	1.6	.02	1.7	.03	1.4	.02	1.2	.02	1.8	.03	1.5	.02	1.3	.02	1.3	.02	1.5	.03	1.4	.02	1.2	.02	1.1	.02	1.3	.02	1.2	.02	1.1	.02	1.0	.02	1.1	.02	.9	.02	.8	.02	.7	.01	-25
-30	1.5	.02	1.6	.02	1.3	.02	1.1	.02	1.6	.02	1.4	.02	1.2	.02	1.2	.02	1.3	.02	1.3	.02	1.1	.02	1.0	.02	1.2	.02	1.1	.02	1.0	.02	.9	.02	1.0	.02	.8	.02	.7	.01	.6	.01	-30
-35	1.4	.02	1.5	.02	1.2	.02	1.0	.02	1.5	.02	1.3	.02	1.2	.02	1.1	.02	1.2	.02	1.2	.02	1.0	.02	.9	.02	1.1	.02	1.0	.02	.9	.02	.9	.02	.9	.02	.8	.02	.6	.01	.5	.01	-35
-40	1.3	.02	1.4	.02	1.1	.02	.9	.02	1.3	.02	1.2	.02	1.1	.02	1.0	.02	1.1	.02	1.1	.02	.9	.02	.9	.02	1.0	.02	1.0	.02	.8	.02	.8	.01	.8	.02	.7	.01	.6	.01	.5	.01	-40
-45	1.2	.02	1.3	.02	1.0	.02	.9	.02	1.2	.02	1.2	.02	1.0	.02	.9	.02	1.1	.02	1.0	.02	.8	.02	.8	.02	.9	.02	.9	.02	.8	.01	.7	.01	.8	.02	.6	.01	.5	.01	.4	.01	-45
-50	1.0	.02	1.1	.02	.9	.01	.7	.01	1.1	.02	1.0	.02	.9	.02	.8	.01	.9	.02	.9	.02	.8	.02	.7	.01	.8	.02	.8	.01	.7	.01	.6	.01	.7	.01	.6	.01	.4	.01	.4	.01	-50
-55	.9	.02	1.0	.02	.8	.01	.7	.01	1.0	.02	.9	.02	.8	.02	.8	.01	.9	.02	.8	.01	.7	.01	.6	.01	.8	.01	.7	.01	.6	.01	.6	.01	.6	.01	.5	.01	.4	.01	.3	.01	-55
-60	.8	.01	.9	.02	.7	.01	.6	.01	.9	.02	.9	.01	.7	.01	.7	.01	.8	.02	.7	.01	.6	.01	.5	.01	.7	.01	.6	.01	.5	.01	.5	.01	.5	.01	.4	.01	.3	.01	.2	.01	-60
-65	.7	.01	.9	.01	.6	.01	.5	.01	.8	.01	.8	.01	.7	.01	.6	.01	.7	.01	.6	.01	.5	.01	.5	.01	.6	.01	.5	.01	.5	.01	.4	.01	.5	.01	.4	.01	.3	.01	.2	.00	-65
-70	.7	.01	.8	.01	.5	.01	.4	.01	.7	.01	.7	.01	.6	.01	.5	.01	.6	.01	.6	.01	.5	.01	.4	.01	.5	.01	.5	.01	.4	.01	.3	.01	.4	.01	.3	.01	.2	.00	.1	.00	-70
-75	.6	.01	.7	.01	.4	.01	.4	.01	.7	.01	.6	.01	.5	.01	.5	.01	.6	.01	.5	.01	.4	.01	.4	.01	.5	.01	.4	.01	.3	.01	.3	.01	.4	.01	.3	.01	.2	.00	.1	.00	-75
-80	.5	.01	.6	.01	.4	.01	.3	.01	.6	.01	.5	.01	.4	.01	.4	.01	.5	.01	.4	.01	.3	.01	.3	.01	.4	.01	.3	.01	.3	.01	.2	.00	.3	.01	.2	.00	.1	.00	.1	.00	-80
-85	.4	.01	.5	.01	.3	.01	.2	.00	.5	.01	.5	.01	.4	.01	.3	.01	.4	.01	.4	.01	.3	.01	.2	.01	.4	.01	.3	.01	.2	.00	.2	.00	.2	.01	.2	.00	.1	.00	.1	.00	-85
-90	.3	.01	.4	.01	.2	.00	.2	.00	.4	.01	.4	.01	.3	.01	.3	.01	.4	.01	.3	.01	.2	.01	.2	.00	.3	.01	.2	.00	.2	.00	.1	.00	.2	.00	.1	.00	.1	.00	.1	.00	-90
-95	.3	.00	.4	.01	.2	.00	.1	.00	.4	.01	.3	.01	.3	.01	.2	.00	.3	.01	.3	.01	.2	.00	.2	.00	.2	.01	.2	.00	.1	.00	.1	.00	.2	.00	.1	.00	.1	.00	.0	.00	-95
-100	.2	.00	.3	.01	.1	.00	.1	.00	.3	.01	.3	.01	.2	.00	.2	.00	.3	.01	.2	.00	.1	.00	.1	.00	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	-100

BOLA UNIT ATTACK TABLE

A–5.1

	AT 1		AT 2		AT 3		AT 4		AT 5		AT 6		AT 7		AT 8		AT 9		AT 10		AT 11		AT 12		AT 13		AT 14		AT 15		AT 16		AT 17		AT 18		AT 19		AT 20		
	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	
100	25.8	.51	24.5	.52	21.2	.50	18.3	.49	24.0	.51	21.4	.50	17.1	.50	16.9	.49	26.4	.50	26.3	.48	22.7	.48	21.1	.47	22.9	.48	22.1	.45	18.8	.43	18.0	.41	17.8	.42	14.7	.38	11.0	.28	9.0	.26	100
95	25.3	.51	24.0	.51	20.7	.49	17.3	.47	23.4	.50	20.9	.49	16.7	.49	16.5	.48	25.6	.49	25.5	.47	22.0	.47	20.0	.45	22.2	.47	20.7	.42	17.6	.40	16.8	.38	16.7	.39	13.6	.35	10.1	.26	8.3	.24	95
90	24.6	.50	23.6	.50	19.6	.47	16.3	.44	22.8	.49	20.4	.49	16.4	.48	16.1	.47	24.7	.48	24.6	.46	20.7	.44	18.7	.42	21.0	.44	19.4	.39	16.4	.37	15.6	.35	15.5	.37	12.6	.32	9.2	.24	7.5	.22	90
85	23.3	.47	23.0	.50	18.4	.44	15.2	.42	22.1	.48	19.8	.48	15.9	.47	15.3	.45	23.7	.47	23.2	.44	19.4	.42	17.5	.39	19.6	.42	18.0	.37	15.2	.34	14.4	.32	14.4	.34	11.5	.29	8.4	.21	6.7	.20	85
80	21.9	.44	22.4	.49	17.2	.41	14.2	.39	21.4	.47	19.2	.47	15.1	.45	14.3	.42	22.6	.46	21.6	.41	18.0	.39	16.2	.36	18.3	.39	16.7	.34	14.0	.32	13.2	.30	13.2	.31	10.5	.27	7.5	.19	6.0	.17	80
75	20.4	.42	21.2	.46	16.0	.38	13.1	.36	20.6	.46	18.1	.44	14.1	.42	13.4	.39	21.2	.43	20.1	.38	16.7	.36	15.0	.34	16.9	.36	15.3	.31	12.8	.29	12.0	.27	12.1	.28	9.4	.24	6.6	.17	5.2	.15	75
70	19.0	.39	19.8	.43	14.8	.36	12.1	.33	19.3	.44	16.9	.41	13.2	.39	12.4	.36	19.6	.41	18.5	.36	15.3	.33	13.7	.31	15.6	.33	14.0	.28	11.6	.26	10.8	.24	10.9	.26	8.4	.21	5.7	.15	4.4	.13	70
65	17.5	.36	18.5	.41	13.6	.33	11.0	.31	18.0	.41	15.7	.39	12.2	.36	11.5	.34	18.1	.38	17.0	.33	14.0	.31	12.5	.28	14.2	.31	12.6	.26	10.4	.23	9.6	.21	9.8	.23	7.3	.18	4.9	.13	3.7	.11	65
60	16.1	.33	17.1	.38	12.4	.30	10.0	.28	16.6	.38	14.5	.36	11.3	.34	10.5	.31	16.5	.35	15.4	.30	12.6	.28	11.2	.25	12.9	.28	11.3	.23	9.2	.21	8.4	.19	8.6	.20	6.3	.16	4.0	.10	2.9	.08	60
55	14.6	.31	15.8	.35	11.2	.27	8.9	.25	15.3	.36	13.3	.33	10.3	.31	9.6	.28	15.0	.32	13.9	.27	11.3	.25	10.0	.23	11.5	.25	9.9	.20	8.0	.18	7.2	.16	7.5	.17	5.2	.13	3.1	.08	2.1	.06	55
50	13.3	.28	14.5	.33	10.1	.25	7.9	.22	14.0	.33	12.2	.31	9.4	.28	8.7	.25	13.6	.30	12.4	.25	10.0	.22	8.8	.20	10.3	.22	8.7	.18	6.9	.15	6.1	.13	6.4	.15	4.3	.10	2.3	.06	1.4	.04	50
45	11.9	.25	13.2	.30	8.9	.22	6.9	.20	12.7	.30	11.0	.28	8.5	.26	7.7	.23	12.1	.27	11.0	.22	8.8	.20	7.6	.17	9.0	.20	7.4	.15	5.8	.13	5.0	.11	5.4	.12	3.4	.08	1.6	.04	.8	.02	45
40	10.5	.23	11.9	.27	7.8	.19	6.0	.17	11.5	.27	9.9	.25	7.6	.23	6.9	.20	10.7	.24	9.6	.20	7.6	.17	6.6	.15	7.8	.17	6.2	.13	4.8	.11	4.0	.09	4.4	.10	2.6	.06	.9	.02	.8	.02	40
35	9.2	.20	10.7	.24	6.7	.17	5.0	.14	10.3	.25	8.8	.23	6.7	.20	6.0	.18	9.4	.22	8.3	.17	6.5	.15	5.5	.13	6.6	.15	5.1	.11	3.8	.09	3.0	.07	3.5	.08	1.8	.05	.9	.02	.7	.02	35
30	7.9	.17	9.5	.22	5.7	.14	4.1	.12	9.1	.22	7.8	.20	5.9	.18	5.2	.15	8.2	.19	7.1	.15	5.4	.13	4.5	.11	5.6	.13	4.1	.09	2.9	.07	2.2	.05	2.6	.06	1.1	.03	.8	.02	.7	.02	30
25	6.7	.15	8.3	.19	4.7	.12	3.3	.09	8.0	.20	6.8	.17	5.1	.16	4.4	.13	7.0	.17	6.0	.13	4.5	.11	3.6	.09	4.6	.11	3.2	.07	2.1	.05	1.4	.03	1.9	.04	1.0	.03	.8	.02	.7	.02	25
20	5.6	.12	7.2	.16	3.7	.09	2.5	.07	6.9	.17	5.8	.15	4.3	.13	3.6	.11	6.0	.15	4.9	.11	3.6	.09	2.8	.07	3.7	.08	2.3	.05	1.3	.03	1.2	.03	1.1	.03	1.0	.02	.7	.02	.6	.02	20
15	4.4	.10	6.1	.14	2.8	.07	1.8	.05	5.9	.15	4.9	.13	3.6	.11	2.9	.09	5.0	.13	3.9	.09	2.8	.07	2.0	.05	2.9	.07	1.5	.03	1.1	.03	1.1	.02	1.1	.03	.9	.02	.7	.02	.6	.02	15
10	3.4	.07	5.0	.12	2.0	.05	1.1	.03	5.0	.13	4.1	.11	2.8	.09	2.2	.07	4.1	.11	3.0	.07	2.0	.05	1.3	.03	2.1	.05	1.3	.03	1.1	.02	1.0	.02	1.0	.02	.8	.02	.6	.02	.5	.02	10
5	2.4	.05	4.0	.09	1.3	.03	1.0	.03	4.1	.11	3.3	.09	2.2	.07	1.6	.05	3.3	.09	2.3	.05	1.4	.03	1.1	.03	1.4	.03	1.2	.02	1.0	.02	1.0	.02	1.0	.02	.8	.02	.6	.02	.5	.01	5
0	1.5	.03	3.1	.07	1.1	.03	.9	.03	3.3	.09	2.5	.07	1.6	.05	1.0	.03	2.6	.07	1.5	.03	1.2	.03	1.1	.02	1.2	.03	1.1	.02	1.0	.02	.9	.02	.9	.02	.7	.02	.6	.01	.5	.01	0
-5	1.3	.03	2.2	.05	1.1	.03	.9	.02	2.6	.07	1.8	.05	1.0	.03	.9	.03	1.9	.05	1.3	.02	1.1	.02	1.0	.02	1.1	.02	1.0	.02	.9	.02	.9	.02	.8	.02	.7	.02	.5	.01	.4	.01	-5
-10	1.3	.03	1.4	.03	1.0	.02	.8	.02	1.9	.05	1.2	.03	.9	.03	.8	.02	1.4	.03	1.3	.02	1.0	.02	.9	.02	1.1	.02	1.0	.02	.8	.02	.8	.02	.8	.02	.6	.02	.5	.01	.4	.01	-10
-15	1.2	.02	1.2	.03	.9	.02	.8	.02	1.3	.03	1.0	.03	.8	.02	.8	.02	1.2	.02	1.2	.02	1.0	.02	.9	.02	1.0	.02	.9	.02	.8	.02	.7	.02	.7	.02	.6	.01	.4	.01	.3	.01	-15
-20	1.1	.02	1.1	.02	.9	.02	.7	.02	1.1	.02	1.0	.02	.8	.02	.7	.02	1.2	.02	1.1	.02	.9	.02	.8	.02	.9	.02	.8	.02	.7	.02	.7	.02	.7	.02	.5	.01	.4	.01	.3	.01	-20
-25	1.0	.02	1.1	.02	.8	.02	.7	.02	1.0	.02	.9	.02	.7	.02	.7	.02	1.1	.02	1.0	.02	.8	.02	.8	.02	.9	.02	.8	.02	.7	.01	.6	.01	.6	.01	.5	.01	.3	.01	.3	.01	-25
-30	1.0	.02	1.0	.02	.8	.02	.6	.02	1.0	.02	.9	.02	.7	.02	.6	.02	1.0	.02	.9	.02	.8	.02	.7	.02	.8	.02	.7	.01	.6	.01	.6	.01	.6	.01	.4	.01	.3	.01	.2	.01	-30
-35	.9	.02	.9	.02	.7	.02	.6	.02	.9	.02	.8	.02	.6	.02	.6	.02	.9	.02	.9	.02	.7	.02	.6	.01	.7	.02	.6	.01	.5	.01	.5	.01	.5	.01	.4	.01	.3	.01	.2	.01	-35
-40	.8	.02	.9	.02	.6	.02	.5	.01	.8	.02	.7	.02	.6	.02	.5	.02	.8	.02	.8	.02	.6	.01	.6	.01	.7	.01	.6	.01	.5	.01	.4	.01	.4	.01	.3	.01	.2	.01	.2	.00	-40
-45	.7	.02	.8	.02	.6	.01	.5	.01	.8	.02	.7	.02	.5	.02	.5	.01	.8	.02	.7	.01	.6	.01	.5	.01	.6	.01	.5	.01	.4	.01	.4	.01	.4	.01	.3	.01	.2	.00	.1	.00	-45
-50	.7	.01	.7	.02	.5	.01	.4	.01	.7	.02	.6	.02	.5	.01	.4	.01	.7	.01	.6	.01	.5	.01	.4	.01	.5	.01	.4	.01	.3	.01	.3	.01	.3	.01	.2	.01	.1	.00	.1	.00	-50
-55	.6	.01	.7	.01	.4	.01	.3	.01	.6	.02	.5	.01	.4	.01	.4	.01	.6	.01	.5	.01	.4	.01	.4	.01	.4	.01	.4	.01	.3	.01	.2	.01	.3	.01	.2	.00	.1	.00	.0	.00	-55
-60	.5	.01	.6	.01	.4	.01	.3	.01	.6	.01	.5	.01	.4	.01	.3	.01	.5	.01	.5	.01	.4	.01	.3	.01	.4	.01	.3	.01	.2	.01	.2	.00	.2	.01	.1	.00	.0	.00	.0	.00	-60
-65	.5	.01	.5	.01	.3	.01	.2	.01	.5	.01	.4	.01	.3	.01	.3	.01	.5	.01	.4	.01	.3	.01	.3	.01	.3	.01	.3	.01	.2	.00	.1	.00	.2	.00	.1	.00	.0	.00	.0	.00	-65
-70	.4	.01	.5	.01	.3	.01	.2	.01	.5	.01	.4	.01	.3	.01	.3	.01	.4	.01	.4	.01	.3	.01	.2	.01	.3	.01	.2	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	.0	.00	-70
-75	.3	.01	.4	.01	.2	.01	.2	.00	.4	.01	.3	.01	.3	.01	.2	.01	.3	.01	.3	.01	.2	.01	.2	.00	.2	.01	.2	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	.0	.00	-75
-80	.3	.01	.4	.01	.2	.00	.1	.00	.3	.01	.3	.01	.2	.01	.2	.01	.3	.01	.2	.01	.2	.00	.1	.00	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	.0	.00	-80
-85	.2	.00	.3	.01	.1	.00	.1	.00	.3	.01	.2	.01	.2	.01	.1	.00	.2	.01	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	.0	.00	-85
-90	.2	.00	.2	.01	.1	.00	.1	.00	.2	.01	.2	.01	.1	.00	.1	.00	.2	.01	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	-90
-95	.1	.00	.2	.00	.1	.00	.0	.00	.2	.01	.2	.00	.1	.00	.1	.00	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	-95
-100	.1	.00	.1	.00	.1	.00	.0	.00	.2	.00	.1	.00	.1	.00	.0	.00	.1	.00	.1	.00	.1	.00	.0	.00	.1	.00	.1	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	-100

Range: 50' (+0), 100' (-20), 150' (-40)

COMPOSITE BOW UNIT ATTACK TABLE

A–5.2

	AT 1		AT 2		AT 3		AT 4		AT 5		AT 6		AT 7		AT 8		AT 9		AT 10		AT 11		AT 12		AT 13		AT 14		AT 15		AT 16		AT 17		AT 18		AT 19		AT 20		
	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	
100	30.7	.51	28.3	.51	24.7	.50	21.9	.49	33.0	.51	30.5	.51	26.3	.51	26.2	.50	29.7	.50	29.5	.50	25.9	.49	24.5	.48	29.0	.50	28.9	.49	26.4	.49	26.4	.48	22.1	.49	20.1	.47	17.2	.43	15.0	.41	100
95	29.8	.50	27.6	.51	23.9	.49	21.1	.48	32.1	.50	29.7	.50	25.7	.50	25.5	.49	28.8	.50	28.5	.49	25.0	.48	23.7	.47	28.0	.49	28.0	.48	25.6	.47	25.6	.47	21.3	.48	19.0	.45	16.1	.40	14.0	.38	95
90	28.7	.49	26.9	.50	23.0	.48	19.9	.46	31.0	.49	28.8	.49	25.0	.49	24.8	.48	27.7	.49	27.5	.48	24.0	.47	22.8	.46	27.0	.49	27.0	.47	24.7	.46	24.2	.45	20.5	.47	17.8	.42	15.0	.37	13.0	.35	90
85	27.1	.47	26.1	.49	21.6	.45	18.6	.43	30.0	.48	27.8	.48	24.2	.48	24.0	.47	26.6	.48	26.3	.47	22.9	.46	21.5	.44	25.9	.48	25.9	.46	23.3	.44	22.7	.42	19.3	.44	16.6	.39	13.9	.35	12.0	.33	85
80	25.3	.44	25.2	.48	20.2	.43	17.3	.40	28.8	.48	26.7	.48	23.3	.48	23.2	.46	25.3	.47	25.0	.46	21.4	.44	20.0	.41	24.7	.47	24.3	.44	21.7	.41	21.1	.39	18.0	.42	15.4	.37	12.8	.32	11.0	.30	80
75	23.5	.41	24.1	.47	18.7	.40	16.0	.38	27.5	.46	25.6	.47	22.4	.47	22.2	.45	23.9	.46	23.3	.43	19.9	.41	18.6	.38	23.4	.46	22.6	.41	20.2	.38	19.6	.36	16.7	.39	14.2	.34	11.7	.29	10.0	.27	75
70	21.7	.38	22.5	.44	17.3	.37	14.7	.35	26.1	.45	24.3	.46	21.4	.45	20.9	.42	22.2	.43	21.5	.41	18.3	.38	17.1	.35	21.7	.43	20.9	.38	18.6	.36	18.0	.34	15.4	.36	13.0	.31	10.6	.26	9.0	.24	70
65	19.9	.36	20.9	.41	15.8	.34	13.4	.32	24.5	.44	22.9	.44	20.0	.43	19.4	.39	20.5	.41	19.8	.38	16.8	.36	15.7	.33	20.0	.40	19.2	.35	17.1	.33	16.5	.31	14.1	.33	11.8	.28	9.5	.24	8.0	.22	65
60	18.1	.33	19.3	.39	14.4	.32	12.1	.29	22.6	.41	21.2	.41	18.5	.40	17.9	.37	18.7	.38	18.0	.35	15.2	.33	14.2	.30	18.3	.38	17.5	.33	15.5	.30	14.9	.28	12.8	.31	10.6	.26	8.4	.21	7.0	.19	60
55	16.3	.30	17.7	.36	12.9	.29	10.8	.27	20.7	.38	19.4	.39	17.0	.38	16.4	.34	17.0	.35	16.3	.32	13.7	.30	12.8	.27	16.6	.35	15.8	.30	14.0	.27	13.4	.25	11.5	.28	9.4	.23	7.3	.18	6.0	.16	55
50	14.6	.28	16.2	.33	11.6	.26	9.6	.24	19.0	.36	17.8	.36	15.6	.35	15.0	.31	15.4	.32	14.7	.30	12.2	.27	11.4	.24	15.1	.32	14.2	.27	12.5	.25	11.9	.23	10.3	.25	8.3	.20	6.3	.16	5.1	.14	50
45	13.0	.25	14.7	.30	10.2	.24	8.4	.21	17.2	.33	16.2	.33	14.2	.32	13.5	.29	13.7	.30	13.0	.27	10.8	.25	10.1	.22	13.5	.30	12.6	.25	11.1	.22	10.5	.20	9.1	.23	7.2	.18	5.3	.13	4.2	.11	45
40	11.3	.22	13.2	.28	8.9	.21	7.3	.19	15.5	.30	14.6	.31	12.8	.29	12.2	.26	12.2	.27	11.5	.25	9.5	.22	8.8	.19	12.0	.27	11.1	.22	9.7	.20	9.1	.18	7.9	.20	6.1	.15	4.3	.11	3.3	.09	40
35	9.8	.19	11.8	.25	7.7	.18	6.2	.16	13.9	.28	13.1	.28	11.5	.27	10.9	.24	10.7	.25	10.1	.22	8.2	.20	7.6	.17	10.5	.24	9.7	.20	8.4	.17	7.8	.15	6.8	.17	5.1	.13	3.5	.09	2.5	.07	35
30	8.4	.17	10.4	.22	6.5	.16	5.1	.14	12.3	.25	11.6	.25	10.2	.24	9.6	.21	9.4	.22	8.7	.20	7.0	.17	6.5	.15	9.2	.22	8.4	.17	7.2	.15	6.5	.13	5.8	.15	4.2	.11	2.6	.07	1.8	.05	30
25	7.0	.14	9.1	.20	5.5	.13	4.2	.11	10.8	.23	10.3	.23	9.0	.22	8.5	.19	8.1	.20	7.5	.17	5.9	.15	5.4	.13	7.9	.19	7.1	.15	6.0	.13	5.4	.11	4.9	.13	3.4	.09	1.9	.05	1.1	.03	25
20	5.8	.12	7.9	.17	4.5	.11	3.3	.09	9.4	.20	9.0	.21	7.9	.20	7.3	.17	6.9	.17	6.3	.15	4.9	.13	4.5	.11	6.8	.17	6.0	.13	4.9	.11	4.3	.09	4.0	.11	2.6	.07	1.2	.03	1.0	.03	20
15	4.6	.09	6.7	.15	3.5	.09	2.6	.07	8.2	.18	7.8	.18	6.9	.17	6.3	.14	5.8	.15	5.2	.13	4.0	.11	3.6	.08	5.7	.15	4.9	.11	4.0	.08	3.3	.07	3.2	.09	1.9	.05	1.0	.03	.9	.02	15
10	3.6	.07	5.6	.12	2.7	.07	1.9	.05	7.0	.16	6.7	.16	5.9	.15	5.3	.12	4.8	.13	4.3	.11	3.2	.09	2.8	.07	4.8	.13	3.9	.09	3.1	.07	2.4	.05	2.5	.07	1.3	.03	1.0	.02	.9	.02	10
5	2.7	.05	4.6	.10	2.0	.05	1.3	.03	5.9	.14	5.6	.14	4.9	.13	4.4	.10	4.0	.11	3.5	.09	2.5	.07	2.1	.05	3.9	.11	3.0	.07	2.3	.05	1.6	.03	1.8	.05	1.1	.03	.9	.02	.8	.02	5
0	1.9	.03	3.6	.08	1.4	.03	1.1	.03	4.9	.12	4.7	.12	4.1	.11	3.5	.08	3.2	.09	2.7	.07	1.9	.05	1.4	.03	3.1	.08	2.3	.05	1.5	.03	1.4	.03	1.3	.03	1.0	.02	.9	.02	.8	.02	0
-5	1.6	.03	2.7	.06	1.2	.03	1.1	.02	4.0	.10	3.9	.10	3.3	.09	2.8	.06	2.5	.07	2.1	.05	1.4	.03	1.2	.02	2.5	.07	1.6	.03	1.3	.02	1.3	.02	1.1	.03	1.0	.02	.8	.02	.7	.02	-5
-10	1.5	.02	2.0	.04	1.2	.02	1.0	.02	3.2	.08	3.1	.08	2.5	.07	2.1	.05	1.9	.05	1.5	.03	1.2	.02	1.2	.02	1.9	.05	1.4	.02	1.3	.02	1.2	.02	1.0	.02	.9	.02	.8	.02	.7	.02	-10
-15	1.4	.02	1.4	.03	1.1	.02	.9	.02	2.5	.06	2.4	.06	1.9	.05	1.4	.03	1.5	.03	1.4	.02	1.2	.02	1.1	.02	1.4	.03	1.3	.02	1.2	.02	1.1	.02	1.0	.02	.8	.02	.7	.02	.6	.02	-15
-20	1.3	.02	1.3	.03	1.0	.02	.9	.02	1.9	.04	1.8	.04	1.3	.03	1.2	.02	1.3	.02	1.3	.02	1.1	.02	1.0	.02	1.3	.02	1.2	.02	1.1	.02	1.1	.02	.9	.02	.8	.02	.7	.02	.6	.02	-20
-25	1.2	.02	1.2	.02	1.0	.02	.8	.02	1.4	.02	1.3	.03	1.2	.02	1.1	.02	1.2	.02	1.2	.02	1.0	.02	.9	.02	1.2	.02	1.1	.02	1.0	.02	1.0	.02	.8	.02	.7	.02	.6	.01	.5	.01	-25
-30	1.1	.02	1.1	.02	.9	.02	.7	.02	1.3	.02	1.3	.02	1.1	.02	1.1	.02	1.1	.02	1.1	.02	.9	.02	.9	.02	1.1	.02	1.1	.02	.9	.02	.9	.02	.8	.02	.7	.02	.5	.01	.5	.01	-30
-35	1.0	.02	1.1	.02	.8	.02	.7	.02	1.2	.02	1.2	.02	1.0	.02	1.0	.02	1.0	.02	1.0	.02	.9	.02	.8	.02	1.0	.02	1.0	.02	.9	.02	.8	.02	.7	.02	.6	.01	.5	.01	.4	.01	-35
-40	0.9	.02	1.0	.02	.7	.02	.6	.01	1.2	.02	1.1	.02	.9	.02	.9	.02	1.0	.02	.9	.02	.8	.02	.7	.02	.9	.02	.9	.02	.8	.02	.8	.01	.7	.02	.5	.01	.4	.01	.4	.01	-40
-45	0.8	.02	.9	.02	.7	.01	.6	.01	1.1	.02	1.0	.02	.9	.02	.8	.02	.9	.02	.8	.02	.7	.02	.7	.01	.8	.02	.8	.02	.7	.01	.7	.01	.6	.01	.5	.01	.4	.01	.3	.01	-45
-50	0.7	.01	.8	.02	.6	.01	.5	.01	.9	.02	.9	.02	.8	.02	.7	.02	.8	.02	.7	.01	.6	.01	.6	.01	.7	.02	.7	.01	.6	.01	.6	.01	.5	.01	.4	.01	.3	.01	.3	.01	-50
-55	0.6	.01	.7	.02	.5	.01	.4	.01	.9	.02	.8	.02	.7	.02	.7	.01	.7	.01	.6	.01	.5	.01	.5	.01	.7	.01	.6	.01	.5	.01	.5	.01	.5	.01	.4	.01	.3	.01	.2	.01	-55
-60	0.6	.01	.7	.01	.4	.01	.4	.01	.8	.02	.7	.02	.6	.01	.6	.01	.6	.01	.6	.01	.5	.01	.4	.01	.6	.01	.6	.01	.5	.01	.4	.01	.4	.01	.3	.01	.2	.01	.2	.00	-60
-65	0.5	.01	.6	.01	.4	.01	.3	.01	.7	.01	.6	.01	.6	.01	.5	.01	.5	.01	.5	.01	.4	.01	.4	.01	.5	.01	.5	.01	.4	.01	.4	.01	.3	.01	.3	.01	.2	.00	.1	.00	-65
-70	0.4	.01	.5	.01	.3	.01	.3	.01	.6	.01	.6	.01	.5	.01	.5	.01	.5	.01	.4	.01	.3	.01	.3	.01	.5	.01	.4	.01	.4	.01	.3	.01	.3	.01	.2	.01	.1	.00	.1	.00	-70
-75	0.3	.01	.5	.01	.3	.01	.2	.01	.5	.01	.5	.01	.4	.01	.4	.01	.4	.01	.4	.01	.3	.01	.3	.01	.4	.01	.4	.01	.3	.01	.3	.01	.2	.01	.2	.00	.1	.00	.1	.00	-75
-80	0.3	.01	.4	.01	.2	.01	.2	.00	.5	.01	.4	.01	.4	.01	.4	.01	.3	.01	.3	.01	.2	.01	.2	.01	.3	.01	.3	.01	.2	.01	.2	.00	.2	.01	.1	.00	.1	.00	.0	.00	-80
-85	0.2	.00	.3	.01	.2	.00	.1	.00	.4	.01	.4	.01	.3	.01	.3	.01	.3	.01	.3	.01	.2	.01	.2	.00	.3	.01	.2	.01	.2	.00	.2	.00	.2	.00	.1	.00	.0	.00	.0	.00	-85
-90	0.2	.00	.3	.01	.1	.00	.1	.00	.3	.01	.3	.01	.3	.01	.3	.01	.2	.01	.2	.01	.2	.00	.1	.00	.2	.01	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	-90
-95	0.1	.00	.2	.00	.1	.00	.1	.00	.3	.01	.3	.01	.2	.01	.2	.01	.2	.01	.2	.00	.1	.00	.1	.00	.2	.01	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	-95
-100	0.1	.00	.2	.00	.1	.00	.1	.00	.2	.01	.2	.01	.2	.01	.2	.00	.2	.00	.1	.00	.1	.00	.1	.00	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	.0	.00	-100

Range: 10' (+25), 100' (+0), 200' (-35), 300' (-60)

HEAVY CROSSBOW UNIT ATTACK TABLE

A–5.3

	AT 1		AT 2		AT 3		AT 4		AT 5		AT 6		AT 7		AT 8		AT 9		AT 10		AT 11		AT 12		AT 13		AT 14		AT 15		AT 16		AT 17		AT 18		AT 19		AT 20		
	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	
100	36.1	.52	35.1	.52	31.4	.51	28.7	.50	35.0	.52	32.4	.51	28.2	.51	28.1	.50	32.5	.51	32.4	.50	28.8	.50	27.3	.49	30.9	.51	30.9	.50	28.5	.50	28.6	.49	25.0	.49	23.0	.48	20.6	.45	18.2	.43	100
95	35.1	.51	34.3	.51	30.4	.50	27.7	.49	34.1	.51	31.6	.51	27.6	.50	27.5	.49	31.6	.50	31.3	.49	27.8	.49	26.4	.48	30.0	.50	30.0	.49	27.7	.49	27.8	.48	24.2	.48	22.3	.47	19.3	.42	17.1	.41	95
90	33.9	.50	33.3	.51	29.2	.49	26.6	.48	33.1	.50	30.7	.50	26.9	.50	26.7	.49	30.5	.49	30.2	.49	26.8	.48	25.5	.47	29.0	.49	29.0	.48	26.8	.48	26.9	.47	23.4	.47	21.1	.44	18.1	.40	15.9	.38	90
85	32.6	.50	32.3	.50	27.9	.48	25.0	.46	32.0	.49	29.7	.49	26.0	.49	25.9	.48	29.3	.49	29.0	.48	25.6	.47	24.5	.46	27.9	.48	27.9	.47	25.8	.47	25.4	.45	22.5	.46	19.7	.42	16.8	.37	14.8	.35	85
80	31.0	.48	31.1	.49	26.2	.46	23.3	.43	30.8	.49	28.6	.48	25.2	.48	25.0	.47	28.0	.48	27.7	.47	24.4	.46	23.0	.43	26.6	.47	26.7	.46	24.3	.44	23.7	.42	21.2	.44	18.4	.39	15.6	.34	13.6	.32	80
75	28.9	.45	29.9	.48	24.3	.43	21.6	.40	29.5	.48	27.4	.47	24.2	.47	24.1	.46	26.6	.47	26.2	.46	22.7	.44	21.4	.40	25.3	.46	25.0	.44	22.7	.42	22.1	.39	19.7	.41	17.0	.36	14.3	.31	12.5	.30	75
70	26.8	.43	28.4	.47	22.5	.40	19.9	.38	28.1	.47	26.2	.46	23.2	.46	23.1	.45	25.1	.46	24.4	.43	21.0	.41	19.8	.38	23.9	.45	23.2	.41	21.0	.39	20.4	.37	18.3	.38	15.7	.33	13.1	.29	11.3	.27	70
65	24.7	.40	26.4	.44	20.6	.37	18.2	.35	26.7	.46	24.8	.45	22.1	.45	21.6	.42	23.2	.43	22.5	.40	19.3	.38	18.2	.35	22.2	.43	21.4	.38	19.4	.36	18.8	.34	16.8	.36	14.3	.31	11.8	.26	10.2	.24	65
60	22.6	.37	24.4	.42	18.8	.35	16.5	.32	25.0	.44	23.3	.44	20.6	.43	20.0	.39	21.3	.40	20.6	.38	17.6	.35	16.6	.32	20.4	.40	19.6	.35	17.7	.33	17.1	.31	15.4	.33	13.0	.28	10.6	.23	9.0	.21	60
55	20.5	.34	22.4	.39	16.9	.32	14.8	.29	23.0	.41	21.5	.41	19.0	.40	18.4	.37	19.4	.38	18.7	.35	15.9	.33	15.0	.29	18.6	.37	17.8	.33	16.1	.31	15.5	.28	13.9	.30	11.6	.25	9.3	.20	7.9	.19	55
50	18.6	.32	20.6	.36	15.2	.29	13.2	.27	21.2	.39	19.8	.38	17.5	.38	16.9	.34	17.7	.35	17.0	.32	14.4	.30	13.6	.27	16.9	.35	16.1	.30	14.5	.28	13.9	.26	12.6	.28	10.4	.22	8.2	.18	6.8	.16	50
45	16.6	.29	18.7	.33	13.5	.27	11.6	.24	19.3	.36	18.0	.36	16.0	.35	15.4	.31	15.9	.32	15.2	.30	12.8	.27	12.1	.24	15.2	.32	14.4	.27	13.0	.25	12.4	.23	11.2	.25	9.1	.20	7.0	.15	5.7	.13	45
40	14.7	.26	16.8	.31	11.9	.24	10.1	.21	17.5	.33	16.3	.33	14.5	.32	13.9	.29	14.2	.30	13.5	.27	11.3	.25	10.6	.22	13.6	.29	12.8	.25	11.5	.23	10.9	.20	9.9	.22	7.9	.17	5.9	.13	4.7	.11	40
35	12.9	.24	15.1	.28	10.3	.21	8.7	.19	15.7	.31	14.7	.30	13.1	.29	12.5	.26	12.6	.27	11.9	.24	9.9	.22	9.3	.19	12.1	.27	11.3	.22	10.1	.20	9.5	.18	8.6	.20	6.7	.15	4.8	.11	3.7	.09	35
30	11.3	.21	13.4	.25	8.9	.19	7.4	.16	14.1	.28	13.2	.28	11.8	.27	11.1	.24	11.1	.24	10.4	.22	8.5	.20	8.0	.17	10.6	.24	9.9	.20	8.7	.18	8.1	.15	7.5	.17	5.7	.13	3.9	.09	2.9	.07	30
25	9.7	.18	11.8	.23	7.5	.16	6.2	.14	12.5	.25	11.7	.25	10.5	.24	9.9	.21	9.7	.22	9.0	.20	7.3	.17	6.8	.15	9.3	.22	8.5	.17	7.4	.15	6.8	.13	6.4	.15	4.7	.11	3.0	.07	2.1	.05	25
20	8.2	.16	10.3	.20	6.2	.14	5.0	.11	11.0	.23	10.4	.23	9.3	.22	8.7	.19	8.4	.20	7.7	.17	6.2	.15	5.7	.13	8.0	.19	7.3	.15	6.3	.13	5.6	.11	5.3	.13	3.7	.08	2.2	.05	1.3	.03	20
15	6.8	.13	8.9	.17	5.1	.11	4.0	.09	9.6	.20	9.1	.20	8.1	.20	7.5	.17	7.2	.17	6.5	.15	5.2	.13	4.7	.10	6.9	.17	6.1	.13	5.1	.11	4.5	.09	4.4	.11	2.9	.07	1.4	.03	1.1	.03	15
10	5.5	.11	7.5	.15	4.1	.09	3.1	.07	8.3	.18	7.9	.18	7.0	.17	6.4	.14	6.0	.15	5.4	.13	4.2	.11	3.8	.08	5.8	.15	5.0	.11	4.1	.09	3.5	.07	3.5	.08	2.1	.05	1.2	.03	1.0	.02	10
5	4.3	.08	6.3	.13	3.2	.07	2.3	.05	7.1	.16	6.7	.16	6.0	.15	5.5	.12	5.0	.13	4.5	.11	3.4	.09	3.0	.07	4.8	.12	4.0	.08	3.2	.07	2.5	.05	2.7	.07	1.4	.03	1.1	.02	1.0	.02	5
0	3.3	.06	5.1	.10	2.4	.05	1.6	.03	6.0	.14	5.7	.14	5.0	.13	4.5	.10	4.1	.11	3.6	.09	2.6	.07	2.2	.05	4.0	.10	3.1	.07	2.4	.05	1.7	.03	2.0	.05	1.2	.03	1.0	.02	.9	.02	0
-5	2.4	.04	4.1	.08	1.7	.03	1.4	.03	5.0	.12	4.8	.12	4.2	.11	3.6	.08	3.3	.09	2.8	.07	2.0	.05	1.5	.03	3.2	.08	2.4	.05	1.6	.03	1.5	.03	1.4	.03	1.1	.02	1.0	.02	.9	.02	-5
-10	1.8	.03	3.1	.06	1.5	.03	1.4	.02	4.1	.10	3.9	.10	3.4	.09	2.8	.06	2.6	.07	2.2	.05	1.5	.03	1.3	.02	2.5	.07	1.7	.03	1.4	.03	1.4	.02	1.2	.02	1.1	.02	.9	.02	.8	.02	-10
-15	1.7	.03	2.3	.04	1.4	.02	1.3	.02	3.3	.08	3.1	.08	2.6	.07	2.1	.05	2.0	.05	1.6	.03	1.3	.02	1.2	.02	2.0	.05	1.4	.02	1.3	.02	1.3	.02	1.1	.02	1.0	.02	.9	.02	.8	.02	-15
-20	1.6	.02	1.6	.03	1.3	.02	1.2	.02	2.6	.06	2.4	.06	2.0	.05	1.4	.03	1.5	.03	1.4	.02	1.2	.02	1.2	.02	1.5	.03	1.4	.02	1.2	.02	1.2	.02	1.1	.02	.9	.02	.8	.02	.7	.02	-20
-25	1.5	.02	1.5	.03	1.2	.02	1.1	.02	1.9	.04	1.8	.04	1.4	.03	1.3	.02	1.4	.02	1.3	.02	1.2	.02	1.1	.02	1.3	.02	1.3	.02	1.1	.02	1.1	.02	1.0	.02	.9	.02	.7	.02	.6	.02	-25
-30	1.4	.02	1.4	.02	1.1	.02	1.0	.02	1.5	.03	1.4	.02	1.2	.02	1.2	.02	1.3	.02	1.2	.02	1.1	.02	1.0	.02	1.2	.02	1.2	.02	1.1	.02	1.0	.02	.9	.02	.8	.02	.7	.01	.6	.01	-30
-35	1.3	.02	1.3	.02	1.1	.02	.9	.02	1.4	.02	1.3	.02	1.1	.02	1.1	.02	1.2	.02	1.1	.02	1.0	.02	.9	.02	1.1	.02	1.1	.02	1.0	.02	1.0	.02	.9	.02	.7	.02	.6	.01	.5	.01	-35
-40	1.2	.02	1.2	.02	1.0	.02	.8	.02	1.3	.02	1.2	.02	1.0	.02	1.0	.02	1.1	.02	1.0	.02	.9	.02	.8	.02	1.0	.02	1.0	.02	.9	.02	.9	.02	.8	.02	.7	.01	.5	.01	.5	.01	-40
-45	1.0	.02	1.1	.02	.9	.02	.8	.01	1.2	.02	1.1	.02	1.0	.02	.9	.02	1.0	.02	1.0	.02	.8	.02	.8	.01	.9	.02	.9	.02	.8	.02	.8	.01	.7	.02	.6	.01	.5	.01	.4	.01	-45
-50	.9	.02	1.0	.02	.8	.01	.7	.01	1.1	.02	1.0	.02	.9	.02	.8	.02	.9	.02	.8	.02	.7	.01	.7	.01	.8	.02	.8	.01	.7	.01	.7	.01	.6	.01	.5	.01	.4	.01	.3	.01	-50
-55	.8	.01	.9	.02	.7	.01	.6	.01	1.0	.02	.9	.02	.8	.02	.8	.02	.8	.02	.8	.01	.6	.01	.6	.01	.8	.02	.7	.01	.6	.01	.6	.01	.6	.01	.5	.01	.3	.01	.3	.01	-55
-60	.7	.01	.8	.02	.6	.01	.5	.01	.9	.02	.8	.02	.7	.02	.7	.01	.7	.01	.7	.01	.6	.01	.5	.01	.7	.01	.6	.01	.6	.01	.5	.01	.5	.01	.4	.01	.3	.01	.2	.01	-60
-65	.6	.01	.7	.01	.5	.01	.4	.01	.8	.02	.7	.01	.7	.01	.6	.01	.6	.01	.6	.01	.5	.01	.5	.01	.6	.01	.6	.01	.5	.01	.5	.01	.4	.01	.3	.01	.2	.01	.2	.00	-65
-70	.6	.01	.7	.01	.4	.01	.4	.01	.7	.01	.7	.01	.6	.01	.6	.01	.5	.01	.5	.01	.4	.01	.4	.01	.5	.01	.5	.01	.4	.01	.4	.01	.4	.01	.3	.01	.2	.00	.1	.00	-70
-75	.5	.01	.6	.01	.4	.01	.3	.01	.6	.01	.6	.01	.5	.01	.5	.01	.5	.01	.4	.01	.4	.01	.3	.01	.5	.01	.4	.01	.4	.01	.3	.01	.3	.01	.2	.01	.1	.00	.1	.00	-75
-80	.4	.01	.5	.01	.3	.01	.2	.01	.5	.01	.5	.01	.5	.01	.4	.01	.4	.01	.4	.01	.3	.01	.3	.01	.4	.01	.4	.01	.3	.01	.3	.01	.3	.01	.2	.00	.1	.00	.1	.00	-80
-85	.3	.01	.4	.01	.2	.01	.2	.00	.5	.01	.4	.01	.4	.01	.4	.01	.4	.01	.3	.01	.3	.01	.2	.01	.3	.01	.3	.01	.3	.01	.2	.00	.2	.01	.1	.00	.1	.00	.1	.00	-85
-90	.3	.01	.4	.01	.2	.00	.1	.00	.4	.01	.4	.01	.3	.01	.3	.01	.3	.01	.3	.01	.2	.01	.2	.00	.3	.01	.2	.01	.2	.00	.2	.00	.2	.00	.1	.00	.1	.00	.0	.00	-90
-95	.2	.00	.3	.01	.2	.00	.1	.00	.3	.01	.3	.01	.3	.01	.3	.01	.2	.01	.2	.01	.2	.00	.1	.00	.2	.01	.2	.00	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	-95
-100	.2	.00	.3	.01	.1	.00	.1	.00	.3	.01	.3	.01	.2	.01	.2	.01	.2	.01	.2	.00	.1	.00	.1	.00	.2	.01	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	-100

Range: 20' (+30), 100' (+0), 200' (-25), 300' (-40), 360'(-55)

LIGHT CROSSBOW UNIT ATTACK TABLE

A–5.4

	AT 1		AT 2		AT 3		AT 4		AT 5		AT 6		AT 7		AT 8		AT 9		AT 10		AT 11		AT 12		AT 13		AT 14		AT 15		AT 16		AT 17		AT 18		AT 19		AT 20		
	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	
100	30.2	.51	29.1	.51	25.5	.50	22.7	.49	32.0	.51	29.4	.51	25.4	.50	25.3	.49	28.9	.50	28.7	.50	25.1	.49	23.7	.48	28.0	.50	27.9	.48	25.4	.48	25.4	.47	21.0	.48	18.6	.45	15.6	.40	13.4	.38	100
95	29.3	.50	28.4	.51	24.6	.49	21.9	.48	31.1	.50	28.6	.50	24.8	.50	24.7	.49	28.0	.50	27.8	.49	24.3	.48	22.9	.47	27.1	.49	27.0	.47	24.6	.47	24.0	.45	20.3	.46	17.4	.42	14.5	.37	12.4	.35	95
90	28.3	.49	27.6	.50	23.7	.48	20.6	.46	30.1	.49	27.7	.49	24.1	.49	24.0	.48	27.0	.49	26.7	.48	23.3	.47	22.1	.46	26.0	.48	26.0	.46	23.2	.44	22.5	.42	19.1	.44	16.3	.39	13.5	.35	11.5	.32	90
85	27.0	.48	26.8	.49	22.3	.46	19.3	.43	29.0	.48	26.7	.48	23.4	.48	23.2	.47	25.9	.48	25.6	.47	22.2	.46	20.8	.44	24.9	.47	24.4	.44	21.7	.42	21.0	.39	17.9	.41	15.1	.36	12.4	.32	10.5	.30	85
80	25.3	.45	25.8	.48	20.8	.43	17.9	.40	27.8	.47	25.6	.47	22.5	.47	22.4	.45	24.6	.47	24.3	.46	20.8	.44	19.4	.41	23.6	.45	22.8	.41	20.2	.39	19.5	.37	16.6	.39	14.0	.34	11.4	.29	9.6	.27	80
75	23.5	.42	24.7	.47	19.3	.40	16.6	.38	26.5	.46	24.4	.46	21.6	.46	21.1	.43	23.3	.46	22.7	.43	19.3	.41	18.0	.38	22.0	.42	21.1	.38	18.7	.36	18.0	.34	15.4	.36	12.8	.31	10.3	.26	8.6	.24	75
70	21.8	.40	23.0	.44	17.8	.37	15.2	.35	25.1	.45	23.2	.45	20.3	.44	19.6	.40	21.7	.43	21.0	.41	17.8	.38	16.6	.35	20.3	.40	19.5	.36	17.2	.33	16.5	.31	14.1	.33	11.7	.28	9.3	.24	7.7	.21	70
65	20.0	.37	21.4	.41	16.3	.35	13.9	.32	23.4	.43	21.6	.43	18.8	.41	18.2	.38	20.0	.41	19.3	.38	16.3	.36	15.2	.33	18.7	.37	17.8	.33	15.7	.31	15.0	.28	12.9	.30	10.5	.25	8.2	.21	6.7	.19	65
60	18.3	.34	19.7	.38	14.8	.32	12.5	.29	21.5	.40	19.9	.40	17.4	.38	16.7	.35	18.3	.38	17.6	.35	14.8	.33	13.8	.30	17.0	.34	16.2	.30	14.2	.28	13.5	.26	11.6	.28	9.4	.23	7.2	.18	5.8	.16	60
55	16.5	.31	18.1	.36	13.3	.29	11.2	.27	19.7	.37	18.2	.37	15.9	.35	15.3	.32	16.6	.35	15.9	.32	13.3	.30	12.4	.27	15.4	.31	14.5	.27	12.7	.25	12.0	.23	10.4	.25	8.2	.20	6.1	.15	4.8	.13	55
50	14.9	.29	16.6	.33	11.9	.26	10.0	.24	17.9	.35	16.6	.34	14.6	.33	13.9	.29	15.0	.32	14.3	.30	11.9	.27	11.1	.24	13.9	.29	13.0	.25	11.3	.22	10.6	.20	9.2	.22	7.2	.17	5.2	.13	4.0	.11	50
45	13.3	.26	15.0	.30	10.5	.24	8.7	.21	16.2	.32	15.0	.32	13.2	.30	12.5	.27	13.4	.30	12.7	.27	10.5	.25	9.8	.22	12.3	.26	11.5	.22	9.9	.20	9.2	.18	8.0	.20	6.1	.15	4.2	.11	3.2	.09	45
40	11.7	.23	13.5	.28	9.1	.21	7.5	.19	14.5	.29	13.5	.29	11.9	.27	11.2	.24	11.9	.27	11.2	.25	9.2	.22	8.5	.19	10.9	.24	10.0	.20	8.6	.17	7.9	.15	6.9	.17	5.1	.13	3.4	.09	2.4	.07	40
35	10.2	.21	12.0	.25	7.9	.18	6.4	.16	12.9	.27	12.0	.26	10.6	.25	9.9	.22	10.5	.25	9.8	.22	8.0	.20	7.4	.17	9.5	.21	8.6	.17	7.3	.15	6.6	.13	5.9	.15	4.2	.10	2.6	.07	1.7	.05	35
30	8.8	.18	10.6	.22	6.7	.16	5.3	.14	11.5	.24	10.6	.24	9.4	.22	8.7	.19	9.2	.22	8.5	.20	6.8	.17	6.3	.15	8.2	.19	7.4	.15	6.1	.13	5.4	.11	4.9	.12	3.4	.08	1.9	.05	1.1	.03	30
25	7.4	.15	9.3	.20	5.6	.13	4.3	.11	10.0	.22	9.3	.21	8.2	.20	7.6	.17	7.9	.20	7.3	.17	5.8	.15	5.3	.13	7.0	.16	6.2	.13	5.1	.11	4.4	.09	4.1	.10	2.6	.07	1.2	.03	.9	.03	25
20	6.2	.13	8.0	.17	4.6	.11	3.4	.09	8.7	.19	8.1	.19	7.1	.17	6.5	.15	6.8	.17	6.2	.15	4.8	.13	4.4	.11	5.9	.14	5.1	.10	4.1	.08	3.4	.07	3.2	.08	1.9	.05	1.0	.03	.9	.02	20
15	5.0	.10	6.8	.15	3.6	.09	2.6	.07	7.5	.17	7.0	.17	6.1	.15	5.5	.13	5.7	.15	5.1	.13	3.9	.11	3.5	.08	4.9	.12	4.1	.08	3.1	.07	2.4	.05	2.5	.07	1.2	.03	.9	.02	.8	.02	15
10	3.9	.08	5.7	.12	2.8	.07	1.9	.05	6.3	.15	5.9	.15	5.1	.13	4.6	.11	4.8	.13	4.2	.11	3.2	.09	2.7	.07	4.0	.10	3.2	.07	2.3	.05	1.6	.03	1.9	.05	1.1	.03	.9	.02	.8	.02	10
5	3.0	.06	4.6	.10	2.1	.05	1.3	.03	5.3	.12	5.0	.12	4.2	.11	3.7	.08	3.9	.11	3.4	.09	2.4	.07	2.0	.05	3.1	.08	2.3	.05	1.5	.03	1.4	.03	1.3	.03	1.0	.02	.8	.02	.7	.02	5
0	2.1	.04	3.7	.08	1.5	.03	1.2	.03	4.4	.10	4.1	.10	3.4	.09	2.8	.07	3.1	.09	2.6	.07	1.9	.05	1.4	.03	2.4	.06	1.6	.03	1.3	.03	1.3	.02	1.1	.03	.9	.02	.8	.02	.7	.02	0
-5	1.5	.03	2.8	.06	1.3	.03	1.1	.02	3.5	.08	3.3	.08	2.6	.07	2.1	.05	2.5	.07	2.0	.05	1.4	.03	1.2	.02	1.8	.04	1.4	.02	1.3	.02	1.2	.02	1.0	.02	.9	.02	.7	.02	.6	.02	-5
-10	1.5	.03	2.0	.04	1.2	.02	1.0	.02	2.8	.07	2.6	.06	2.0	.05	1.4	.03	1.9	.05	1.5	.03	1.2	.02	1.1	.02	1.4	.03	1.3	.02	1.2	.02	1.1	.02	1.0	.02	.8	.02	.7	.02	.6	.02	-10
-15	1.4	.02	1.4	.03	1.1	.02	1.0	.02	2.1	.05	2.0	.05	1.3	.03	1.2	.02	1.4	.03	1.3	.02	1.1	.02	1.1	.02	1.3	.02	1.2	.02	1.1	.02	1.1	.02	.9	.02	.8	.02	.6	.02	.5	.02	-15
-20	1.3	.02	1.3	.02	1.1	.02	.9	.02	1.6	.03	1.4	.03	1.2	.02	1.1	.02	1.3	.02	1.2	.02	1.1	.02	1.0	.02	1.2	.02	1.2	.02	1.0	.02	1.0	.02	.8	.02	.7	.02	.6	.01	.5	.01	-20
-25	1.2	.02	1.3	.02	1.0	.02	.8	.02	1.4	.02	1.3	.02	1.1	.02	1.1	.02	1.2	.02	1.2	.02	1.0	.02	.9	.02	1.1	.02	1.1	.02	1.0	.02	.9	.02	.8	.02	.7	.02	.5	.01	.4	.01	-25
-30	1.1	.02	1.2	.02	.9	.02	.8	.02	1.3	.02	1.2	.02	1.0	.02	1.0	.02	1.1	.02	1.1	.02	.9	.02	.8	.02	1.0	.02	1.0	.02	.9	.02	.8	.02	.7	.02	.6	.01	.5	.01	.4	.01	-30
-35	1.0	.02	1.1	.02	.8	.02	.7	.02	1.2	.02	1.1	.02	1.0	.02	.9	.02	1.0	.02	1.0	.02	.8	.02	.8	.02	1.0	.02	.9	.02	.8	.02	.8	.01	.7	.02	.5	.01	.4	.01	.3	.01	-35
-40	.9	.02	1.0	.02	.8	.02	.6	.01	1.1	.02	1.0	.02	.9	.02	.9	.02	.9	.02	.9	.02	.8	.02	.7	.02	.9	.02	.8	.02	.7	.01	.7	.01	.6	.01	.5	.01	.4	.01	.3	.01	-40
-45	.8	.02	.9	.02	.7	.01	.6	.01	1.0	.02	.9	.02	.8	.02	.8	.02	.8	.02	.8	.02	.7	.02	.6	.01	.8	.02	.7	.01	.7	.01	.6	.01	.5	.01	.4	.01	.3	.01	.2	.01	-45
-50	.7	.01	.8	.02	.6	.01	.5	.01	.9	.02	.8	.02	.7	.02	.7	.01	.7	.02	.7	.01	.6	.01	.5	.01	.7	.01	.6	.01	.6	.01	.5	.01	.5	.01	.4	.01	.3	.01	.2	.01	-50
-55	.7	.01	.7	.02	.5	.01	.4	.01	.8	.02	.7	.02	.7	.01	.6	.01	.7	.01	.6	.01	.5	.01	.5	.01	.6	.01	.6	.01	.5	.01	.5	.01	.4	.01	.3	.01	.2	.01	.2	.00	-55
-60	.6	.01	.7	.01	.5	.01	.4	.01	.7	.01	.7	.01	.6	.01	.6	.01	.6	.01	.6	.01	.5	.01	.4	.01	.5	.01	.5	.01	.4	.01	.4	.01	.3	.01	.3	.01	.2	.00	.1	.00	-60
-65	.5	.01	.6	.01	.4	.01	.3	.01	.6	.01	.6	.01	.5	.01	.5	.01	.5	.01	.5	.01	.4	.01	.4	.01	.5	.01	.4	.01	.4	.01	.3	.01	.3	.01	.2	.01	.1	.00	.1	.00	-65
-70	.4	.01	.5	.01	.3	.01	.3	.01	.6	.01	.5	.01	.5	.01	.4	.01	.5	.01	.4	.01	.3	.01	.3	.01	.4	.01	.4	.01	.3	.01	.3	.01	.2	.01	.2	.00	.1	.00	.1	.00	-70
-75	.4	.01	.5	.01	.3	.01	.2	.01	.5	.01	.5	.01	.4	.01	.4	.01	.4	.01	.4	.01	.3	.01	.3	.01	.3	.01	.3	.01	.2	.01	.2	.00	.2	.01	.1	.00	.1	.00	.0	.00	-75
-80	.3	.01	.4	.01	.2	.01	.2	.00	.4	.01	.4	.01	.4	.01	.3	.01	.3	.01	.3	.01	.2	.01	.2	.01	.3	.01	.2	.01	.2	.00	.2	.00	.2	.00	.1	.00	.0	.00	.0	.00	-80
-85	.2	.01	.3	.01	.2	.00	.1	.00	.4	.01	.3	.01	.3	.01	.3	.01	.3	.01	.3	.01	.2	.01	.2	.00	.2	.01	.2	.00	.2	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	-85
-90	.2	.00	.3	.01	.1	.00	.1	.00	.3	.01	.3	.01	.3	.01	.2	.01	.2	.01	.2	.01	.2	.00	.1	.00	.2	.00	.2	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	.0	.00	-90
-95	.1	.00	.2	.00	.1	.00	.1	.00	.3	.01	.2	.01	.2	.01	.2	.00	.2	.01	.2	.00	.1	.00	.1	.00	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	.0	.00	-95
-100	.1	.00	.2	.00	.1	.00	.1	.00	.2	.01	.2	.01	.2	.00	.1	.00	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	.0	.00	-100

Range: 10'(+15), 100'(+0), 200'(-35), 300'(-50), 360'(-75)

LONG BOW UNIT ATTACK TABLE

A–5.5

	AT 1		AT 2		AT 3		AT 4		AT 5		AT 6		AT 7		AT 8		AT 9		AT 10		AT 11		AT 12		AT 13		AT 14		AT 15		AT 16		AT 17		AT 18		AT 19		AT 20		
	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	
100	31.8	.51	30.8	.52	27.2	.50	24.3	.50	33.8	.51	31.3	.51	27.1	.51	27.1	.50	30.5	.50	30.3	.50	26.7	.49	25.3	.49	30.0	.52	29.9	.51	27.6	.51	27.7	.50	22.7	.48	20.8	.47	18.3	.43	16.1	.42	100
95	30.9	.50	30.1	.51	26.4	.49	23.4	.49	32.9	.50	30.5	.50	26.5	.50	26.3	.49	29.5	.50	29.3	.49	25.8	.49	24.5	.48	29.0	.51	29.1	.50	26.9	.50	26.9	.50	21.9	.47	19.9	.45	17.1	.41	15.0	.39	95
90	29.9	.49	29.3	.50	25.4	.48	22.4	.48	31.8	.49	29.5	.49	25.7	.50	25.6	.48	28.4	.49	28.2	.48	24.7	.48	23.5	.47	28.0	.50	28.1	.50	26.0	.49	25.9	.48	21.0	.46	18.7	.42	16.0	.38	14.0	.36	90
85	28.7	.48	28.4	.49	24.1	.47	21.2	.46	30.7	.49	28.5	.48	24.9	.49	24.8	.47	27.3	.48	26.9	.47	23.6	.47	22.5	.45	27.0	.50	26.9	.49	24.8	.48	24.3	.45	20.1	.45	17.4	.40	14.8	.35	12.9	.33	85
80	27.0	.46	27.4	.49	22.5	.44	19.7	.43	29.5	.48	27.4	.48	24.0	.48	23.8	.46	25.9	.47	25.6	.46	22.3	.45	21.0	.42	25.7	.49	25.6	.47	23.2	.45	22.7	.43	18.7	.42	16.2	.37	13.7	.32	11.9	.31	80
75	25.1	.43	26.3	.47	20.9	.41	18.3	.41	28.1	.47	26.2	.47	23.1	.47	22.9	.45	24.5	.46	24.1	.45	20.7	.42	19.5	.40	24.4	.48	23.8	.44	21.6	.42	21.1	.40	17.4	.39	14.9	.34	12.5	.30	10.8	.28	75
70	23.3	.40	24.7	.45	19.3	.38	16.8	.38	26.7	.45	24.9	.46	22.0	.46	21.7	.44	22.8	.43	22.3	.42	19.1	.40	18.0	.37	22.9	.47	22.1	.42	20.0	.40	19.5	.37	16.0	.37	13.7	.31	11.4	.27	9.8	.25	70
65	21.4	.38	22.9	.42	17.7	.36	15.4	.35	25.1	.44	23.5	.44	20.8	.44	20.2	.41	21.0	.41	20.5	.39	17.5	.37	16.5	.34	21.2	.44	20.3	.39	18.4	.37	17.9	.34	14.7	.34	12.4	.29	10.2	.24	8.7	.22	65
60	19.6	.35	21.2	.40	16.1	.33	13.9	.32	23.2	.41	21.7	.41	19.3	.42	18.6	.38	19.2	.38	18.7	.36	15.9	.34	15.0	.31	19.4	.41	18.6	.36	16.8	.34	16.3	.32	13.3	.31	11.2	.26	9.1	.21	7.7	.20	60
55	17.7	.32	19.4	.37	14.5	.30	12.5	.30	21.2	.39	19.9	.39	17.7	.39	17.1	.36	17.4	.35	16.9	.34	14.3	.31	13.5	.29	17.7	.38	16.8	.33	15.2	.31	14.7	.29	12.0	.28	9.9	.23	7.9	.19	6.6	.17	55
50	16.0	.30	17.8	.34	13.0	.27	11.1	.27	19.4	.36	18.2	.36	16.3	.36	15.7	.33	15.7	.32	15.2	.31	12.8	.29	12.1	.26	16.0	.36	15.2	.31	13.8	.29	13.2	.26	10.7	.26	8.8	.21	6.9	.16	5.7	.14	50
45	14.3	.27	16.1	.31	11.5	.25	9.8	.24	17.6	.33	16.5	.33	14.8	.34	14.2	.30	14.1	.30	13.5	.28	11.3	.26	10.7	.23	14.4	.33	13.6	.28	12.2	.26	11.7	.24	9.4	.23	7.6	.18	5.8	.14	4.7	.12	45
40	12.6	.24	14.5	.29	10.1	.22	8.5	.22	15.8	.30	14.9	.31	13.4	.31	12.8	.28	12.5	.27	12.0	.26	9.9	.24	9.3	.21	12.8	.30	12.0	.25	10.8	.23	10.2	.21	8.2	.21	6.6	.16	4.9	.12	3.9	.10	40
35	11.0	.21	13.0	.26	8.7	.19	7.3	.19	14.1	.28	13.3	.28	12.1	.28	11.4	.25	11.0	.25	10.5	.23	8.6	.21	8.1	.18	11.4	.27	10.5	.23	9.4	.20	8.8	.18	7.1	.18	5.6	.14	4.0	.10	3.0	.08	35
30	9.5	.19	11.5	.23	7.5	.17	6.2	.17	12.5	.25	11.9	.25	10.8	.26	10.1	.23	9.6	.22	9.1	.21	7.4	.19	7.0	.16	10.0	.25	9.1	.20	8.1	.18	7.5	.16	6.1	.16	4.6	.12	3.1	.08	2.3	.06	30
25	8.1	.16	10.1	.21	6.3	.14	5.2	.14	11.0	.23	10.5	.23	9.5	.23	8.9	.20	8.3	.20	7.8	.19	6.3	.16	5.9	.14	8.7	.22	7.8	.18	6.9	.15	6.3	.13	5.1	.14	3.8	.09	2.4	.06	1.6	.04	25
20	6.8	.14	8.8	.18	5.2	.12	4.2	.12	9.6	.20	9.2	.21	8.4	.21	7.8	.18	7.1	.17	6.6	.16	5.3	.14	4.9	.12	7.5	.20	6.6	.15	5.7	.13	5.1	.11	4.3	.12	3.0	.08	1.7	.04	1.0	.03	20
15	5.5	.11	7.5	.16	4.2	.10	3.4	.10	8.3	.18	7.9	.18	7.3	.19	6.7	.16	6.0	.15	5.6	.14	4.3	.12	4.0	.10	6.3	.17	5.5	.13	4.7	.11	4.0	.08	3.5	.09	2.3	.06	1.1	.03	1.0	.03	15
10	4.4	.09	6.3	.13	3.3	.08	2.7	.08	7.1	.16	6.8	.16	6.3	.16	5.7	.14	4.9	.13	4.6	.12	3.5	.10	3.2	.08	5.3	.15	4.5	.10	3.7	.08	3.0	.06	2.8	.08	1.6	.04	1.0	.02	.9	.02	10
5	3.4	.07	5.2	.11	2.5	.06	2.0	.06	6.0	.14	5.7	.14	5.3	.14	4.8	.12	4.1	.11	3.7	.10	2.8	.08	2.4	.06	4.4	.13	3.5	.08	2.8	.06	2.1	.04	2.1	.06	1.1	.03	1.0	.02	.9	.02	5
0	2.5	.05	4.1	.09	1.8	.04	1.5	.04	5.0	.12	4.8	.12	4.4	.12	3.9	.10	3.3	.09	3.0	.08	2.2	.06	1.8	.04	3.6	.10	2.7	.06	2.0	.04	1.5	.03	1.6	.04	1.1	.02	.9	.02	.8	.02	0
-5	1.8	.03	3.2	.07	1.4	.03	1.2	.03	4.1	.10	3.9	.10	3.6	.10	3.1	.08	2.6	.07	2.3	.06	1.7	.04	1.3	.03	2.8	.08	2.0	.04	1.4	.03	1.4	.03	1.2	.03	1.0	.02	.9	.02	.8	.02	-5
-10	1.6	.03	2.4	.05	1.3	.02	1.1	.02	3.3	.08	3.1	.08	2.9	.08	2.4	.06	2.0	.05	1.8	.04	1.3	.03	1.2	.02	2.2	.06	1.5	.03	1.3	.03	1.3	.02	1.1	.02	.9	.02	.8	.02	.7	.02	-10
-15	1.5	.02	1.6	.03	1.2	.02	1.1	.02	2.6	.06	2.4	.06	2.2	.06	1.8	.04	1.5	.03	1.4	.03	1.2	.02	1.1	.02	1.7	.04	1.4	.03	1.3	.02	1.2	.02	1.0	.02	.9	.02	.8	.02	.7	.02	-15
-20	1.4	.02	1.4	.03	1.1	.02	1.0	.02	1.9	.04	1.8	.04	1.6	.04	1.3	.02	1.3	.02	1.3	.02	1.1	.02	1.1	.02	1.3	.03	1.3	.02	1.2	.02	1.2	.02	.9	.02	.8	.02	.7	.02	.6	.02	-20
-25	1.3	.02	1.3	.02	1.1	.02	.9	.02	1.5	.03	1.4	.03	1.2	.03	1.2	.02	1.2	.02	1.2	.02	1.0	.02	1.0	.02	1.3	.02	1.2	.02	1.1	.02	1.1	.02	.9	.02	.8	.02	.6	.02	.6	.01	-25
-30	1.2	.02	1.3	.02	1.0	.02	.9	.02	1.4	.02	1.3	.02	1.1	.02	1.1	.02	1.2	.02	1.1	.02	1.0	.02	.9	.02	1.2	.02	1.1	.02	1.0	.02	1.0	.02	.8	.02	.7	.02	.6	.01	.5	.01	-30
-35	1.1	.02	1.2	.02	.9	.02	.8	.02	1.3	.02	1.2	.02	1.1	.02	1.0	.02	1.1	.02	1.0	.02	.9	.02	.8	.02	1.1	.02	1.0	.02	.9	.02	.9	.02	.7	.02	.6	.01	.5	.01	.4	.01	-35
-40	1.0	.02	1.1	.02	.8	.02	.7	.02	1.2	.02	1.1	.02	1.0	.02	.9	.02	1.0	.02	1.0	.02	.8	.02	.8	.02	1.0	.02	.9	.02	.9	.02	.8	.02	.7	.02	.6	.01	.5	.01	.4	.01	-40
-45	.9	.02	1.0	.02	.7	.02	.6	.02	1.1	.02	1.0	.02	.9	.02	.9	.02	.9	.02	.9	.02	.7	.02	.7	.01	.9	.02	.9	.02	.8	.02	.8	.01	.6	.01	.5	.01	.4	.01	.3	.01	-45
-50	.8	.01	.9	.02	.6	.01	.6	.01	1.0	.02	.9	.02	.8	.02	.8	.02	.8	.02	.8	.02	.6	.01	.6	.01	.8	.02	.8	.02	.7	.01	.7	.01	.5	.01	.4	.01	.3	.01	.3	.01	-50
-55	.7	.01	.8	.02	.6	.01	.5	.01	.9	.02	.8	.02	.7	.02	.7	.01	.7	.01	.7	.01	.6	.01	.5	.01	.7	.02	.7	.01	.6	.01	.6	.01	.5	.01	.4	.01	.3	.01	.2	.01	-55
-60	.6	.01	.7	.01	.5	.01	.4	.01	.8	.02	.7	.02	.7	.02	.6	.01	.6	.01	.6	.01	.5	.01	.5	.01	.6	.02	.6	.01	.5	.01	.5	.01	.4	.01	.3	.01	.2	.01	.2	.00	-60
-65	.5	.01	.6	.01	.4	.01	.4	.01	.7	.01	.7	.01	.6	.01	.6	.01	.5	.01	.5	.01	.4	.01	.4	.01	.6	.01	.5	.01	.5	.01	.4	.01	.4	.01	.3	.01	.2	.00	.1	.00	-65
-70	.5	.01	.6	.01	.4	.01	.3	.01	.6	.01	.6	.01	.5	.01	.5	.01	.5	.01	.4	.01	.4	.01	.3	.01	.5	.01	.5	.01	.4	.01	.4	.01	.3	.01	.2	.01	.2	.00	.1	.00	-70
-75	.4	.01	.5	.01	.3	.01	.3	.01	.5	.01	.5	.01	.5	.01	.4	.01	.4	.01	.4	.01	.3	.01	.3	.01	.4	.01	.4	.01	.3	.01	.3	.01	.3	.01	.2	.00	.1	.00	.1	.00	-75
-80	.3	.01	.4	.01	.3	.01	.2	.01	.5	.01	.5	.01	.4	.01	.4	.01	.3	.01	.3	.01	.3	.01	.2	.01	.4	.01	.3	.01	.3	.01	.3	.01	.2	.01	.1	.00	.1	.00	.0	.00	-80
-85	.3	.01	.4	.01	.2	.00	.2	.00	.4	.01	.4	.01	.4	.01	.3	.01	.3	.01	.3	.01	.2	.01	.2	.00	.3	.01	.3	.01	.2	.01	.2	.00	.2	.00	.1	.00	.1	.00	.0	.00	-85
-90	.2	.00	.3	.01	.2	.00	.1	.00	.3	.01	.3	.01	.3	.01	.3	.01	.2	.01	.2	.01	.2	.00	.2	.00	.3	.01	.2	.01	.2	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	-90
-95	.2	.00	.3	.01	.1	.00	.1	.00	.3	.01	.3	.01	.3	.01	.2	.01	.2	.01	.2	.00	.1	.00	.1	.00	.2	.01	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	-95
-100	.1	.00	.2	.00	.1	.00	.1	.00	.2	.01	.2	.01	.2	.01	.2	.00	.2	.00	.1	.00	.1	.00	.1	.00	.2	.01	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	.0	.00	-100

Range:10' (+20), 100' (+0), 200' (-30), 300' (-40), 400' (-50)

SHORT BOW UNIT ATTACK TABLE

A–5.6

	AT 1		AT 2		AT 3		AT 4		AT 5		AT 6		AT 7		AT 8		AT 9		AT 10		AT 11		AT 12		AT 13		AT 14		AT 15		AT 16		AT 17		AT 18		AT 19		AT 20		
	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	
100	26.6	.50	25.6	.51	22.0	.49	19.1	.48	27.7	.50	25.2	.50	21.1	.50	20.9	.49	25.2	.50	25.1	.49	21.6	.48	20.0	.47	24.2	.49	24.1	.48	21.5	.47	21.0	.45	17.5	.47	15.2	.44	12.5	.40	10.1	.35	100
95	25.8	.49	25.0	.50	21.2	.48	18.1	.46	26.9	.50	24.5	.49	20.6	.49	20.4	.48	24.4	.49	24.2	.48	20.8	.47	18.9	.45	23.3	.48	23.2	.47	20.3	.44	19.7	.42	16.9	.46	14.2	.42	11.6	.37	9.4	.33	95
90	24.7	.48	24.3	.49	20.0	.46	16.9	.43	26.1	.49	23.8	.48	20.1	.48	19.8	.47	23.4	.48	23.2	.47	19.5	.45	17.7	.42	22.3	.47	21.8	.44	19.0	.41	18.4	.39	15.9	.44	13.3	.39	10.8	.34	8.7	.30	90
85	23.2	.45	23.5	.48	18.7	.43	15.8	.40	25.2	.48	22.9	.47	19.5	.48	19.2	.46	22.3	.47	21.8	.45	18.2	.42	16.5	.39	21.2	.46	20.4	.41	17.7	.39	17.1	.37	14.9	.41	12.3	.36	9.9	.32	8.0	.28	85
80	21.6	.42	22.6	.47	17.4	.40	14.6	.38	24.1	.47	22.0	.46	18.8	.47	18.5	.45	21.1	.46	20.3	.42	16.9	.39	15.3	.37	19.8	.44	18.9	.39	16.4	.36	15.8	.34	13.8	.38	11.4	.33	9.1	.29	7.2	.25	80
75	20.1	.40	21.1	.44	16.1	.37	13.5	.35	23.0	.46	21.1	.45	18.0	.45	17.4	.43	19.6	.43	18.8	.39	15.6	.37	14.1	.34	18.4	.41	17.5	.36	15.1	.33	14.5	.31	12.8	.36	10.4	.31	8.2	.26	6.5	.23	75
70	18.5	.37	19.7	.41	14.8	.35	12.3	.32	21.8	.44	20.0	.44	16.9	.43	16.2	.40	18.1	.40	17.3	.36	14.3	.34	12.9	.31	16.9	.38	16.0	.33	13.8	.30	13.2	.28	11.7	.33	9.5	.28	7.4	.23	5.8	.20	70
65	17.0	.34	18.2	.39	13.5	.32	11.2	.29	20.2	.42	18.5	.41	15.7	.40	15.0	.37	16.6	.37	15.8	.34	13.0	.31	11.7	.28	15.5	.35	14.6	.30	12.5	.28	11.9	.26	10.7	.30	8.5	.25	6.5	.21	5.1	.18	65
60	15.4	.31	16.8	.36	12.2	.29	10.0	.27	18.6	.39	17.1	.38	14.5	.38	13.8	.35	15.1	.35	14.3	.31	11.7	.28	10.5	.25	14.0	.33	13.1	.28	11.2	.25	10.6	.23	9.6	.27	7.6	.22	5.7	.18	4.3	.15	60
55	13.9	.29	15.3	.33	10.9	.26	8.9	.24	17.0	.36	15.6	.36	13.3	.35	12.6	.32	13.6	.32	12.8	.28	10.4	.26	9.3	.23	12.6	.30	11.7	.25	9.9	.22	9.3	.20	8.6	.25	6.6	.20	4.8	.15	3.6	.13	55
50	12.5	.26	14.0	.30	9.7	.24	7.8	.21	15.5	.33	14.3	.33	12.2	.32	11.5	.29	12.2	.29	11.4	.25	9.2	.23	8.2	.20	11.3	.27	10.4	.22	8.7	.20	8.1	.18	7.6	.22	5.8	.17	4.1	.13	3.0	.10	50
45	11.0	.23	12.6	.28	8.5	.21	6.7	.18	14.0	.31	12.9	.30	11.1	.29	10.3	.26	10.8	.26	10.0	.23	8.0	.20	7.1	.18	9.9	.25	9.0	.20	7.5	.17	6.9	.15	6.6	.19	4.9	.15	3.3	.11	2.4	.08	45
40	9.6	.20	11.3	.25	7.3	.18	5.7	.16	12.5	.28	11.6	.28	10.0	.27	9.2	.24	9.5	.24	8.7	.20	6.9	.18	6.0	.15	8.7	.22	7.8	.17	6.4	.15	5.8	.13	5.7	.17	4.1	.12	2.7	.09	1.8	.06	40
35	8.3	.18	10.0	.22	6.2	.16	4.7	.13	11.2	.25	10.3	.25	8.9	.24	8.2	.21	8.3	.21	7.5	.18	5.8	.15	5.1	.13	7.5	.19	6.6	.15	5.4	.13	4.8	.11	4.8	.15	3.4	.10	2.1	.07	1.3	.05	35
30	7.0	.15	8.7	.20	5.2	.13	3.9	.11	9.9	.23	9.1	.23	7.9	.22	7.2	.19	7.1	.19	6.4	.15	4.9	.13	4.2	.11	6.4	.17	5.5	.13	4.4	.10	3.8	.09	4.0	.12	2.7	.08	1.5	.05	.8	.03	30
25	5.8	.13	7.5	.17	4.3	.11	3.1	.09	8.6	.20	8.0	.20	6.9	.19	6.2	.17	6.1	.17	5.3	.13	4.0	.11	3.3	.09	5.4	.15	4.5	.11	3.5	.08	2.9	.07	3.3	.10	2.1	.07	.9	.03	.7	.02	25
20	4.7	.10	6.4	.15	3.4	.09	2.4	.07	7.5	.18	7.0	.18	6.0	.17	5.3	.15	5.1	.14	4.3	.11	3.2	.09	2.6	.07	4.4	.13	3.6	.09	2.7	.07	2.1	.05	2.7	.08	1.5	.05	.8	.03	.7	.02	20
15	3.7	.08	5.4	.12	2.6	.07	1.7	.05	6.4	.16	6.0	.16	5.2	.15	4.5	.12	4.2	.12	3.5	.09	2.5	.07	1.9	.05	3.6	.11	2.8	.07	2.0	.05	1.4	.03	2.1	.07	1.0	.03	.8	.02	.6	.02	15
10	2.8	.06	4.4	.10	1.9	.05	1.2	.03	5.4	.14	5.1	.14	4.3	.13	3.7	.10	3.4	.10	2.7	.07	1.8	.05	1.2	.03	2.9	.08	2.1	.05	1.3	.03	1.2	.03	1.5	.05	.9	.03	.7	.02	.6	.02	10
5	2.0	.04	3.5	.08	1.3	.03	1.0	.03	4.5	.12	4.2	.12	3.6	.11	3.0	.08	2.7	.08	2.0	.05	1.3	.03	1.1	.03	2.3	.07	1.4	.03	1.2	.03	1.1	.02	1.0	.03	.8	.02	.7	.02	.6	.02	5
0	1.4	.03	2.6	.06	1.1	.03	1.0	.02	3.7	.10	3.5	.10	2.9	.09	2.3	.07	2.1	.06	1.4	.03	1.1	.03	1.0	.02	1.8	.05	1.3	.03	1.1	.02	1.1	.02	.9	.02	.8	.02	.6	.02	.5	.02	0
-5	1.3	.03	1.9	.04	1.1	.02	.9	.02	2.9	.08	2.8	.08	2.2	.07	1.7	.05	1.6	.04	1.3	.03	1.1	.02	1.0	.02	1.3	.03	1.2	.02	1.0	.02	1.0	.02	.9	.02	.7	.02	.6	.02	.5	.02	-5
-10	1.3	.02	1.3	.03	1.0	.02	.9	.02	2.3	.06	2.1	.06	1.7	.05	1.2	.03	1.2	.03	1.2	.02	1.0	.02	.9	.02	1.2	.02	1.1	.02	1.0	.02	.9	.02	.8	.02	.7	.02	.5	.02	.4	.02	-10
-15	1.2	.02	1.2	.03	1.0	.02	.8	.02	1.7	.04	1.6	.04	1.1	.03	1.0	.02	1.1	.02	1.1	.02	.9	.02	.8	.02	1.1	.02	1.0	.02	.9	.02	.9	.02	.8	.02	.6	.02	.5	.02	.4	.01	-15
-20	1.1	.02	1.1	.02	.9	.02	.7	.02	1.3	.03	1.2	.02	1.0	.02	.9	.02	1.1	.02	1.0	.02	.9	.02	.8	.02	1.0	.02	1.0	.02	.8	.02	.8	.02	.7	.02	.6	.02	.5	.01	.4	.01	-20
-25	1.0	.02	1.1	.02	.8	.02	.7	.02	1.2	.02	1.1	.02	.9	.02	.9	.02	1.0	.02	1.0	.02	.8	.02	.7	.02	.9	.02	.9	.02	.8	.02	.7	.02	.6	.02	.5	.02	.4	.01	.3	.01	-25
-30	.9	.02	1.0	.02	.8	.02	.6	.02	1.1	.02	1.0	.02	.9	.02	.8	.02	.9	.02	.9	.02	.7	.02	.7	.02	.9	.02	.8	.02	.7	.02	.7	.01	.6	.02	.5	.01	.4	.01	.3	.01	-30
-35	.9	.02	.9	.02	.7	.02	.6	.01	1.0	.02	.9	.02	.8	.02	.8	.02	.8	.02	.8	.02	.7	.02	.6	.01	.8	.02	.7	.02	.6	.01	.6	.01	.5	.02	.4	.01	.3	.01	.3	.01	-35
-40	.8	.02	.9	.02	.6	.01	.5	.01	.9	.02	.9	.02	.7	.02	.7	.02	.8	.02	.7	.02	.6	.01	.5	.01	.7	.02	.7	.01	.6	.01	.5	.01	.5	.01	.4	.01	.3	.01	.2	.01	-40
-45	.7	.01	.8	.02	.6	.01	.5	.01	.9	.02	.8	.02	.7	.02	.6	.02	.7	.02	.7	.01	.5	.01	.5	.01	.6	.02	.6	.01	.5	.01	.5	.01	.4	.01	.3	.01	.2	.01	.2	.01	-45
-50	.6	.01	.7	.02	.5	.01	.4	.01	.8	.02	.7	.02	.6	.02	.6	.01	.6	.01	.6	.01	.5	.01	.4	.01	.6	.01	.5	.01	.4	.01	.4	.01	.4	.01	.3	.01	.2	.01	.1	.01	-50
-55	.5	.01	.6	.01	.4	.01	.3	.01	.7	.02	.6	.02	.5	.01	.5	.01	.5	.01	.5	.01	.4	.01	.4	.01	.5	.01	.4	.01	.4	.01	.3	.01	.3	.01	.2	.01	.2	.01	.1	.00	-55
-60	.5	.01	.6	.01	.4	.01	.3	.01	.6	.01	.6	.01	.5	.01	.5	.01	.5	.01	.4	.01	.3	.01	.3	.01	.4	.01	.4	.01	.3	.01	.3	.01	.3	.01	.2	.01	.1	.00	.1	.00	-60
-65	.4	.01	.5	.01	.3	.01	.2	.01	.6	.01	.5	.01	.4	.01	.4	.01	.4	.01	.4	.01	.3	.01	.3	.01	.4	.01	.3	.01	.3	.01	.2	.01	.2	.01	.2	.01	.1	.00	.1	.00	-65
-70	.3	.01	.4	.01	.3	.01	.2	.01	.5	.01	.5	.01	.4	.01	.4	.01	.4	.01	.3	.01	.2	.01	.2	.01	.3	.01	.3	.01	.2	.01	.2	.00	.2	.01	.1	.00	.1	.00	.0	.00	-70
-75	.3	.01	.4	.01	.2	.01	.1	.00	.4	.01	.4	.01	.3	.01	.3	.01	.3	.01	.3	.01	.2	.01	.2	.00	.3	.01	.2	.01	.2	.00	.1	.00	.2	.01	.1	.00	.0	.00	.0	.00	-75
-80	.2	.01	.3	.01	.2	.00	.1	.00	.4	.01	.3	.01	.3	.01	.3	.01	.2	.01	.2	.01	.2	.00	.1	.00	.2	.01	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	-80
-85	.2	.00	.3	.01	.1	.00	.1	.00	.3	.01	.3	.01	.3	.01	.2	.01	.2	.01	.2	.00	.1	.00	.1	.00	.2	.01	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	.0	.00	-85
-90	.1	.00	.2	.00	.1	.00	.1	.00	.3	.01	.2	.01	.2	.01	.2	.01	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	.0	.00	-90
-95	.1	.00	.2	.00	.1	.00	.0	.00	.2	.01	.2	.01	.2	.01	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	.0	.00	.0	.00	-95
-100	.1	.00	.1	.00	.1	.00	.0	.00	.2	.00	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	-100

Range: 10'(+10), 100'(+0), 180'(-40), 240'(-70)

SLING UNIT ATTACK TABLE

A–5.7

	AT 1		AT 2		AT 3		AT 4		AT 5		AT 6		AT 7		AT 8		AT 9		AT 10		AT 11		AT 12		AT 13		AT 14		AT 15		AT 16		AT 17		AT 18		AT 19		AT 20		
	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	
100	31.4	.50	30.6	.51	26.9	.49	24.0	.48	30.0	.50	27.5	.49	23.5	.49	23.3	.48	28.1	.51	28.0	.50	24.4	.49	22.8	.48	24.5	.49	24.3	.48	21.3	.46	20.5	.44	21.0	.48	18.6	.45	15.7	.41	13.5	.38	100
95	30.4	.49	29.8	.50	25.8	.48	22.5	.45	29.1	.49	26.7	.48	22.9	.48	22.7	.47	27.2	.50	27.1	.49	23.6	.48	22.1	.47	23.6	.48	22.9	.45	20.0	.43	19.2	.41	20.2	.47	17.4	.42	14.6	.38	12.5	.36	95
90	29.1	.48	28.9	.50	24.2	.45	21.1	.42	28.1	.48	25.9	.47	22.2	.47	21.5	.44	26.2	.49	26.1	.48	22.6	.47	20.9	.44	22.7	.47	21.5	.42	18.7	.40	17.9	.38	19.1	.45	16.3	.39	13.6	.35	11.6	.33	90
85	27.3	.45	27.9	.49	22.6	.42	19.6	.40	26.9	.47	24.9	.46	21.0	.45	20.1	.42	25.1	.48	24.9	.47	21.3	.45	19.5	.42	21.4	.45	20.0	.40	17.4	.38	16.6	.35	17.8	.42	15.1	.37	12.5	.32	10.6	.30	85
80	25.4	.43	26.7	.47	21.0	.39	18.2	.37	25.8	.46	23.4	.44	19.6	.42	18.8	.39	23.9	.47	23.4	.44	19.8	.42	18.2	.39	19.9	.42	18.6	.37	16.1	.35	15.3	.33	16.6	.39	14.0	.34	11.5	.30	9.7	.27	80
75	23.6	.40	24.9	.44	19.4	.37	16.7	.34	24.1	.44	21.8	.41	18.3	.39	17.4	.36	22.7	.46	21.7	.41	18.4	.39	16.8	.36	18.5	.39	17.1	.34	14.8	.32	14.0	.30	15.3	.36	12.8	.31	10.4	.27	8.7	.25	75
70	21.7	.37	23.2	.42	17.8	.34	15.3	.31	22.4	.41	20.2	.38	16.9	.36	16.1	.33	21.0	.43	20.1	.39	16.9	.36	15.5	.33	17.0	.36	15.7	.31	13.5	.29	12.7	.27	14.1	.34	11.7	.28	9.4	.24	7.8	.22	70
65	19.9	.34	21.4	.39	16.2	.31	13.8	.29	20.6	.38	18.6	.35	15.6	.34	14.7	.31	19.4	.41	18.4	.36	15.5	.34	14.1	.31	15.6	.34	14.2	.29	12.2	.27	11.4	.24	12.8	.31	10.5	.26	8.3	.21	6.8	.19	65
60	18.0	.32	19.7	.36	14.6	.28	12.4	.26	18.9	.35	17.0	.33	14.2	.31	13.4	.28	17.7	.38	16.8	.33	14.0	.31	12.8	.28	14.1	.31	12.8	.26	10.9	.24	10.1	.22	11.6	.28	9.4	.23	7.3	.19	5.9	.16	60
55	16.2	.29	17.9	.33	13.0	.26	10.9	.23	17.1	.33	15.4	.30	12.9	.28	12.0	.25	16.1	.35	15.1	.30	12.6	.28	11.4	.25	12.7	.28	11.3	.23	9.6	.21	8.8	.19	10.3	.25	8.2	.20	6.2	.16	4.9	.14	55
50	14.5	.26	16.3	.31	11.5	.23	9.6	.21	15.5	.30	13.9	.27	11.6	.26	10.8	.23	14.5	.32	13.6	.28	11.2	.26	10.2	.23	11.3	.26	10.0	.21	8.4	.18	7.6	.16	9.2	.23	7.2	.18	5.2	.13	4.1	.11	50
45	12.7	.23	14.6	.28	10.0	.20	8.2	.18	13.8	.27	12.4	.25	10.3	.23	9.5	.20	13.0	.30	12.1	.25	9.9	.23	8.9	.20	10.0	.23	8.6	.18	7.1	.16	6.4	.14	8.0	.20	6.1	.15	4.3	.11	3.2	.09	45
40	11.1	.21	13.1	.25	8.6	.18	7.0	.15	12.3	.25	11.0	.22	9.1	.20	8.3	.17	11.5	.27	10.6	.23	8.6	.20	7.7	.17	8.7	.20	7.4	.15	6.0	.13	5.2	.11	6.9	.18	5.1	.13	3.4	.09	2.4	.07	40
35	9.5	.18	11.5	.23	7.3	.15	5.8	.13	10.8	.22	9.6	.20	7.9	.18	7.1	.15	10.2	.24	9.2	.20	7.4	.18	6.6	.15	7.5	.18	6.2	.13	4.9	.11	4.2	.09	5.8	.15	4.2	.11	2.6	.07	1.7	.05	35
30	8.0	.15	10.1	.20	6.0	.12	4.7	.10	9.4	.20	8.3	.17	6.8	.15	6.0	.13	8.9	.22	7.9	.18	6.3	.15	5.5	.13	6.3	.15	5.1	.11	3.9	.09	3.2	.07	4.9	.13	3.3	.09	1.9	.05	1.1	.03	30
25	6.7	.13	8.7	.17	4.9	.10	3.6	.08	8.1	.17	7.1	.15	5.7	.13	4.9	.11	7.6	.19	6.8	.15	5.2	.13	4.5	.11	5.3	.13	4.0	.09	3.0	.07	2.3	.05	4.0	.11	2.6	.07	1.2	.03	.9	.03	25
20	5.4	.10	7.4	.15	3.8	.08	2.7	.06	6.9	.15	6.0	.13	4.7	.11	4.0	.09	6.5	.17	5.6	.13	4.3	.11	3.6	.09	4.3	.11	3.1	.07	2.2	.05	1.4	.03	3.2	.09	1.9	.05	1.0	.03	.9	.02	20
15	4.2	.08	6.1	.13	2.9	.06	1.9	.04	5.7	.13	4.9	.11	3.8	.09	3.1	.07	5.5	.15	4.6	.11	3.4	.09	2.8	.07	3.4	.09	2.3	.05	1.4	.03	1.2	.03	2.5	.07	1.2	.03	1.0	.02	.8	.02	15
10	3.2	.06	5.0	.10	2.1	.04	1.4	.03	4.7	.11	4.0	.09	2.9	.07	2.2	.05	4.6	.13	3.7	.09	2.7	.07	2.1	.05	2.7	.07	1.5	.03	1.2	.03	1.2	.02	1.8	.05	1.1	.03	.9	.02	.8	.02	10
5	2.3	.04	4.0	.08	1.5	.03	1.3	.03	3.8	.08	3.1	.07	2.1	.05	1.4	.03	3.7	.10	2.9	.07	2.0	.05	1.4	.03	2.0	.05	1.3	.03	1.1	.02	1.1	.02	1.3	.03	1.0	.02	.8	.02	.7	.02	5
0	1.7	.03	3.0	.06	1.4	.03	1.2	.02	3.0	.07	2.3	.05	1.4	.03	1.2	.03	3.0	.08	2.2	.05	1.4	.03	1.2	.03	1.4	.03	1.2	.02	1.1	.02	1.0	.02	1.1	.03	.9	.02	.8	.02	.7	.02	0
-5	1.6	.03	2.2	.04	1.3	.02	1.1	.02	2.2	.05	1.6	.03	1.2	.03	1.2	.02	2.3	.06	1.5	.03	1.2	.03	1.1	.02	1.2	.03	1.2	.02	1.0	.02	1.0	.02	1.0	.02	.9	.02	.7	.02	.6	.02	-5
-10	1.5	.02	1.5	.03	1.2	.02	1.1	.02	1.6	.03	1.3	.02	1.1	.02	1.1	.02	1.8	.04	1.4	.03	1.2	.02	1.1	.02	1.2	.02	1.1	.02	.9	.02	.9	.02	1.0	.02	.8	.02	.7	.02	.6	.02	-10
-15	1.4	.02	1.4	.03	1.1	.02	1.0	.02	1.4	.02	1.3	.02	1.1	.02	1.0	.02	1.3	.03	1.3	.02	1.1	.02	1.0	.02	1.1	.02	1.0	.02	.9	.02	.8	.02	.9	.02	.8	.02	.6	.02	.5	.02	-15
-20	1.3	.02	1.4	.02	1.1	.02	.9	.02	1.3	.02	1.2	.02	1.0	.02	1.0	.02	1.2	.02	1.2	.02	1.0	.02	.9	.02	1.0	.02	.9	.02	.8	.02	.8	.02	.8	.02	.7	.02	.6	.02	.5	.01	-20
-25	1.2	.02	1.3	.02	1.0	.02	.9	.02	1.2	.02	1.1	.02	.9	.02	.9	.02	1.1	.02	1.1	.02	.9	.02	.9	.02	.9	.02	.9	.02	.8	.02	.7	.02	.8	.02	.7	.02	.5	.01	.4	.01	-25
-30	1.1	.02	1.2	.02	.9	.02	.8	.02	1.1	.02	1.0	.02	.9	.02	.8	.02	1.1	.02	1.0	.02	.9	.02	.8	.02	.9	.02	.8	.02	.7	.01	.6	.01	.7	.02	.6	.01	.5	.01	.4	.01	-30
-35	1.0	.02	1.1	.02	.8	.02	.7	.01	1.0	.02	.9	.02	.8	.02	.7	.02	1.0	.02	.9	.02	.8	.02	.7	.02	.8	.02	.7	.01	.6	.01	.6	.01	.7	.02	.5	.01	.4	.01	.4	.01	-35
-40	.9	.02	1.0	.02	.7	.01	.6	.01	1.0	.02	.9	.02	.7	.02	.7	.01	.9	.02	.9	.02	.7	.02	.7	.01	.7	.02	.7	.01	.6	.01	.5	.01	.6	.01	.5	.01	.4	.01	.3	.01	-40
-45	.8	.01	.9	.02	.7	.01	.6	.01	.9	.02	.8	.02	.7	.01	.6	.01	.8	.02	.8	.02	.6	.01	.6	.01	.6	.01	.6	.01	.5	.01	.5	.01	.5	.01	.4	.01	.3	.01	.3	.01	-45
-50	.7	.01	.8	.02	.6	.01	.5	.01	.8	.01	.7	.01	.6	.01	.5	.01	.7	.02	.7	.01	.6	.01	.5	.01	.6	.01	.5	.01	.4	.01	.4	.01	.5	.01	.4	.01	.3	.01	.2	.01	-50
-55	.6	.01	.7	.01	.5	.01	.4	.01	.7	.01	.6	.01	.5	.01	.5	.01	.6	.01	.6	.01	.5	.01	.4	.01	.5	.01	.4	.01	.4	.01	.3	.01	.4	.01	.3	.01	.2	.01	.2	.00	-55
-60	.5	.01	.6	.01	.4	.01	.3	.01	.6	.01	.5	.01	.5	.01	.4	.01	.6	.01	.5	.01	.4	.01	.4	.01	.4	.01	.4	.01	.3	.01	.3	.01	.3	.01	.3	.01	.2	.00	.1	.00	-60
-65	.5	.01	.6	.01	.4	.01	.3	.01	.5	.01	.5	.01	.4	.01	.4	.01	.5	.01	.5	.01	.4	.01	.3	.01	.4	.01	.3	.01	.2	.01	.2	.00	.3	.01	.2	.01	.1	.00	.1	.00	-65
-70	.4	.01	.5	.01	.3	.01	.2	.01	.5	.01	.4	.01	.3	.01	.3	.01	.4	.01	.4	.01	.3	.01	.3	.01	.3	.01	.2	.01	.2	.00	.2	.00	.2	.01	.2	.00	.1	.00	.1	.00	-70
-75	.3	.01	.4	.01	.2	.01	.2	.00	.4	.01	.4	.01	.3	.01	.2	.01	.4	.01	.3	.01	.3	.01	.2	.01	.3	.01	.2	.00	.1	.00	.1	.00	.2	.01	.1	.00	.1	.00	.0	.00	-75
-80	.3	.01	.4	.01	.2	.00	.1	.00	.3	.01	.3	.01	.2	.01	.2	.00	.3	.01	.3	.01	.2	.01	.2	.00	.2	.01	.1	.00	.1	.00	.1	.00	.2	.00	.1	.00	.0	.00	.0	.00	-80
-85	.2	.00	.3	.01	.1	.00	.1	.00	.3	.01	.2	.01	.2	.00	.1	.00	.3	.01	.2	.01	.2	.00	.1	.00	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	-85
-90	.2	.00	.2	.01	.1	.00	.1	.00	.2	.01	.2	.00	.1	.00	.1	.00	.2	.01	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	.0	.00	-90
-95	.1	.00	.2	.00	.1	.00	.1	.00	.2	.00	.1	.00	.1	.00	.1	.00	.2	.01	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	.0	.00	-95
-100	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	.1	.00	.0	.00	.0	.00	.0	.00	-100

Range: 10'(+15), 60'(+0), 120'(-40), 180'(-65)

BATTLE AXE UNIT ATTACK TABLE

A–6.1

	AT 1		AT 2		AT 3		AT 4		AT 5		AT 6		AT 7		AT 8		AT 9		AT 10		AT 11		AT 12		AT 13		AT 14		AT 15		AT 16		AT 17		AT 18		AT 19		AT 20		
	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	
100	58.4	.52	56.2	.52	56.0	.51	51.5	.51	52.9	.52	50.5	.52	46.2	.51	45.0	.51	51.8	.51	52.3	.51	50.2	.51	46.0	.50	48.2	.51	46.9	.50	44.5	.50	42.9	.50	39.4	.50	37.3	.49	31.7	.48	25.2	.45	100
95	59.4	.51	57.3	.52	57.5	.51	52.8	.51	53.5	.51	51.2	.51	47.0	.51	45.6	.50	52.5	.51	53.3	.50	51.6	.50	46.9	.49	49.2	.50	47.6	.49	45.3	.49	43.3	.49	40.8	.49	35.9	.48	30.2	.45	23.8	.43	95
90	60.5	.51	58.4	.51	59.3	.50	54.2	.50	54.1	.51	51.9	.50	48.0	.50	46.2	.49	53.4	.50	54.4	.50	53.1	.50	47.8	.48	50.2	.50	48.3	.49	45.6	.48	43.2	.47	41.6	.48	34.5	.47	28.7	.42	22.4	.40	90
85	61.8	.50	59.6	.51	61.1	.49	55.7	.49	54.8	.50	52.8	.50	49.0	.49	47.0	.48	54.4	.49	55.5	.49	54.7	.49	48.9	.47	51.3	.49	49.1	.47	43.7	.47	41.1	.45	40.2	.47	32.9	.44	27.2	.39	21.0	.37	85
80	62.3	.49	58.0	.50	59.5	.46	54.1	.47	55.5	.49	53.7	.49	50.2	.49	47.7	.47	55.4	.49	56.8	.48	55.7	.48	49.3	.46	51.9	.48	49.3	.46	41.9	.46	39.0	.42	38.7	.46	31.3	.41	25.7	.37	19.6	.34	80
75	59.5	.46	55.7	.49	57.0	.44	51.8	.44	56.3	.48	54.7	.48	51.4	.48	48.6	.46	56.5	.48	57.4	.47	53.6	.46	47.2	.43	49.9	.47	47.0	.43	40.0	.45	36.9	.39	37.0	.43	29.7	.38	24.2	.34	18.2	.32	75
70	56.8	.43	53.2	.48	54.5	.41	49.4	.41	57.1	.47	55.7	.47	50.7	.47	47.6	.44	57.0	.47	55.1	.46	51.4	.43	45.0	.40	47.8	.45	44.8	.41	37.9	.42	34.8	.36	35.3	.40	28.1	.36	22.7	.31	16.8	.29	70
65	54.0	.40	50.6	.45	52.0	.38	47.1	.38	58.1	.46	54.8	.46	48.7	.44	45.5	.41	54.7	.45	52.6	.43	49.1	.41	42.9	.38	45.6	.43	42.5	.38	35.8	.39	32.7	.34	33.6	.38	26.5	.33	21.2	.28	15.4	.26	65
60	51.3	.38	47.9	.42	49.5	.35	44.7	.36	56.2	.44	52.5	.43	46.5	.42	43.3	.38	52.3	.42	50.2	.40	46.9	.38	40.7	.35	43.3	.40	40.3	.35	33.7	.36	30.6	.31	31.9	.35	24.9	.30	19.7	.26	14.0	.23	60
55	48.5	.35	45.3	.40	47.0	.33	42.4	.33	53.7	.41	50.1	.41	44.4	.39	41.2	.36	49.8	.39	47.7	.37	44.6	.35	38.6	.32	41.1	.37	38.0	.32	31.6	.34	28.5	.28	30.2	.32	23.3	.27	18.2	.23	12.6	.21	55
50	45.9	.32	42.7	.37	44.6	.30	40.1	.30	51.2	.38	47.8	.38	42.3	.36	39.1	.33	47.5	.37	45.4	.35	42.4	.33	36.5	.30	38.9	.35	35.9	.30	29.5	.31	26.5	.25	28.5	.30	21.7	.25	16.7	.20	11.3	.18	50
45	42.9	.30	39.9	.34	41.8	.27	37.5	.27	48.6	.36	45.3	.35	40.0	.34	36.9	.30	44.9	.34	42.8	.32	40.0	.30	34.2	.27	36.5	.32	33.5	.27	27.3	.28	24.3	.23	26.6	.27	19.9	.22	14.9	.17	9.8	.15	45
40	39.9	.27	37.0	.31	38.9	.24	34.8	.25	45.8	.33	42.6	.33	37.6	.31	34.5	.28	42.2	.31	40.0	.29	37.3	.27	31.8	.24	33.9	.29	31.0	.24	24.9	.26	22.1	.20	24.4	.24	17.8	.19	13.1	.15	8.4	.13	40
35	36.7	.24	33.9	.29	35.7	.22	31.9	.22	43.0	.30	39.9	.30	35.1	.28	32.1	.25	39.4	.29	37.2	.27	34.5	.24	29.2	.22	31.3	.26	28.5	.22	22.5	.23	19.7	.17	22.2	.22	15.6	.17	11.0	.12	6.9	.10	35
30	33.4	.21	30.7	.26	32.4	.19	28.9	.19	40.1	.27	37.1	.27	32.5	.26	29.6	.22	36.5	.26	34.2	.24	31.6	.22	26.6	.19	28.5	.24	25.8	.19	19.9	.21	17.3	.15	19.8	.19	13.2	.14	8.9	.10	5.5	.08	30
25	29.9	.19	27.3	.23	28.9	.17	25.8	.17	37.1	.25	34.2	.25	29.7	.23	27.0	.20	33.5	.23	31.1	.22	28.4	.19	23.9	.17	25.7	.21	23.1	.17	17.2	.18	14.8	.13	17.2	.16	10.6	.12	6.5	.08	4.0	.06	25
20	26.4	.16	23.9	.21	25.2	.14	22.4	.14	34.1	.22	31.3	.22	26.9	.21	24.4	.18	30.4	.21	27.9	.19	25.1	.17	21.0	.14	22.7	.19	20.3	.14	14.5	.16	12.3	.10	14.5	.14	7.9	.10	4.1	.06	2.6	.04	20
15	22.7	.14	20.3	.18	21.3	.12	19.0	.12	31.0	.20	28.2	.20	24.0	.18	21.6	.15	27.2	.19	24.6	.17	21.7	.15	18.1	.12	19.6	.17	17.5	.12	11.6	.14	9.8	.08	11.6	.12	5.0	.08	2.0	.04	1.5	.03	15
10	18.9	.11	16.6	.16	17.3	.09	15.4	.10	27.8	.17	25.1	.17	21.0	.16	18.8	.13	24.0	.16	21.2	.15	18.2	.12	15.1	.10	16.4	.14	14.5	.10	8.7	.11	7.2	.06	8.5	.10	2.5	.06	1.7	.03	1.4	.03	10
5	14.9	.09	12.8	.13	13.1	.07	11.7	.07	24.6	.15	21.9	.15	17.9	.14	16.0	.11	20.6	.14	17.7	.12	14.4	.10	11.9	.08	13.1	.12	11.5	.08	5.7	.09	4.6	.04	5.4	.08	2.2	.04	1.7	.03	1.3	.02	5
0	10.9	.06	8.9	.11	8.7	.05	7.8	.05	21.3	.13	18.6	.13	14.6	.11	13.1	.09	17.2	.12	14.1	.10	10.6	.08	8.7	.06	9.7	.10	8.4	.06	3.2	.08	2.4	.03	2.7	.06	1.9	.03	1.6	.02	1.3	.02	0
-5	6.8	.04	4.9	.09	4.3	.03	3.9	.03	17.9	.11	15.2	.11	11.3	.09	10.1	.07	13.6	.10	10.3	.08	6.6	.06	5.4	.04	6.2	.08	5.3	.04	2.8	.06	2.3	.03	2.4	.04	1.8	.02	1.5	.02	1.2	.02	-5
-10	3.4	.03	3.7	.06	3.3	.03	3.0	.03	14.5	.09	11.8	.09	8.0	.07	7.1	.05	10.0	.07	6.5	.06	3.2	.04	2.7	.03	3.3	.06	2.7	.03	2.5	.04	2.2	.02	2.1	.03	1.7	.02	1.4	.02	1.1	.02	-10
-15	3.3	.03	3.3	.04	3.1	.02	2.8	.02	11.0	.07	8.3	.07	4.5	.05	4.0	.03	6.3	.05	3.3	.04	2.9	.03	2.6	.02	2.9	.04	2.6	.02	2.2	.03	2.1	.02	2.0	.02	1.7	.02	1.4	.02	1.1	.02	-15
-20	3.1	.02	3.0	.03	3.0	.02	2.7	.02	7.5	.05	4.7	.05	2.9	.03	2.6	.02	3.3	.04	3.0	.03	2.8	.02	2.5	.02	2.6	.03	2.5	.02	2.1	.02	2.0	.02	1.9	.02	1.6	.02	1.3	.02	1.0	.02	-20
-25	3.0	.02	2.8	.03	2.9	.02	2.6	.02	3.9	.03	3.1	.03	2.7	.03	2.5	.02	3.0	.03	2.9	.02	2.7	.02	2.4	.02	2.5	.02	2.4	.02	2.0	.02	1.9	.02	1.9	.02	1.5	.02	1.2	.02	.9	.02	-25
-30	2.9	.02	2.7	.02	2.8	.02	2.5	.02	3.1	.02	2.9	.02	2.6	.02	2.4	.02	2.9	.02	2.8	.02	2.6	.02	2.3	.02	2.4	.02	2.3	.02	1.9	.02	1.8	.02	1.8	.02	1.4	.02	1.1	.02	.9	.01	-30
-35	2.7	.02	2.6	.02	2.6	.02	2.4	.02	3.0	.02	2.8	.02	2.5	.02	2.3	.02	2.8	.02	2.7	.02	2.5	.02	2.2	.02	2.3	.02	2.1	.02	1.8	.02	1.7	.02	1.7	.02	1.3	.02	1.1	.01	.8	.01	-35
-40	2.6	.02	2.4	.02	2.5	.02	2.3	.02	2.8	.02	2.6	.02	2.3	.02	2.2	.02	2.6	.02	2.5	.02	2.4	.02	2.1	.02	2.2	.02	2.0	.02	1.7	.02	1.6	.02	1.6	.02	1.3	.02	1.0	.01	.7	.01	-40
-45	2.5	.02	2.3	.02	2.4	.02	2.1	.02	2.7	.02	2.5	.02	2.2	.02	2.1	.02	2.5	.02	2.4	.02	2.3	.02	2.0	.02	2.1	.02	1.9	.02	1.6	.02	1.4	.01	1.5	.02	1.2	.01	.9	.01	.6	.01	-45
-50	2.3	.02	2.1	.02	2.2	.01	2.0	.02	2.6	.02	2.4	.02	2.1	.02	2.0	.02	2.4	.02	2.3	.02	2.1	.02	1.8	.01	1.9	.02	1.8	.01	1.5	.02	1.3	.01	1.4	.01	1.1	.01	.8	.01	.6	.01	-50
-55	2.1	.01	2.0	.02	2.1	.01	1.9	.01	2.4	.02	2.3	.02	2.0	.02	1.8	.02	2.2	.02	2.1	.02	2.0	.01	1.7	.01	1.8	.02	1.7	.01	1.4	.01	1.2	.01	1.3	.01	1.0	.01	.7	.01	.5	.01	-55
-60	2.0	.01	1.8	.02	1.9	.01	1.7	.01	2.3	.02	2.1	.02	1.9	.02	1.7	.01	2.1	.02	2.0	.01	1.9	.01	1.6	.01	1.7	.01	1.5	.01	1.2	.01	1.1	.01	1.2	.01	.9	.01	.6	.01	.4	.01	-60
-65	1.8	.01	1.7	.01	1.8	.01	1.6	.01	2.1	.01	2.0	.01	1.7	.01	1.6	.01	2.0	.01	1.9	.01	1.7	.01	1.5	.01	1.6	.01	1.4	.01	1.1	.01	1.0	.01	1.1	.01	.8	.01	.5	.01	.3	.01	-65
-70	1.7	.01	1.5	.01	1.6	.01	1.4	.01	2.0	.01	1.8	.01	1.6	.01	1.5	.01	1.8	.01	1.7	.01	1.6	.01	1.3	.01	1.4	.01	1.3	.01	1.0	.01	.9	.01	1.0	.01	.7	.01	.4	.01	.3	.00	-70
-75	1.5	.01	1.4	.01	1.4	.01	1.3	.01	1.8	.01	1.7	.01	1.5	.01	1.3	.01	1.7	.01	1.5	.01	1.4	.01	1.2	.01	1.3	.01	1.1	.01	.9	.01	.7	.01	.9	.01	.5	.01	.3	.00	.2	.00	-75
-80	1.3	.01	1.2	.01	1.3	.01	1.1	.01	1.7	.01	1.6	.01	1.3	.01	1.2	.01	1.5	.01	1.4	.01	1.3	.01	1.0	.01	1.1	.01	1.0	.01	.7	.01	.6	.01	.7	.01	.4	.00	.2	.00	.1	.00	-80
-85	1.1	.01	1.0	.01	1.1	.01	.9	.01	1.5	.01	1.4	.01	1.2	.01	1.1	.01	1.4	.01	1.2	.01	1.1	.01	.9	.01	1.0	.01	.9	.01	.6	.01	.5	.00	.6	.01	.2	.00	.1	.00	.1	.00	-85
-90	.9	.01	.8	.01	.9	.00	.8	.00	1.4	.01	1.2	.01	1.0	.01	.9	.01	1.2	.01	1.1	.01	.9	.01	.7	.00	.8	.01	.7	.00	.4	.01	.4	.00	.4	.00	.1	.00	.1	.00	.1	.00	-90
-95	.7	.00	.6	.01	.6	.00	.6	.00	1.2	.01	1.1	.01	.9	.01	.8	.01	1.0	.01	.9	.01	.7	.00	.6	.00	.6	.01	.6	.00	.3	.00	.2	.00	.3	.00	.1	.00	.1	.00	.1	.00	-95
-100	.5	.00	.4	.01	.4	.00	.4	.00	1.1	.01	.9	.01	.7	.01	.6	.00	.9	.01	.7	.00	.5	.00	.4	.00	.5	.00	.4	.00	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	-100

FLAIL UNIT ATTACK TABLE

A–6.2

	AT 1		AT 2		AT 3		AT 4		AT 5		AT 6		AT 7		AT 8		AT 9		AT 10		AT 11		AT 12		AT 13		AT 14		AT 15		AT 16		AT 17		AT 18		AT 19		AT 20		
	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	
100	45.6	.52	44.7	.52	41.0	.52	38.2	.51	44.4	.52	41.8	.52	37.8	.51	37.8	.51	38.2	.52	38.2	.51	34.5	.51	33.1	.50	34.8	.51	34.8	.50	32.3	.50	32.4	.50	31.5	.50	29.5	.49	27.5	.48	24.9	.45	100
95	44.3	.52	43.6	.52	39.8	.51	37.0	.51	43.3	.51	40.8	.51	36.9	.51	37.0	.50	37.2	.51	37.1	.51	33.6	.50	32.3	.50	33.9	.50	33.9	.50	31.5	.49	31.5	.49	30.6	.49	28.7	.48	25.9	.45	23.4	.43	95
90	42.9	.51	42.5	.52	38.4	.50	35.7	.50	42.0	.51	39.6	.50	35.9	.50	36.0	.49	36.1	.51	36.0	.50	32.5	.50	31.3	.49	32.9	.50	32.9	.49	30.6	.48	30.4	.47	29.7	.49	27.7	.46	24.3	.42	21.9	.40	90
85	41.3	.50	41.1	.51	36.9	.50	34.2	.49	40.6	.50	38.3	.50	34.9	.49	34.9	.48	34.8	.50	34.8	.49	31.3	.49	30.3	.48	31.8	.49	31.6	.47	29.4	.47	28.6	.44	28.7	.47	26.0	.44	22.7	.39	20.4	.37	85
80	39.6	.50	39.7	.50	35.2	.49	32.4	.48	39.0	.49	36.8	.49	33.7	.49	33.7	.47	33.5	.49	33.4	.48	30.0	.48	29.1	.47	30.6	.48	29.6	.44	27.6	.44	26.7	.42	27.5	.46	24.3	.41	21.1	.37	18.9	.34	80
75	37.7	.49	38.2	.50	33.2	.47	30.2	.45	37.4	.48	35.3	.48	32.4	.48	32.4	.46	32.1	.48	32.0	.48	28.6	.47	27.5	.45	29.3	.47	27.6	.42	25.7	.41	24.9	.39	25.7	.43	22.6	.38	19.5	.34	17.4	.32	75
70	35.1	.46	36.5	.49	30.8	.44	27.9	.42	35.6	.47	33.7	.47	31.0	.47	30.9	.45	30.5	.48	30.4	.46	26.8	.45	25.6	.42	27.8	.45	25.6	.39	23.9	.38	23.0	.36	23.9	.41	20.9	.35	17.9	.31	15.9	.29	70
65	32.4	.43	34.7	.48	28.4	.41	25.7	.39	33.7	.46	31.9	.46	29.4	.45	28.8	.42	28.8	.47	28.4	.44	24.8	.42	23.7	.39	25.8	.43	23.6	.36	22.0	.36	21.2	.33	22.1	.38	19.2	.33	16.3	.28	14.4	.26	65
60	29.8	.41	32.1	.45	26.0	.39	23.4	.37	31.7	.45	29.9	.45	27.2	.43	26.6	.39	26.9	.45	26.2	.42	22.8	.39	21.8	.36	23.8	.40	21.6	.33	20.2	.33	19.3	.31	20.3	.35	17.5	.30	14.7	.25	12.9	.23	60
55	27.1	.38	29.6	.42	23.6	.36	21.2	.34	29.1	.43	27.5	.42	25.1	.40	24.5	.37	24.7	.42	24.0	.39	20.8	.37	19.9	.34	21.8	.37	19.6	.31	18.3	.30	17.5	.28	18.5	.32	15.8	.27	13.1	.23	11.4	.21	55
50	24.7	.35	27.2	.40	21.4	.33	19.1	.31	26.8	.40	25.3	.39	23.1	.37	22.5	.34	22.7	.40	22.0	.36	19.0	.34	18.2	.31	19.9	.35	17.8	.28	16.6	.27	15.8	.25	16.9	.30	14.2	.25	11.6	.20	10.0	.18	50
45	22.2	.32	24.8	.37	19.1	.30	17.0	.29	24.4	.37	23.0	.36	21.1	.34	20.4	.31	20.6	.37	19.9	.34	17.1	.31	16.4	.28	18.0	.32	15.9	.25	14.8	.25	14.0	.23	15.1	.27	12.6	.22	10.1	.17	8.5	.15	45
40	19.8	.30	22.5	.34	17.0	.28	15.0	.26	22.1	.34	20.8	.34	19.1	.32	18.5	.28	18.7	.34	17.9	.31	15.3	.28	14.6	.26	16.2	.29	14.0	.23	13.1	.22	12.3	.20	13.5	.24	11.0	.19	8.6	.15	7.2	.13	40
35	17.6	.27	20.3	.31	15.0	.25	13.1	.23	19.9	.32	18.8	.31	17.2	.29	16.6	.26	16.8	.32	16.0	.28	13.6	.26	13.0	.23	14.5	.26	12.3	.20	11.5	.19	10.7	.17	11.9	.22	9.6	.17	7.2	.12	5.8	.10	35
30	15.5	.24	18.2	.29	13.1	.22	11.4	.21	17.8	.29	16.8	.28	15.4	.27	14.8	.23	15.0	.29	14.2	.26	12.0	.23	11.4	.21	12.8	.24	10.7	.18	10.0	.17	9.1	.15	10.4	.19	8.2	.14	5.9	.10	4.6	.08	30
25	13.5	.21	16.2	.26	11.3	.20	9.7	.18	15.8	.27	14.9	.26	13.7	.24	13.0	.21	13.3	.26	12.5	.23	10.5	.21	9.9	.18	11.3	.21	9.1	.15	8.5	.15	7.6	.13	9.0	.17	6.8	.12	4.6	.08	3.4	.06	25
20	11.6	.19	14.2	.23	9.6	.17	8.2	.15	13.9	.24	13.2	.23	12.1	.21	11.4	.19	11.7	.24	10.9	.21	9.0	.18	8.5	.16	9.8	.19	7.6	.13	7.1	.12	6.2	.10	7.7	.14	5.6	.10	3.5	.06	2.3	.04	20
15	9.8	.16	12.4	.21	8.1	.15	6.8	.13	12.2	.22	11.5	.21	10.5	.19	9.9	.16	10.2	.21	9.4	.18	7.7	.16	7.2	.13	8.4	.17	6.2	.11	5.8	.10	4.9	.08	6.4	.12	4.4	.08	2.4	.04	1.5	.03	15
10	8.2	.14	10.7	.18	6.7	.12	5.5	.11	10.5	.19	10.0	.19	9.1	.17	8.4	.14	8.8	.19	8.1	.16	6.5	.14	5.9	.11	7.1	.14	4.9	.08	4.6	.08	3.7	.06	5.2	.10	3.3	.06	1.6	.03	1.4	.03	10
5	6.7	.11	9.1	.16	5.4	.10	4.4	.08	9.0	.17	8.5	.16	7.7	.14	7.0	.12	7.5	.17	6.8	.14	5.3	.11	4.8	.09	5.9	.12	3.7	.06	3.5	.06	2.6	.04	4.1	.08	2.3	.04	1.5	.03	1.3	.02	5
0	5.4	.09	7.6	.13	4.2	.08	3.3	.06	7.6	.14	7.2	.14	6.5	.12	5.8	.10	6.3	.14	5.6	.11	4.3	.09	3.8	.07	4.8	.10	2.6	.04	2.5	.04	1.7	.03	3.1	.06	1.6	.03	1.4	.02	1.3	.02	0
-5	4.1	.07	6.3	.11	3.2	.06	2.5	.04	6.3	.12	6.0	.12	5.3	.10	4.6	.08	5.2	.12	4.5	.09	3.4	.07	2.8	.05	3.8	.08	1.8	.03	1.7	.03	1.6	.03	2.3	.04	1.5	.02	1.3	.02	1.2	.02	-5
-10	3.1	.05	5.0	.09	2.4	.04	1.9	.03	5.2	.10	4.9	.10	4.2	.08	3.5	.06	4.2	.10	3.6	.07	2.6	.05	2.0	.03	3.0	.06	1.7	.03	1.6	.02	1.5	.02	1.6	.03	1.4	.02	1.2	.02	1.1	.02	-10
-15	2.2	.03	3.9	.07	1.9	.03	1.8	.03	4.2	.08	3.9	.08	3.2	.06	2.5	.04	3.4	.08	2.7	.05	1.9	.03	1.6	.03	2.2	.04	1.6	.02	1.5	.02	1.4	.02	1.5	.02	1.3	.02	1.2	.02	1.0	.02	-15
-20	2.0	.03	2.9	.05	1.8	.03	1.6	.02	3.3	.06	3.0	.06	2.4	.04	1.8	.03	2.6	.06	2.0	.03	1.6	.03	1.5	.02	1.6	.03	1.5	.02	1.4	.02	1.4	.02	1.4	.02	1.2	.02	1.1	.02	1.0	.02	-20
-25	1.9	.02	2.0	.03	1.7	.02	1.5	.02	2.5	.04	2.3	.04	1.7	.03	1.7	.02	2.0	.04	1.7	.03	1.5	.02	1.4	.02	1.5	.02	1.4	.02	1.3	.02	1.3	.02	1.3	.02	1.1	.02	1.0	.02	.9	.02	-25
-30	1.8	.02	1.9	.03	1.6	.02	1.4	.02	1.9	.03	1.8	.03	1.6	.02	1.6	.02	1.6	.03	1.6	.02	1.4	.02	1.3	.02	1.4	.02	1.3	.02	1.2	.02	1.2	.02	1.2	.02	1.1	.02	.9	.02	.8	.01	-30
-35	1.6	.02	1.8	.02	1.4	.02	1.3	.02	1.7	.02	1.6	.02	1.5	.02	1.5	.02	1.5	.02	1.4	.02	1.3	.02	1.2	.02	1.3	.02	1.2	.02	1.1	.02	1.1	.02	1.1	.02	1.0	.02	.8	.01	.7	.01	-35
-40	1.5	.02	1.6	.02	1.3	.02	1.2	.02	1.6	.02	1.5	.02	1.4	.02	1.4	.02	1.4	.02	1.3	.02	1.2	.02	1.1	.02	1.2	.02	1.1	.02	1.0	.02	1.0	.02	1.0	.02	.9	.02	.8	.01	.7	.01	-40
-45	1.4	.02	1.5	.02	1.2	.02	1.1	.02	1.5	.02	1.4	.02	1.3	.02	1.2	.02	1.3	.02	1.2	.02	1.1	.02	1.0	.02	1.1	.02	1.0	.02	.9	.02	.9	.01	.9	.02	.8	.01	.7	.01	.6	.01	-45
-50	1.2	.02	1.4	.02	1.1	.02	.9	.02	1.3	.02	1.3	.02	1.1	.02	1.1	.02	1.1	.02	1.1	.02	.9	.02	.9	.02	1.0	.02	.9	.01	.8	.01	.8	.01	.8	.01	.7	.01	.6	.01	.5	.01	-50
-55	1.1	.02	1.2	.02	.9	.02	.8	.01	1.2	.02	1.1	.02	1.0	.02	1.0	.02	1.0	.02	1.0	.02	.8	.02	.8	.01	.9	.02	.8	.01	.7	.01	.7	.01	.8	.01	.6	.01	.5	.01	.4	.01	-55
-60	1.0	.01	1.1	.02	.8	.01	.7	.01	1.1	.02	1.0	.02	.9	.02	.9	.01	.9	.02	.9	.02	.8	.01	.7	.01	.8	.01	.7	.01	.7	.01	.6	.01	.7	.01	.5	.01	.4	.01	.4	.01	-60
-65	.9	.01	1.0	.02	.7	.01	.7	.01	1.0	.02	.9	.02	.9	.01	.8	.01	.8	.02	.8	.01	.7	.01	.6	.01	.7	.01	.6	.01	.6	.01	.5	.01	.6	.01	.5	.01	.4	.01	.3	.01	-65
-70	.8	.01	.9	.01	.6	.01	.6	.01	.9	.01	.8	.01	.8	.01	.7	.01	.7	.01	.7	.01	.6	.01	.6	.01	.6	.01	.5	.01	.5	.01	.4	.01	.5	.01	.4	.01	.3	.00	.2	.00	-70
-75	.7	.01	.8	.01	.6	.01	.5	.01	.8	.01	.7	.01	.7	.01	.6	.01	.7	.01	.6	.01	.5	.01	.5	.01	.6	.01	.4	.01	.4	.01	.4	.01	.4	.01	.3	.01	.2	.00	.2	.00	-75
-80	.6	.01	.7	.01	.5	.01	.4	.01	.7	.01	.7	.01	.6	.01	.6	.01	.6	.01	.5	.01	.4	.01	.4	.01	.5	.01	.4	.01	.4	.01	.3	.01	.4	.01	.3	.00	.2	.00	.1	.00	-80
-85	.5	.01	.6	.01	.4	.01	.3	.01	.6	.01	.6	.01	.5	.01	.5	.01	.5	.01	.5	.01	.4	.01	.4	.01	.4	.01	.3	.01	.3	.00	.2	.00	.3	.01	.2	.00	.1	.00	.1	.00	-85
-90	.4	.01	.5	.01	.3	.01	.3	.01	.5	.01	.5	.01	.4	.01	.4	.01	.4	.01	.4	.01	.3	.01	.3	.01	.4	.01	.2	.00	.2	.00	.2	.00	.3	.00	.2	.00	.1	.00	.1	.00	-90
-95	.3	.01	.4	.01	.3	.00	.2	.00	.4	.01	.4	.01	.4	.01	.3	.01	.4	.01	.3	.01	.3	.01	.2	.00	.3	.01	.2	.00	.2	.00	.1	.00	.2	.00	.1	.00	.1	.00	.1	.00	-95
-100	.3	.00	.4	.01	.2	.00	.2	.00	.4	.01	.4	.01	.3	.01	.3	.00	.3	.01	.3	.01	.2	.00	.2	.00	.2	.00	.1	.00	.1	.00	.1	.00	.2	.00	.1	.00	.1	.00	.1	.00	-100

WAR MATTOCK UNIT ATTACK TABLE

A–6.3

	AT 1		AT 2		AT 3		AT 4		AT 5		AT 6		AT 7		AT 8		AT 9		AT 10		AT 11		AT 12		AT 13		AT 14		AT 15		AT 16		AT 17		AT 18		AT 19		AT 20		
	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	
100	43.5	.52	42.6	.52	38.8	.51	35.9	.51	43.1	.51	40.6	.51	36.5	.51	36.5	.51	38.5	.51	38.2	.51	34.6	.51	33.2	.50	35.9	.51	36.0	.50	33.6	.50	33.7	.50	32.7	.51	31.1	.50	29.3	.48	27.5	.48	100
95	42.1	.51	41.6	.52	37.5	.51	34.6	.50	41.9	.51	39.5	.51	35.5	.51	35.5	.50	37.3	.50	37.0	.50	33.4	.50	32.2	.49	34.8	.51	34.9	.50	32.7	.49	32.8	.49	31.8	.50	30.3	.49	28.3	.47	25.9	.45	95
90	40.7	.51	40.3	.51	36.0	.50	33.2	.50	40.6	.50	38.3	.50	34.5	.50	34.4	.49	36.0	.50	35.7	.49	32.1	.49	31.0	.48	33.6	.50	33.7	.49	31.6	.48	31.7	.48	30.7	.49	29.3	.48	26.6	.44	24.3	.42	90
85	39.0	.50	39.0	.50	34.4	.49	31.6	.49	39.1	.49	36.9	.49	33.3	.49	33.3	.48	34.6	.49	34.1	.48	30.7	.48	29.7	.47	32.3	.49	32.4	.48	30.4	.47	30.0	.46	29.5	.48	28.1	.46	24.9	.42	22.7	.40	85
80	37.1	.49	37.5	.50	32.2	.46	29.5	.46	37.5	.49	35.4	.49	32.0	.49	32.0	.47	33.1	.48	32.5	.47	29.2	.47	28.4	.46	30.8	.48	31.0	.47	28.6	.45	28.0	.43	28.3	.47	26.3	.44	23.2	.39	21.1	.37	80
75	34.5	.46	35.9	.49	29.9	.44	27.4	.44	35.7	.48	33.8	.48	30.7	.48	30.6	.46	31.4	.47	30.7	.46	27.4	.45	26.5	.44	29.2	.47	29.0	.44	26.7	.42	26.1	.40	26.8	.46	24.5	.41	21.5	.36	19.5	.34	75
70	32.0	.43	34.0	.47	27.6	.41	25.2	.41	33.9	.46	32.1	.47	29.1	.47	29.0	.45	29.6	.46	28.7	.44	25.3	.43	24.6	.41	27.5	.46	26.9	.42	24.7	.39	24.1	.37	24.9	.43	22.7	.38	19.8	.33	17.9	.31	70
65	29.4	.40	31.6	.45	25.3	.38	23.1	.38	31.8	.45	30.1	.45	27.5	.45	26.9	.42	27.5	.44	26.5	.42	23.3	.40	22.6	.38	25.5	.44	24.8	.39	22.8	.37	22.2	.35	23.0	.40	20.9	.35	18.1	.31	16.3	.29	65
60	26.9	.38	29.1	.42	23.0	.35	20.9	.35	29.3	.42	27.8	.42	25.4	.43	24.8	.39	25.2	.41	24.2	.39	21.2	.37	20.7	.36	23.4	.41	22.7	.36	20.8	.34	20.2	.32	21.1	.37	19.1	.33	16.4	.28	14.7	.26	60
55	24.3	.35	26.7	.39	20.7	.33	18.8	.33	26.8	.40	25.4	.40	23.3	.40	22.7	.37	23.0	.38	22.0	.36	19.2	.34	18.7	.33	21.3	.38	20.6	.33	18.9	.31	18.3	.29	19.2	.35	17.3	.30	14.7	.25	13.1	.23	55
50	22.0	.32	24.4	.37	18.6	.30	16.8	.30	24.5	.37	23.3	.37	21.3	.37	20.8	.34	20.9	.36	19.9	.34	17.3	.32	16.9	.30	19.4	.36	18.6	.31	17.1	.29	16.4	.26	17.4	.32	15.6	.27	13.1	.22	11.6	.20	50
45	19.6	.30	22.1	.34	16.5	.27	14.8	.27	22.1	.34	21.1	.34	19.3	.34	18.8	.31	18.8	.33	17.8	.31	15.4	.29	15.1	.27	17.4	.33	16.7	.28	15.2	.26	14.6	.24	15.7	.29	13.9	.24	11.5	.20	10.1	.18	45
40	17.3	.27	19.9	.31	14.5	.24	12.9	.24	19.9	.31	19.0	.32	17.4	.32	16.9	.28	16.8	.30	15.8	.28	13.6	.26	13.4	.25	15.5	.30	14.8	.25	13.5	.23	12.8	.21	13.9	.27	12.3	.22	9.9	.17	8.6	.15	40
35	15.2	.24	17.8	.28	12.6	.22	11.2	.22	17.7	.29	16.9	.29	15.6	.29	15.1	.26	14.9	.27	14.0	.25	11.9	.24	11.7	.22	13.8	.27	13.0	.23	11.8	.21	11.1	.18	12.3	.24	10.7	.19	8.5	.15	7.2	.13	35
30	13.2	.21	15.8	.26	10.8	.19	9.6	.19	15.7	.26	15.1	.26	13.9	.27	13.4	.23	13.1	.25	12.2	.23	10.3	.21	10.2	.20	12.1	.25	11.3	.20	10.2	.18	9.5	.16	10.8	.21	9.2	.17	7.1	.12	5.9	.10	30
25	11.3	.19	13.9	.23	9.1	.17	8.1	.17	13.8	.24	13.3	.24	12.3	.24	11.7	.21	11.4	.22	10.6	.20	8.8	.19	8.8	.17	10.6	.22	9.8	.18	8.7	.15	8.0	.13	9.4	.19	7.9	.14	5.8	.10	4.6	.08	25
20	9.6	.16	12.1	.20	7.6	.14	6.7	.14	12.1	.21	11.6	.21	10.8	.21	10.2	.19	9.9	.20	9.0	.18	7.5	.16	7.5	.15	9.1	.20	8.3	.15	7.3	.13	6.6	.11	8.0	.16	6.6	.12	4.5	.08	3.4	.06	20
15	8.0	.14	10.4	.18	6.2	.12	5.5	.12	10.4	.19	10.0	.19	9.3	.19	8.8	.16	8.5	.18	7.7	.16	6.3	.14	6.2	.13	7.8	.18	7.0	.13	6.0	.11	5.3	.09	6.8	.14	5.3	.10	3.4	.06	2.4	.04	15
10	6.5	.11	8.8	.15	5.0	.09	4.4	.09	8.9	.16	8.5	.16	8.0	.17	7.4	.14	7.1	.15	6.4	.13	5.1	.12	5.1	.11	6.5	.15	5.7	.11	4.8	.09	4.1	.07	5.6	.12	4.2	.08	2.4	.04	1.6	.03	10
5	5.1	.09	7.3	.13	3.9	.07	3.4	.07	7.5	.14	7.2	.14	6.8	.14	6.2	.12	5.9	.13	5.2	.11	4.1	.10	4.1	.09	5.4	.13	4.6	.09	3.7	.07	3.0	.05	4.6	.10	3.2	.06	1.6	.03	1.5	.03	5
0	3.9	.06	6.0	.11	2.9	.05	2.6	.05	6.2	.12	6.0	.12	5.6	.12	5.1	.10	4.8	.11	4.2	.09	3.3	.07	3.2	.07	4.4	.11	3.5	.07	2.8	.05	2.0	.03	3.6	.08	2.3	.04	1.5	.03	1.4	.02	0
-5	2.9	.04	4.7	.08	2.1	.03	1.9	.03	5.0	.10	4.9	.10	4.6	.10	4.0	.08	3.9	.09	3.4	.07	2.5	.06	2.4	.05	3.5	.09	2.7	.05	1.9	.03	1.7	.03	2.8	.06	1.6	.03	1.4	.02	1.3	.02	-5
-10	2.1	.03	3.6	.06	1.9	.03	1.7	.03	4.0	.08	3.9	.08	3.6	.08	3.1	.06	3.1	.07	2.7	.05	1.9	.04	1.7	.03	2.8	.07	1.9	.03	1.6	.03	1.6	.02	2.1	.04	1.5	.02	1.3	.02	1.2	.02	-10
-15	2.0	.03	2.7	.04	1.8	.02	1.6	.02	3.1	.06	3.0	.06	2.8	.06	2.3	.04	2.4	.05	2.0	.04	1.6	.03	1.5	.02	2.2	.05	1.7	.03	1.5	.02	1.5	.02	1.5	.03	1.4	.02	1.3	.02	1.2	.02	-15
-20	1.9	.02	2.0	.03	1.6	.02	1.5	.02	2.4	.04	2.3	.04	2.1	.04	1.7	.03	1.8	.03	1.7	.03	1.5	.02	1.4	.02	1.7	.03	1.6	.02	1.4	.02	1.4	.02	1.5	.02	1.3	.02	1.2	.02	1.1	.02	-20
-25	1.8	.02	1.8	.03	1.5	.02	1.4	.02	1.9	.03	1.8	.03	1.6	.03	1.6	.02	1.6	.02	1.6	.02	1.4	.02	1.3	.02	1.5	.02	1.5	.02	1.4	.02	1.3	.02	1.4	.02	1.2	.02	1.1	.02	1.0	.02	-25
-30	1.6	.02	1.7	.02	1.4	.02	1.3	.02	1.7	.02	1.6	.02	1.5	.02	1.5	.02	1.5	.02	1.5	.02	1.3	.02	1.2	.02	1.4	.02	1.4	.02	1.3	.02	1.2	.02	1.3	.02	1.2	.02	1.0	.02	.9	.02	-30
-35	1.5	.02	1.6	.02	1.3	.02	1.2	.02	1.6	.02	1.5	.02	1.4	.02	1.4	.02	1.4	.02	1.3	.02	1.2	.02	1.2	.02	1.3	.02	1.3	.02	1.2	.02	1.1	.02	1.2	.02	1.1	.02	.9	.02	.8	.01	-35
-40	1.4	.02	1.5	.02	1.2	.02	1.1	.02	1.5	.02	1.4	.02	1.3	.02	1.3	.02	1.3	.02	1.2	.02	1.1	.02	1.1	.02	1.2	.02	1.2	.02	1.1	.02	1.0	.02	1.1	.02	1.0	.02	.8	.01	.8	.01	-40
-45	1.2	.02	1.4	.02	1.1	.02	1.0	.02	1.4	.02	1.3	.02	1.2	.02	1.2	.02	1.2	.02	1.1	.02	1.0	.02	1.0	.02	1.1	.02	1.1	.02	1.0	.02	.9	.01	1.0	.02	.9	.02	.8	.01	.7	.01	-45
-50	1.1	.02	1.2	.02	.9	.01	.8	.01	1.2	.02	1.2	.02	1.1	.02	1.0	.02	1.0	.02	1.0	.02	.9	.02	.8	.01	1.0	.02	.9	.02	.8	.01	.8	.01	.9	.02	.8	.01	.7	.01	.6	.01	-50
-55	1.0	.01	1.1	.02	.8	.01	.7	.01	1.1	.02	1.0	.02	1.0	.02	.9	.02	.9	.02	.9	.02	.8	.01	.7	.01	.9	.02	.8	.01	.8	.01	.7	.01	.8	.01	.7	.01	.6	.01	.5	.01	-55
-60	0.9	.01	1.0	.02	.7	.01	.6	.01	1.0	.02	.9	.02	.9	.02	.8	.01	.8	.01	.8	.01	.7	.01	.7	.01	.8	.02	.7	.01	.7	.01	.6	.01	.7	.01	.6	.01	.5	.01	.4	.01	-60
-65	0.8	.01	.9	.01	.6	.01	.6	.01	.9	.01	.8	.01	.8	.01	.7	.01	.7	.01	.7	.01	.6	.01	.6	.01	.7	.01	.6	.01	.6	.01	.6	.01	.6	.01	.5	.01	.4	.01	.4	.01	-65
-70	0.7	.01	.8	.01	.5	.01	.5	.01	.8	.01	.7	.01	.7	.01	.7	.01	.6	.01	.6	.01	.5	.01	.5	.01	.6	.01	.6	.01	.5	.01	.5	.01	.5	.01	.5	.01	.3	.01	.3	.01	-70
-75	0.6	.01	.7	.01	.5	.01	.4	.01	.7	.01	.7	.01	.6	.01	.6	.01	.6	.01	.5	.01	.4	.01	.4	.01	.5	.01	.5	.01	.4	.01	.4	.01	.5	.01	.4	.01	.3	.00	.2	.00	-75
-80	0.5	.01	.6	.01	.4	.01	.3	.01	.6	.01	.6	.01	.5	.01	.5	.01	.5	.01	.4	.01	.4	.01	.4	.01	.4	.01	.4	.01	.4	.01	.3	.01	.4	.01	.3	.01	.2	.00	.2	.00	-80
-85	0.4	.01	.5	.01	.3	.01	.3	.01	.5	.01	.5	.01	.5	.01	.4	.01	.4	.01	.4	.01	.3	.01	.3	.01	.4	.01	.3	.01	.3	.01	.3	.00	.3	.01	.3	.00	.2	.00	.1	.00	-85
-90	0.3	.01	.4	.01	.2	.00	.2	.00	.4	.01	.4	.01	.4	.01	.4	.01	.4	.01	.3	.01	.3	.01	.2	.01	.3	.01	.3	.01	.2	.00	.2	.00	.3	.01	.2	.00	.1	.00	.1	.00	-90
-95	0.2	.00	.4	.01	.2	.00	.2	.00	.4	.01	.4	.01	.3	.01	.3	.01	.3	.01	.3	.01	.2	.00	.2	.00	.3	.01	.2	.00	.2	.00	.1	.00	.2	.00	.2	.00	.1	.00	.1	.00	-95
-100	0.2	.00	.3	.01	.1	.00	.1	.00	.3	.01	.3	.01	.3	.01	.2	.00	.2	.01	.2	.00	.2	.00	.2	.00	.2	.01	.2	.00	.1	.00	.1	.00	.2	.00	.2	.00	.1	.00	.1	.00	-100

QUARTERSTAFF UNIT ATTACK TABLE

A–6.4

	AT 1		AT 2		AT 3		AT 4		AT 5		AT 6		AT 7		AT 8		AT 9		AT 10		AT 11		AT 12		AT 13		AT 14		AT 15		AT 16		AT 17		AT 18		AT 19		AT 20		
	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	
100	40.8	.49	39.8	.50	36.1	.48	32.3	.46	39.5	.49	36.9	.49	32.6	.49	32.4	.47	30.4	.49	30.2	.48	26.5	.47	24.6	.46	25.7	.47	24.4	.44	20.9	.41	19.9	.39	20.4	.42	17.1	.38	13.1	.29	11.0	.27	100
95	39.7	.48	38.9	.49	34.2	.45	30.4	.43	38.5	.48	36.0	.48	31.9	.48	31.6	.46	29.6	.48	29.4	.46	25.6	.46	23.1	.43	24.8	.45	22.9	.41	19.6	.38	18.6	.36	19.1	.39	15.9	.35	12.0	.26	10.1	.24	95
90	37.6	.45	37.9	.48	32.1	.43	28.4	.40	37.5	.47	35.1	.47	31.0	.47	30.6	.45	28.7	.47	28.4	.45	24.1	.43	21.7	.40	23.3	.43	21.4	.38	18.2	.36	17.2	.34	17.8	.37	14.7	.32	11.0	.24	9.1	.22	90
85	35.3	.43	36.8	.47	30.0	.40	26.5	.37	36.3	.46	34.1	.46	30.0	.45	28.8	.42	27.8	.46	26.6	.42	22.5	.40	20.2	.38	21.8	.40	19.9	.35	16.9	.33	15.9	.31	16.5	.34	13.5	.30	10.0	.22	8.2	.20	85
80	32.9	.40	34.8	.44	28.0	.37	24.5	.35	35.1	.45	32.8	.44	28.1	.42	26.9	.39	26.7	.44	24.9	.40	21.0	.37	18.8	.35	20.3	.37	18.4	.33	15.5	.30	14.5	.28	15.2	.31	12.3	.27	9.0	.20	7.3	.18	80
75	30.6	.37	32.5	.42	25.9	.34	22.6	.32	33.7	.44	30.7	.42	26.3	.40	25.1	.37	24.9	.41	23.1	.37	19.4	.35	17.3	.32	18.8	.34	16.9	.30	14.2	.27	13.2	.25	13.9	.28	11.1	.24	8.0	.17	6.4	.15	75
70	28.2	.34	30.3	.39	23.7	.32	20.6	.29	31.4	.41	28.6	.39	24.4	.37	23.2	.34	23.2	.39	21.4	.34	17.9	.32	15.9	.29	17.3	.32	15.4	.27	12.8	.25	11.8	.23	12.6	.26	9.9	.21	6.9	.15	5.5	.13	70
65	25.9	.32	28.0	.36	21.6	.29	18.7	.26	29.2	.38	26.5	.36	22.6	.34	21.4	.31	21.4	.36	19.6	.31	16.3	.29	14.4	.27	15.8	.29	13.9	.24	11.5	.22	10.5	.20	11.3	.23	8.7	.19	5.9	.13	4.5	.11	65
60	23.5	.29	25.8	.33	19.5	.26	16.7	.23	26.9	.36	24.4	.33	20.7	.31	19.5	.28	19.7	.33	17.9	.29	14.8	.26	13.0	.24	14.3	.26	12.4	.22	10.1	.19	9.1	.17	10.0	.20	7.5	.16	4.9	.11	3.6	.09	60
55	21.2	.26	23.5	.31	17.5	.23	14.8	.21	24.7	.33	22.3	.31	18.9	.29	17.7	.26	17.9	.30	16.1	.26	13.2	.23	11.5	.21	12.8	.23	10.9	.19	8.8	.16	7.8	.14	8.7	.17	6.3	.13	3.9	.08	2.7	.06	55
50	19.0	.23	21.4	.28	15.5	.21	13.0	.18	22.6	.30	20.3	.28	17.2	.26	16.0	.23	16.3	.28	14.5	.23	11.8	.21	10.2	.19	11.4	.21	9.5	.16	7.5	.14	6.6	.12	7.5	.15	5.2	.11	3.0	.06	1.9	.04	50
45	16.8	.21	19.3	.25	13.5	.18	11.1	.16	20.4	.28	18.3	.25	15.4	.23	14.2	.21	14.6	.25	12.8	.21	10.3	.18	8.9	.16	10.0	.18	8.1	.14	6.3	.12	5.3	.10	6.3	.12	4.2	.09	2.1	.04	1.1	.03	45
40	14.6	.18	17.2	.23	11.6	.16	9.4	.13	18.4	.25	16.4	.23	13.7	.21	12.5	.18	13.0	.23	11.3	.18	8.9	.16	7.6	.14	8.7	.16	6.8	.12	5.2	.10	4.2	.08	5.1	.10	3.2	.07	1.2	.03	.9	.02	40
35	12.6	.16	15.2	.20	9.8	.13	7.7	.11	16.4	.22	14.5	.20	12.1	.18	10.9	.16	11.5	.20	9.8	.16	7.6	.14	6.4	.12	7.4	.14	5.6	.10	4.1	.08	3.2	.06	4.1	.08	2.3	.05	1.0	.02	.9	.02	35
30	10.6	.13	13.3	.17	8.1	.11	6.2	.09	14.5	.20	12.8	.18	10.5	.16	9.3	.14	10.1	.18	8.4	.14	6.4	.12	5.2	.10	6.2	.12	4.4	.08	3.1	.06	2.1	.04	3.1	.06	1.4	.03	1.0	.02	.8	.02	30
25	8.8	.11	11.4	.15	6.5	.09	4.7	.07	12.7	.18	11.1	.16	9.0	.14	7.9	.12	8.7	.16	7.0	.12	5.3	.10	4.1	.08	5.1	.10	3.3	.06	2.1	.04	1.3	.03	2.2	.04	1.2	.03	.9	.02	.8	.02	25
20	7.0	.09	9.7	.13	5.0	.07	3.4	.05	11.0	.16	9.5	.14	7.6	.12	6.5	.10	7.5	.14	5.8	.10	4.1	.08	3.1	.06	4.1	.08	2.3	.04	1.3	.03	1.3	.03	1.3	.03	1.1	.02	.9	.02	.7	.02	20
15	5.4	.07	8.0	.11	3.6	.05	2.2	.03	9.4	.13	8.0	.12	6.2	.10	5.1	.08	6.3	.12	4.6	.08	3.1	.06	2.1	.04	3.1	.06	1.5	.03	1.3	.02	1.2	.02	1.2	.03	1.0	.02	.8	.02	.7	.02	15
10	3.9	.05	6.5	.09	2.3	.03	1.8	.03	7.9	.11	6.6	.10	4.9	.08	3.9	.06	5.1	.10	3.5	.06	2.2	.04	1.4	.03	2.1	.04	1.4	.02	1.2	.02	1.1	.02	1.2	.02	1.0	.02	.8	.02	.7	.02	10
5	2.5	.03	5.0	.07	1.9	.03	1.7	.02	6.5	.09	5.2	.08	3.7	.06	2.7	.04	4.1	.08	2.4	.04	1.5	.03	1.3	.02	1.4	.03	1.3	.02	1.1	.02	1.1	.02	1.1	.02	.9	.02	.7	.02	.6	.01	5
0	2.1	.03	3.6	.05	1.8	.02	1.6	.02	5.2	.08	4.0	.06	2.6	.04	1.7	.03	3.1	.06	1.6	.03	1.4	.02	1.2	.02	1.3	.02	1.2	.02	1.1	.02	1.0	.02	1.0	.02	.9	.02	.7	.01	.6	.01	0
-5	2.0	.02	2.3	.03	1.7	.02	1.5	.02	4.0	.06	2.8	.04	1.7	.03	1.6	.02	2.2	.04	1.5	.02	1.3	.02	1.2	.02	1.3	.02	1.2	.02	1.0	.02	.9	.02	1.0	.02	.8	.02	.6	.01	.5	.01	-5
-10	1.9	.02	2.0	.03	1.6	.02	1.4	.02	2.8	.04	1.9	.03	1.6	.02	1.6	.02	1.5	.03	1.4	.02	1.2	.02	1.1	.02	1.2	.02	1.1	.02	.9	.02	.9	.02	.9	.02	.7	.02	.6	.01	.5	.01	-10
-15	1.8	.02	1.9	.02	1.5	.02	1.3	.02	1.9	.02	1.8	.02	1.5	.02	1.5	.02	1.4	.02	1.3	.02	1.1	.02	1.0	.02	1.1	.02	1.0	.02	.9	.02	.8	.02	.8	.02	.7	.02	.5	.01	.4	.01	-15
-20	1.7	.02	1.8	.02	1.4	.02	1.2	.02	1.8	.02	1.7	.02	1.4	.02	1.4	.02	1.4	.02	1.3	.02	1.1	.02	1.0	.02	1.0	.02	.9	.02	.8	.02	.7	.01	.8	.02	.6	.01	.5	.01	.4	.01	-20
-25	1.6	.02	1.6	.02	1.3	.02	1.1	.02	1.7	.02	1.6	.02	1.3	.02	1.3	.02	1.3	.02	1.2	.02	1.0	.02	.9	.02	1.0	.02	.9	.02	.7	.01	.7	.01	.7	.01	.6	.01	.4	.01	.3	.01	-25
-30	1.4	.02	1.5	.02	1.2	.02	1.1	.01	1.6	.02	1.5	.02	1.2	.02	1.2	.02	1.2	.02	1.1	.02	.9	.02	.8	.01	.9	.02	.8	.01	.7	.01	.6	.01	.6	.01	.5	.01	.4	.01	.3	.01	-30
-35	1.3	.02	1.4	.02	1.1	.01	1.0	.01	1.5	.02	1.3	.02	1.1	.02	1.1	.02	1.1	.02	1.0	.02	.8	.01	.7	.01	.8	.01	.7	.01	.6	.01	.5	.01	.6	.01	.4	.01	.3	.01	.2	.01	-35
-40	1.2	.01	1.3	.02	1.0	.01	.9	.01	1.4	.02	1.2	.02	1.1	.02	1.0	.01	1.0	.02	.9	.01	.8	.01	.7	.01	.7	.01	.6	.01	.5	.01	.5	.01	.5	.01	.4	.01	.3	.01	.2	.00	-40
-45	1.1	.01	1.2	.02	.9	.01	.8	.01	1.3	.02	1.1	.02	1.0	.01	.9	.01	.9	.02	.8	.01	.7	.01	.6	.01	.7	.01	.6	.01	.5	.01	.4	.01	.4	.01	.3	.01	.2	.00	.1	.00	-45
-50	.9	.01	1.1	.01	.8	.01	.6	.01	1.1	.02	1.0	.01	.9	.01	.8	.01	.8	.01	.7	.01	.6	.01	.5	.01	.6	.01	.5	.01	.4	.01	.3	.01	.4	.01	.3	.01	.1	.00	.1	.00	-50
-55	.8	.01	1.0	.01	.7	.01	.6	.01	1.0	.01	.9	.01	.8	.01	.7	.01	.7	.01	.6	.01	.5	.01	.4	.01	.5	.01	.4	.01	.3	.01	.3	.00	.3	.01	.2	.00	.1	.00	.1	.00	-55
-60	.7	.01	.9	.01	.6	.01	.5	.01	.9	.01	.8	.01	.7	.01	.6	.01	.6	.01	.6	.01	.4	.01	.4	.01	.4	.01	.3	.01	.3	.00	.2	.00	.3	.01	.2	.00	.1	.00	.0	.00	-60
-65	.6	.01	.8	.01	.5	.01	.4	.01	.8	.01	.7	.01	.6	.01	.5	.01	.6	.01	.5	.01	.4	.01	.3	.01	.4	.01	.3	.00	.2	.00	.2	.00	.2	.00	.1	.00	.0	.00	.0	.00	-65
-70	.5	.01	.7	.01	.4	.01	.3	.00	.7	.01	.6	.01	.5	.01	.5	.01	.5	.01	.4	.01	.3	.01	.3	.00	.3	.01	.2	.00	.1	.00	.1	.00	.2	.00	.1	.00	.0	.00	.0	.00	-70
-75	.4	.01	.6	.01	.3	.00	.2	.00	.6	.01	.5	.01	.4	.01	.4	.01	.4	.01	.3	.01	.3	.00	.2	.00	.3	.00	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	-75
-80	.3	.00	.5	.01	.2	.00	.2	.00	.5	.01	.5	.01	.4	.01	.3	.00	.4	.01	.3	.00	.2	.00	.2	.00	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	-80
-85	.3	.00	.4	.01	.2	.00	.1	.00	.5	.01	.4	.01	.3	.00	.3	.00	.3	.01	.2	.00	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	.0	.00	-85
-90	.2	.00	.3	.00	.1	.00	.1	.00	.4	.01	.3	.00	.2	.00	.2	.00	.3	.00	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	.0	.00	-90
-95	.1	.00	.2	.00	.1	.00	.1	.00	.3	.00	.3	.00	.2	.00	.1	.00	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.1	.00	.0	.00	.0	.00	.0	.00	-95
-100	.1	.00	.2	.00	.1	.00	.1	.00	.3	.00	.2	.00	.1	.00	.1	.00	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	-100

TWO-HAND SWORD UNIT ATTACK TABLE

	AT 1		AT 2		AT 3		AT 4		AT 5		AT 6		AT 7		AT 8		AT 9		AT 10		AT 11		AT 12		AT 13		AT 14		AT 15		AT 16		AT 17		AT 18		AT 19		AT 20		
	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	
100	48.8	.52	48.0	.52	44.1	.52	41.1	.51	47.7	.52	45.2	.52	41.0	.52	41.1	.51	42.0	.51	41.7	.51	38.1	.51	36.9	.50	36.0	.51	36.0	.50	33.6	.50	33.6	.49	28.5	.50	26.6	.49	24.1	.46	21.6	.44	100
95	47.3	.52	46.8	.52	42.7	.51	39.7	.51	46.4	.51	44.0	.51	40.0	.51	40.1	.50	40.8	.51	40.4	.50	36.8	.50	35.8	.50	34.9	.50	35.0	.49	32.7	.49	32.7	.48	27.7	.49	25.8	.47	22.7	.43	20.3	.41	95
90	45.7	.51	45.4	.52	41.1	.50	38.1	.50	45.0	.51	42.7	.51	38.8	.50	39.0	.50	39.4	.50	39.0	.50	35.4	.50	34.6	.49	33.7	.49	33.8	.48	31.6	.47	30.9	.46	26.8	.48	24.4	.45	21.2	.40	18.9	.38	90
85	44.0	.50	43.9	.51	39.4	.50	36.4	.50	43.5	.50	41.2	.50	37.6	.50	37.7	.49	38.0	.50	37.4	.49	33.9	.49	33.2	.48	32.4	.48	32.5	.47	29.8	.45	29.0	.43	25.8	.47	22.9	.42	19.8	.38	17.6	.36	85
80	42.1	.50	42.4	.50	37.4	.48	34.4	.49	41.8	.49	39.7	.49	36.2	.49	36.4	.48	36.3	.49	35.7	.48	32.3	.48	31.8	.47	31.0	.47	30.5	.44	27.9	.42	27.0	.40	24.3	.44	21.3	.40	18.3	.35	16.2	.33	80
75	39.8	.48	40.6	.50	35.0	.46	32.1	.46	40.0	.49	37.9	.48	34.7	.48	34.9	.47	34.6	.48	33.8	.47	30.5	.47	29.8	.44	29.4	.46	28.4	.42	25.9	.40	25.1	.37	22.6	.42	19.8	.37	16.9	.32	14.9	.30	75
70	37.0	.46	38.8	.49	32.4	.43	29.6	.43	38.0	.48	36.1	.48	33.1	.47	33.3	.46	32.7	.47	31.8	.46	28.3	.45	27.6	.41	27.4	.44	26.3	.39	24.0	.37	23.1	.35	21.0	.39	18.2	.34	15.4	.29	13.5	.27	70
65	34.1	.43	36.6	.47	29.8	.41	27.2	.41	35.9	.47	34.1	.46	31.4	.46	31.1	.43	30.5	.45	29.4	.44	26.0	.42	25.5	.39	25.3	.41	24.2	.36	22.0	.34	21.2	.32	19.3	.36	16.7	.31	14.0	.27	12.2	.24	65
60	31.3	.40	33.8	.45	27.2	.38	24.7	.38	33.6	.45	31.9	.45	29.1	.44	28.8	.41	28.1	.43	27.0	.41	23.8	.39	23.3	.36	23.2	.38	22.1	.33	20.1	.31	19.2	.29	17.7	.33	15.1	.29	12.5	.24	10.8	.22	60
55	28.4	.37	31.1	.42	24.6	.35	22.3	.35	30.9	.43	29.3	.42	26.8	.41	26.4	.38	25.6	.40	24.5	.38	21.5	.36	21.2	.33	21.1	.35	20.0	.31	18.1	.29	17.3	.26	16.0	.31	13.6	.26	11.1	.21	9.5	.19	55
50	25.8	.35	28.5	.39	22.2	.32	20.0	.33	28.3	.40	26.9	.40	24.6	.39	24.3	.35	23.4	.37	22.3	.36	19.5	.34	19.2	.31	19.2	.33	18.1	.28	16.3	.26	15.5	.24	14.5	.28	12.2	.23	9.7	.19	8.2	.16	50
45	23.1	.32	25.9	.37	19.8	.30	17.8	.30	25.7	.37	24.5	.37	22.4	.36	22.0	.33	21.1	.35	20.0	.33	17.4	.31	17.2	.28	17.2	.30	16.1	.25	14.5	.23	13.6	.21	12.9	.25	10.7	.20	8.4	.16	6.9	.14	45
40	20.6	.29	23.5	.34	17.5	.27	15.6	.27	23.3	.35	22.2	.34	20.3	.33	19.9	.30	18.9	.32	17.8	.30	15.4	.28	15.2	.25	15.4	.27	14.2	.23	12.7	.21	11.9	.18	11.4	.23	9.3	.18	7.0	.13	5.7	.11	40
35	18.2	.27	21.1	.31	15.3	.24	13.6	.24	20.9	.32	19.9	.31	18.2	.30	17.8	.27	16.8	.29	15.8	.27	13.5	.25	13.4	.23	13.6	.25	12.4	.20	11.0	.18	10.2	.16	10.0	.20	7.9	.15	5.8	.11	4.5	.09	35
30	15.9	.24	18.8	.28	13.3	.22	11.8	.22	18.7	.29	17.8	.29	16.3	.28	15.9	.25	14.9	.27	13.8	.25	11.8	.23	11.7	.20	11.9	.22	10.8	.18	9.4	.16	8.6	.13	8.7	.18	6.7	.13	4.6	.09	3.5	.07	30
25	13.8	.21	16.7	.26	11.4	.19	10.0	.19	16.6	.27	15.8	.26	14.5	.25	14.0	.22	13.1	.24	12.1	.22	10.2	.20	10.1	.18	10.3	.20	9.2	.15	7.9	.13	7.1	.11	7.4	.15	5.5	.11	3.5	.07	2.5	.05	25
20	11.8	.19	14.7	.23	9.7	.16	8.5	.17	14.6	.24	13.9	.24	12.7	.23	12.3	.20	11.4	.22	10.4	.20	8.7	.18	8.6	.15	8.9	.17	7.7	.13	6.5	.11	5.6	.09	6.2	.13	4.4	.09	2.5	.05	1.5	.03	20
15	10.0	.16	12.8	.20	8.0	.14	7.0	.14	12.7	.22	12.1	.21	11.1	.20	10.7	.17	9.8	.19	8.9	.18	7.3	.16	7.2	.13	7.5	.15	6.3	.11	5.2	.09	4.3	.07	5.1	.11	3.4	.07	1.6	.03	1.3	.03	15
10	8.3	.14	11.0	.18	6.6	.12	5.7	.12	11.0	.19	10.5	.19	9.6	.18	9.1	.15	8.3	.17	7.5	.15	6.1	.13	5.9	.11	6.3	.13	5.1	.09	4.0	.07	3.1	.05	4.1	.09	2.5	.05	1.4	.03	1.2	.02	10
5	6.8	.11	9.3	.15	5.3	.09	4.6	.09	9.4	.17	9.0	.17	8.2	.16	7.7	.13	7.0	.14	6.2	.13	4.9	.11	4.7	.09	5.1	.11	3.9	.07	3.0	.05	2.0	.03	3.2	.07	1.6	.03	1.3	.02	1.2	.02	5
0	5.4	.09	7.7	.13	4.1	.07	3.6	.07	7.9	.15	7.6	.14	6.9	.13	6.3	.11	5.8	.12	5.0	.11	3.9	.09	3.7	.07	4.1	.08	2.9	.05	2.0	.03	1.8	.03	2.4	.05	1.4	.03	1.2	.02	1.1	.02	0
-5	4.1	.06	6.3	.11	3.1	.05	2.7	.05	6.6	.12	6.3	.12	5.6	.11	5.1	.09	4.7	.10	4.1	.09	3.1	.07	2.8	.05	3.2	.07	2.0	.03	1.7	.03	1.7	.02	1.6	.03	1.3	.02	1.1	.02	1.0	.02	-5
-10	3.0	.04	5.0	.08	2.3	.03	2.1	.03	5.4	.10	5.1	.10	4.5	.09	4.0	.07	3.7	.08	3.2	.07	2.4	.05	2.0	.03	2.5	.05	1.8	.03	1.6	.02	1.6	.02	1.4	.03	1.2	.02	1.1	.02	1.0	.02	-10
-15	2.3	.03	3.8	.06	2.0	.03	1.9	.03	4.3	.08	4.1	.08	3.5	.07	3.0	.05	2.9	.06	2.5	.05	1.8	.03	1.7	.03	1.8	.03	1.7	.02	1.5	.02	1.5	.02	1.3	.02	1.2	.02	1.0	.02	.9	.02	-15
-20	2.2	.03	2.8	.04	1.9	.02	1.8	.02	3.4	.06	3.2	.06	2.7	.05	2.1	.03	2.3	.04	1.9	.03	1.7	.03	1.6	.02	1.6	.02	1.5	.02	1.4	.02	1.4	.02	1.2	.02	1.1	.02	.9	.02	.8	.02	-20
-25	2.0	.02	2.1	.03	1.8	.02	1.6	.02	2.6	.04	2.4	.04	1.9	.03	1.8	.02	1.8	.03	1.7	.02	1.5	.02	1.5	.02	1.5	.02	1.4	.02	1.3	.02	1.3	.02	1.1	.02	1.0	.02	.9	.02	.8	.02	-25
-30	1.9	.02	2.0	.03	1.6	.02	1.5	.02	2.0	.03	1.9	.03	1.7	.02	1.7	.02	1.7	.02	1.6	.02	1.4	.02	1.4	.02	1.4	.02	1.3	.02	1.2	.02	1.2	.02	1.1	.02	.9	.02	.8	.01	.7	.01	-30
-35	1.7	.02	1.9	.02	1.5	.02	1.4	.02	1.8	.02	1.8	.02	1.6	.02	1.6	.02	1.6	.02	1.5	.02	1.3	.02	1.3	.02	1.3	.02	1.2	.02	1.1	.02	1.1	.02	1.0	.02	.9	.02	.7	.01	.6	.01	-35
-40	1.6	.02	1.7	.02	1.4	.02	1.3	.02	1.7	.02	1.6	.02	1.5	.02	1.5	.02	1.4	.02	1.4	.02	1.2	.02	1.2	.02	1.2	.02	1.1	.02	1.0	.02	1.0	.01	.9	.02	.8	.01	.6	.01	.6	.01	-40
-45	1.4	.02	1.6	.02	1.3	.02	1.1	.02	1.6	.02	1.5	.02	1.4	.02	1.3	.02	1.3	.02	1.3	.02	1.1	.02	1.1	.02	1.1	.02	1.0	.02	.9	.01	.9	.01	.8	.02	.7	.01	.6	.01	.5	.01	-45
-50	1.3	.02	1.4	.02	1.1	.02	1.0	.02	1.4	.02	1.3	.02	1.2	.02	1.2	.02	1.2	.02	1.1	.02	1.0	.02	1.0	.02	1.0	.02	.9	.01	.8	.01	.8	.01	.7	.01	.6	.01	.5	.01	.4	.01	-50
-55	1.1	.02	1.3	.02	1.0	.01	.9	.01	1.3	.02	1.2	.02	1.1	.02	1.1	.02	1.0	.02	1.0	.02	.9	.02	.9	.01	.9	.01	.8	.01	.7	.01	.7	.01	.6	.01	.5	.01	.4	.01	.3	.01	-55
-60	1.0	.01	1.2	.02	.9	.01	.8	.01	1.2	.02	1.1	.02	1.0	.02	1.0	.01	.9	.02	.9	.01	.8	.01	.8	.01	.8	.01	.7	.01	.6	.01	.6	.01	.6	.01	.5	.01	.3	.01	.3	.01	-60
-65	.9	.01	1.0	.02	.8	.01	.7	.01	1.0	.02	1.0	.02	.9	.02	.9	.01	.8	.01	.8	.01	.7	.01	.7	.01	.7	.01	.6	.01	.5	.01	.5	.01	.5	.01	.4	.01	.3	.01	.2	.00	-65
-70	.8	.01	.9	.01	.7	.01	.6	.01	.9	.01	.9	.01	.8	.01	.8	.01	.7	.01	.7	.01	.6	.01	.6	.01	.6	.01	.5	.01	.5	.01	.4	.01	.4	.01	.3	.01	.2	.00	.2	.00	-70
-75	.7	.01	.8	.01	.6	.01	.5	.01	.8	.01	.8	.01	.7	.01	.7	.01	.6	.01	.6	.01	.5	.01	.5	.01	.5	.01	.5	.01	.4	.01	.3	.01	.4	.01	.3	.01	.2	.00	.1	.00	-75
-80	.6	.01	.7	.01	.5	.01	.4	.01	.7	.01	.7	.01	.6	.01	.6	.01	.6	.01	.5	.01	.4	.01	.4	.01	.4	.01	.4	.01	.3	.01	.3	.00	.3	.01	.2	.00	.1	.00	.1	.00	-80
-85	.5	.01	.6	.01	.4	.01	.3	.01	.6	.01	.6	.01	.5	.01	.5	.01	.5	.01	.4	.01	.4	.01	.4	.01	.4	.01	.3	.01	.3	.00	.2	.00	.2	.01	.2	.00	.1	.00	.1	.00	-85
-90	.4	.01	.5	.01	.3	.01	.3	.01	.5	.01	.5	.01	.5	.01	.4	.01	.4	.01	.4	.01	.3	.01	.3	.01	.3	.01	.2	.00	.2	.00	.2	.00	.2	.00	.1	.00	.1	.00	.1	.00	-90
-95	.3	.01	.5	.01	.3	.00	.2	.00	.5	.01	.4	.01	.4	.01	.4	.01	.3	.01	.3	.01	.2	.01	.2	.00	.3	.01	.2	.00	.1	.00	.1	.00	.2	.00	.1	.00	.1	.00	.1	.00	-95
-100	.3	.00	.4	.01	.2	.00	.2	.00	.4	.01	.4	.01	.3	.01	.3	.01	.3	.01	.2	.01	.2	.00	.2	.00	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	-100

JAVELIN UNIT ATTACK TABLE

A-7.1

	AT 1		AT 2		AT 3		AT 4		AT 5		AT 6		AT 7		AT 8		AT 9		AT 10		AT 11		AT 12		AT 13		AT 14		AT 15		AT 16		AT 17		AT 18		AT 19		AT 20		
	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	
100	30.2	.51	29.1	.51	25.6	.50	22.8	.49	28.7	.51	26.1	.50	22.1	.50	21.9	.49	27.3	.50	26.3	.49	22.8	.49	21.2	.48	23.0	.49	22.6	.47	19.4	.45	18.7	.43	17.2	.46	14.2	.41	11.4	.36	9.4	.34	100
95	29.3	.50	28.5	.51	24.7	.49	22.0	.48	27.9	.50	25.4	.49	21.6	.49	21.4	.48	26.4	.50	25.5	.49	22.0	.48	20.5	.47	22.2	.48	21.3	.45	18.2	.42	17.5	.40	16.1	.43	13.2	.38	10.5	.33	8.7	.32	95
90	28.4	.49	27.7	.50	23.8	.48	20.7	.46	27.0	.49	24.7	.49	21.0	.48	20.8	.47	25.4	.49	24.5	.48	21.1	.47	19.4	.44	21.3	.47	19.9	.42	17.0	.39	16.3	.37	15.1	.40	12.3	.35	9.7	.31	7.9	.29	90
85	27.3	.48	26.9	.49	22.4	.45	19.4	.43	26.0	.48	23.8	.48	20.4	.47	20.2	.46	24.4	.48	23.5	.46	19.9	.44	18.1	.42	19.9	.44	18.6	.39	15.8	.37	15.1	.35	14.0	.37	11.3	.32	8.8	.28	7.2	.26	85
80	25.5	.46	25.9	.48	20.9	.43	18.0	.40	25.0	.47	22.9	.47	19.7	.46	19.0	.44	23.3	.47	22.0	.44	18.5	.42	16.9	.39	18.6	.41	17.2	.36	14.6	.34	13.9	.32	13.0	.35	10.4	.30	8.0	.25	6.4	.23	80
75	23.8	.43	24.9	.47	19.4	.40	16.7	.38	23.9	.46	21.9	.45	18.5	.44	17.8	.41	22.0	.46	20.5	.41	17.2	.39	15.6	.36	17.2	.38	15.9	.34	13.4	.31	12.7	.29	11.9	.32	9.4	.27	7.1	.22	5.7	.20	75
70	22.0	.40	23.3	.44	17.9	.37	15.3	.35	22.7	.45	20.5	.43	17.3	.41	16.5	.38	20.4	.43	18.9	.39	15.8	.36	14.4	.33	15.9	.36	14.5	.31	12.2	.28	11.5	.26	10.9	.29	8.5	.24	6.3	.20	4.9	.18	70
65	20.3	.37	21.6	.42	16.4	.34	14.0	.32	21.0	.43	19.0	.40	16.0	.38	15.3	.35	18.8	.40	17.4	.36	14.5	.33	13.1	.31	14.5	.33	13.2	.28	11.0	.26	10.3	.23	9.8	.26	7.5	.21	5.4	.17	4.2	.15	65
60	18.5	.35	20.0	.39	14.9	.32	12.6	.29	19.4	.40	17.5	.38	14.8	.36	14.0	.33	17.2	.38	15.8	.33	13.1	.31	11.9	.28	13.2	.30	11.8	.25	9.8	.23	9.1	.21	8.8	.23	6.6	.19	4.6	.14	3.4	.12	60
55	16.8	.32	18.3	.36	13.4	.29	11.3	.27	17.7	.37	16.0	.35	13.5	.33	12.8	.30	15.6	.35	14.3	.30	11.8	.28	10.6	.25	11.8	.27	10.5	.23	8.6	.20	7.9	.18	7.7	.21	5.6	.16	3.7	.11	2.7	.09	55
50	15.1	.29	16.8	.34	12.0	.26	10.0	.24	16.2	.34	14.6	.32	12.4	.30	11.6	.27	14.1	.32	12.9	.28	10.5	.25	9.5	.23	10.6	.25	9.2	.20	7.5	.18	6.8	.15	6.7	.18	4.7	.13	2.9	.09	2.0	.07	50
45	13.5	.27	15.2	.31	10.6	.24	8.8	.21	14.6	.32	13.2	.29	11.2	.28	10.4	.24	12.6	.30	11.4	.25	9.2	.23	8.3	.20	9.3	.22	8.0	.17	6.4	.15	5.6	.13	5.7	.16	3.9	.11	2.2	.07	1.4	.05	45
40	11.9	.24	13.7	.28	9.3	.21	7.6	.19	13.1	.29	11.8	.27	10.0	.25	9.3	.22	11.2	.27	10.0	.22	8.1	.20	7.2	.17	8.1	.19	6.8	.15	5.3	.12	4.5	.10	4.8	.13	3.1	.09	1.6	.05	.9	.03	40
35	10.4	.21	12.2	.25	8.0	.18	6.4	.16	11.7	.26	10.6	.24	8.9	.22	8.1	.19	9.9	.24	8.7	.20	6.9	.18	6.1	.15	6.9	.17	5.6	.12	4.3	.10	3.5	.08	3.9	.11	2.3	.07	1.0	.03	.7	.03	35
30	9.0	.18	10.8	.23	6.8	.16	5.4	.14	10.4	.24	9.3	.22	7.8	.20	7.1	.17	8.6	.22	7.5	.17	5.9	.15	5.2	.13	5.9	.14	4.6	.10	3.4	.08	2.6	.06	3.1	.09	1.7	.05	.8	.03	.7	.03	30
25	7.6	.16	9.5	.20	5.7	.13	4.4	.11	9.1	.21	8.1	.19	6.8	.18	6.1	.15	7.4	.19	6.4	.15	4.9	.13	4.2	.11	4.9	.12	3.6	.08	2.5	.06	1.8	.04	2.4	.07	1.1	.03	.8	.03	.7	.02	25
20	6.4	.13	8.2	.18	4.6	.11	3.5	.09	7.9	.19	7.0	.17	5.9	.15	5.2	.13	6.4	.17	5.3	.13	4.0	.11	3.4	.09	3.9	.10	2.7	.06	1.8	.04	1.2	.03	1.7	.05	.9	.03	.7	.02	.6	.02	20
15	5.2	.11	7.0	.15	3.7	.09	2.7	.07	6.8	.16	6.0	.15	4.9	.13	4.3	.11	5.4	.15	4.4	.11	3.2	.09	2.6	.07	3.1	.08	1.9	.04	1.2	.03	1.1	.03	1.1	.03	.9	.02	.7	.02	.6	.02	15
10	4.1	.09	5.9	.13	2.9	.07	2.0	.05	5.7	.14	5.0	.13	4.1	.11	3.4	.09	4.4	.12	3.5	.09	2.5	.07	1.9	.05	2.4	.06	1.3	.03	1.1	.03	1.1	.02	1.0	.03	.8	.02	.7	.02	.6	.02	10
5	3.2	.07	4.8	.10	2.1	.05	1.4	.03	4.8	.12	4.2	.11	3.3	.09	2.7	.07	3.6	.10	2.7	.07	1.9	.05	1.3	.03	1.7	.04	1.2	.03	1.0	.02	1.0	.02	.9	.02	.8	.02	.6	.02	.5	.02	5
0	2.3	.05	3.8	.08	1.5	.03	1.2	.03	3.9	.10	3.4	.08	2.5	.07	1.9	.05	2.9	.08	2.0	.05	1.3	.03	1.1	.03	1.2	.03	1.1	.02	1.0	.02	.9	.02	.9	.02	.7	.02	.6	.02	.5	.02	0
-5	1.6	.03	2.9	.06	1.3	.03	1.1	.02	3.1	.08	2.6	.07	1.9	.05	1.3	.03	2.3	.06	1.4	.03	1.1	.03	1.0	.02	1.1	.02	1.1	.02	.9	.02	.9	.02	.8	.02	.7	.02	.5	.02	.4	.02	-5
-10	1.5	.03	2.2	.04	1.2	.02	1.1	.02	2.5	.06	2.0	.05	1.2	.03	1.1	.02	1.7	.04	1.3	.03	1.1	.02	1.0	.02	1.1	.02	1.0	.02	.9	.02	.8	.02	.8	.02	.6	.02	.5	.02	.4	.01	-10
-15	1.4	.02	1.4	.03	1.1	.02	1.0	.02	1.9	.04	1.4	.03	1.1	.02	1.0	.02	1.3	.03	1.2	.02	1.0	.02	.9	.02	1.0	.02	.9	.02	.8	.02	.8	.02	.7	.02	.6	.02	.4	.01	.4	.01	-15
-20	1.3	.02	1.3	.03	1.1	.02	.9	.02	1.3	.03	1.2	.02	1.0	.02	1.0	.02	1.2	.02	1.1	.02	.9	.02	.9	.02	.9	.02	.9	.02	.7	.02	.7	.02	.7	.02	.5	.02	.4	.01	.3	.01	-20
-25	1.2	.02	1.3	.02	1.0	.02	.8	.02	1.2	.02	1.1	.02	.9	.02	.9	.02	1.1	.02	1.0	.02	.9	.02	.8	.02	.9	.02	.8	.02	.7	.02	.6	.01	.6	.02	.5	.01	.4	.01	.3	.01	-25
-30	1.1	.02	1.2	.02	.9	.02	.8	.02	1.2	.02	1.0	.02	.9	.02	.8	.02	1.0	.02	1.0	.02	.8	.02	.7	.02	.8	.02	.7	.02	.6	.01	.6	.01	.6	.01	.4	.01	.3	.01	.3	.01	-30
-35	1.0	.02	1.1	.02	.8	.02	.7	.02	1.1	.02	1.0	.02	.8	.02	.8	.02	1.0	.02	.9	.02	.7	.02	.7	.02	.7	.02	.7	.01	.6	.01	.5	.01	.5	.01	.4	.01	.3	.01	.2	.01	-35
-40	.9	.02	1.0	.02	.8	.02	.6	.01	1.0	.02	.9	.02	.8	.02	.7	.02	.9	.02	.8	.02	.7	.02	.6	.01	.7	.02	.6	.01	.5	.01	.5	.01	.4	.01	.3	.01	.2	.01	.2	.01	-40
-45	.9	.02	.9	.02	.7	.01	.6	.01	.9	.02	.8	.02	.7	.02	.7	.02	.8	.02	.7	.02	.6	.01	.5	.01	.6	.01	.5	.01	.4	.01	.4	.01	.4	.01	.3	.01	.2	.01	.1	.01	-45
-50	.8	.01	.8	.02	.6	.01	.5	.01	.8	.02	.7	.02	.6	.02	.6	.01	.7	.02	.6	.01	.5	.01	.5	.01	.5	.01	.5	.01	.4	.01	.3	.01	.3	.01	.2	.01	.1	.00	.1	.00	-50
-55	.7	.01	.8	.02	.5	.01	.4	.01	.7	.02	.7	.01	.6	.01	.5	.01	.6	.01	.6	.01	.5	.01	.4	.01	.5	.01	.4	.01	.3	.01	.3	.01	.3	.01	.2	.01	.1	.00	.1	.00	-55
-60	.6	.01	.7	.01	.5	.01	.4	.01	.7	.01	.6	.01	.5	.01	.5	.01	.6	.01	.5	.01	.4	.01	.4	.01	.4	.01	.3	.01	.3	.01	.2	.01	.2	.01	.2	.00	.1	.00	.0	.00	-60
-65	.5	.01	.6	.01	.4	.01	.3	.01	.6	.01	.5	.01	.4	.01	.4	.01	.5	.01	.4	.01	.3	.01	.3	.01	.3	.01	.3	.01	.2	.00	.2	.00	.2	.01	.1	.00	.0	.00	.0	.00	-65
-70	.4	.01	.5	.01	.3	.01	.3	.01	.5	.01	.5	.01	.4	.01	.4	.01	.4	.01	.4	.01	.3	.01	.3	.01	.3	.01	.2	.01	.2	.00	.1	.00	.2	.00	.1	.00	.0	.00	.0	.00	-70
-75	.4	.01	.5	.01	.3	.01	.2	.01	.4	.01	.4	.01	.3	.01	.3	.01	.4	.01	.3	.01	.2	.01	.2	.01	.2	.01	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	-75
-80	.3	.01	.4	.01	.2	.01	.2	.00	.4	.01	.3	.01	.3	.01	.3	.01	.3	.01	.3	.01	.2	.01	.2	.00	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	.0	.00	-80
-85	.3	.01	.3	.01	.2	.00	.1	.00	.3	.01	.3	.01	.2	.01	.2	.01	.3	.01	.2	.01	.2	.00	.1	.00	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	.0	.00	-85
-90	.2	.00	.3	.01	.1	.00	.1	.00	.3	.01	.2	.01	.2	.01	.2	.00	.2	.01	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	-90
-95	.2	.00	.2	.01	.1	.00	.1	.00	.2	.01	.2	.01	.2	.00	.1	.00	.2	.01	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	-95
-100	.1	.00	.2	.00	.1	.00	.1	.00	.2	.00	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	.0	.00	-100

Range: 10'(+0), 50'(-20), 100'(-40)

LANCE MOUNTED UNIT ATTACK TABLE

	AT 1		AT 2		AT 3		AT 4		AT 5		AT 6		AT 7		AT 8		AT 9		AT 10		AT 11		AT 12		AT 13		AT 14		AT 15		AT 16		AT 17		AT 18		AT 19		AT 20		
	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	
100	50.0	.52	49.4	.52	45.3	.51	42.4	.51	49.2	.52	46.7	.52	42.5	.52	42.4	.51	43.5	.51	43.2	.51	39.5	.51	38.1	.51	37.2	.51	37.0	.51	34.6	.51	34.9	.51	33.7	.51	32.0	.50	30.6	.49	29.2	.49	100
95	48.4	.51	48.0	.52	43.7	.51	40.9	.51	47.8	.51	45.3	.51	41.3	.51	41.3	.51	42.1	.51	41.8	.51	38.1	.50	36.9	.50	35.9	.50	35.7	.50	33.5	.50	33.7	.50	32.6	.50	30.9	.49	29.6	.48	27.7	.46	95
90	46.6	.51	46.6	.51	42.0	.50	39.2	.50	46.2	.51	43.9	.51	40.1	.51	40.0	.50	40.6	.50	40.3	.50	36.7	.50	35.5	.50	34.6	.50	34.3	.49	32.2	.49	32.5	.49	31.4	.49	29.7	.48	28.0	.46	26.0	.44	90
85	44.7	.50	45.0	.51	40.1	.49	37.2	.49	44.6	.50	42.4	.50	38.7	.50	38.6	.50	39.0	.50	38.6	.49	35.0	.49	34.0	.49	33.1	.49	32.8	.49	30.7	.48	31.1	.48	29.9	.48	28.4	.47	26.2	.43	24.3	.41	85
80	42.4	.49	43.2	.50	37.5	.47	34.8	.47	42.7	.49	40.7	.49	37.2	.49	37.1	.49	37.2	.49	36.7	.48	33.2	.48	32.4	.48	31.4	.48	31.1	.48	29.2	.47	29.2	.45	28.4	.47	26.6	.45	24.4	.40	22.6	.38	80
75	39.4	.46	41.3	.49	34.8	.44	32.2	.44	40.8	.49	38.8	.48	35.6	.48	35.5	.48	35.3	.48	34.7	.47	30.9	.45	30.5	.46	29.6	.47	29.2	.46	27.2	.45	27.1	.43	26.7	.46	24.7	.42	22.6	.37	20.9	.35	75
70	36.5	.43	39.1	.48	32.1	.41	29.7	.41	38.6	.47	36.8	.47	33.9	.47	33.7	.47	33.1	.46	32.2	.45	28.6	.43	28.2	.44	27.5	.44	27.0	.43	25.1	.42	25.1	.40	24.7	.43	22.8	.39	20.8	.35	19.2	.33	70
65	33.5	.40	36.2	.45	29.4	.38	27.1	.38	36.2	.46	34.6	.46	31.9	.46	31.7	.45	30.6	.44	29.7	.42	26.2	.40	26.0	.41	25.3	.42	24.8	.41	23.1	.39	23.0	.37	22.7	.40	20.9	.36	19.0	.32	17.5	.30	65
60	30.6	.38	33.4	.42	26.7	.36	24.6	.36	33.4	.43	31.9	.43	29.4	.43	29.2	.43	28.0	.41	27.1	.39	23.9	.37	23.7	.38	23.1	.39	22.6	.38	21.0	.37	21.0	.34	20.7	.38	19.0	.34	17.2	.29	15.8	.27	60
55	27.6	.35	30.5	.40	24.0	.33	22.0	.33	30.5	.41	29.2	.40	27.0	.41	26.8	.40	25.5	.38	24.6	.37	21.5	.34	21.5	.35	20.9	.36	20.4	.35	19.0	.34	18.9	.32	18.7	.35	17.1	.31	15.4	.26	14.1	.24	55
50	24.9	.32	27.9	.37	21.5	.30	19.7	.30	27.9	.38	26.7	.38	24.7	.38	24.5	.37	23.1	.35	22.2	.34	19.3	.32	19.4	.33	18.9	.34	18.3	.33	17.1	.31	17.0	.29	16.9	.32	15.3	.28	13.7	.24	12.5	.22	50
45	22.2	.29	25.2	.34	19.0	.28	17.3	.28	25.2	.35	24.1	.35	22.4	.35	22.2	.35	20.8	.33	19.9	.31	17.2	.29	17.3	.30	16.8	.31	16.3	.30	15.2	.28	15.1	.26	15.0	.30	13.5	.26	12.0	.21	10.9	.19	45
40	19.6	.27	22.7	.31	16.7	.25	15.1	.25	22.7	.32	21.7	.32	20.2	.32	20.0	.32	18.5	.30	17.6	.28	15.1	.26	15.3	.27	14.9	.28	14.4	.27	13.4	.26	13.3	.23	13.2	.27	11.9	.23	10.4	.18	9.3	.16	40
35	17.1	.24	20.2	.29	14.5	.22	13.1	.22	20.3	.30	19.4	.30	18.1	.30	17.9	.29	16.4	.27	15.5	.26	13.2	.23	13.5	.25	13.1	.25	12.6	.24	11.7	.23	11.6	.21	11.6	.24	10.3	.20	8.9	.16	7.9	.14	35
30	14.8	.21	17.9	.26	12.4	.19	11.2	.19	18.0	.27	17.2	.27	16.1	.27	15.9	.26	14.4	.25	13.5	.23	11.4	.21	11.7	.22	11.4	.23	10.9	.22	10.1	.21	10.0	.18	10.1	.22	8.8	.18	7.4	.13	6.5	.11	30
25	12.7	.19	15.7	.23	10.5	.17	9.4	.17	15.8	.25	15.2	.24	14.2	.25	14.1	.24	12.5	.22	11.7	.21	9.7	.18	10.1	.19	9.8	.20	9.3	.19	8.6	.18	8.5	.16	8.6	.19	7.5	.15	6.1	.11	5.2	.09	25
20	10.7	.16	13.7	.21	8.7	.14	7.8	.14	13.8	.22	13.3	.22	12.4	.22	12.3	.21	10.8	.20	10.0	.18	8.2	.16	8.6	.17	8.4	.18	7.9	.17	7.3	.16	7.1	.13	7.3	.17	6.2	.13	4.9	.09	3.9	.07	20
15	8.9	.14	11.8	.18	7.1	.12	6.4	.12	11.9	.19	11.5	.19	10.8	.20	10.6	.19	9.1	.17	8.4	.16	6.8	.14	7.2	.15	7.0	.16	6.6	.15	6.1	.13	5.8	.11	6.1	.14	5.1	.11	3.7	.07	2.8	.05	15
10	7.2	.11	10.0	.16	5.7	.10	5.1	.10	10.2	.17	9.8	.17	9.2	.17	9.1	.17	7.7	.15	7.0	.13	5.6	.11	6.0	.12	5.8	.13	5.4	.12	4.9	.11	4.6	.09	5.0	.12	4.0	.09	2.7	.05	1.8	.03	10
5	5.7	.09	8.3	.13	4.4	.07	4.0	.07	8.6	.15	8.3	.15	7.8	.15	7.7	.14	6.4	.13	5.7	.11	4.4	.09	4.8	.10	4.7	.11	4.4	.10	3.9	.09	3.6	.07	4.0	.10	3.1	.07	1.8	.03	1.6	.03	5
0	4.4	.06	6.8	.11	3.3	.05	3.0	.05	7.1	.12	6.9	.12	6.5	.13	6.4	.12	5.2	.10	4.6	.09	3.5	.07	3.8	.08	3.8	.09	3.5	.08	3.1	.07	2.7	.05	3.2	.08	2.4	.05	1.6	.03	1.5	.02	0
-5	3.2	.04	5.4	.09	2.4	.03	2.2	.03	5.8	.10	5.6	.10	5.3	.10	5.2	.10	4.1	.08	3.6	.07	2.6	.05	3.0	.06	3.0	.07	2.7	.06	2.4	.05	1.9	.03	2.5	.06	1.7	.03	1.5	.02	1.4	.02	-5
-10	2.4	.03	4.1	.06	2.2	.03	2.0	.03	4.6	.08	4.4	.08	4.2	.08	4.1	.08	3.2	.06	2.8	.05	2.0	.03	2.3	.04	2.3	.05	2.1	.04	1.8	.03	1.7	.03	2.0	.04	1.5	.03	1.4	.02	1.3	.02	-10
-15	2.3	.03	3.0	.04	2.0	.02	1.9	.02	3.6	.06	3.4	.06	3.3	.06	3.2	.06	2.4	.04	2.1	.03	1.8	.03	1.8	.03	1.8	.03	1.7	.03	1.6	.03	1.6	.02	1.6	.03	1.4	.02	1.3	.02	1.2	.02	-15
-20	2.1	.02	2.3	.03	1.9	.02	1.8	.02	2.7	.04	2.6	.04	2.4	.04	2.4	.04	1.9	.03	1.9	.03	1.7	.02	1.7	.02	1.6	.03	1.6	.02	1.5	.02	1.5	.02	1.5	.02	1.3	.02	1.2	.02	1.1	.02	-20
-25	2.0	.02	2.1	.03	1.8	.02	1.6	.02	2.1	.03	2.0	.03	1.9	.03	1.9	.03	1.8	.02	1.8	.02	1.6	.02	1.5	.02	1.5	.02	1.5	.02	1.4	.02	1.4	.02	1.4	.02	1.3	.02	1.1	.02	1.1	.02	-25
-30	1.9	.02	2.0	.02	1.6	.02	1.5	.02	2.0	.02	1.9	.02	1.7	.02	1.7	.02	1.7	.02	1.6	.02	1.5	.02	1.4	.02	1.4	.02	1.4	.02	1.3	.02	1.3	.02	1.3	.02	1.2	.02	1.1	.02	1.0	.02	-30
-35	1.7	.02	1.8	.02	1.5	.02	1.4	.02	1.8	.02	1.8	.02	1.6	.02	1.6	.02	1.6	.02	1.5	.02	1.3	.02	1.3	.02	1.3	.02	1.3	.02	1.2	.02	1.2	.02	1.2	.02	1.1	.02	1.0	.02	.9	.02	-35
-40	1.6	.02	1.7	.02	1.4	.02	1.3	.02	1.7	.02	1.6	.02	1.5	.02	1.5	.02	1.4	.02	1.4	.02	1.2	.02	1.2	.02	1.2	.02	1.2	.02	1.1	.02	1.1	.02	1.1	.02	1.0	.02	.9	.01	.8	.01	-40
-45	1.4	.02	1.6	.02	1.2	.02	1.1	.02	1.6	.02	1.5	.02	1.4	.02	1.4	.02	1.3	.02	1.3	.02	1.1	.02	1.1	.02	1.1	.02	1.0	.02	1.0	.02	1.0	.02	1.0	.02	.9	.02	.8	.01	.7	.01	-45
-50	1.2	.02	1.4	.02	1.1	.02	1.0	.02	1.4	.02	1.3	.02	1.2	.02	1.2	.02	1.1	.02	1.1	.02	1.0	.02	1.0	.02	.9	.02	.9	.02	.8	.02	.8	.01	.8	.02	.8	.01	.7	.01	.6	.01	-50
-55	1.1	.01	1.3	.02	.9	.01	.9	.01	1.3	.02	1.2	.02	1.1	.02	1.1	.02	1.0	.02	1.0	.02	.9	.01	.9	.01	.8	.02	.8	.01	.8	.01	.7	.01	.7	.01	.7	.01	.6	.01	.5	.01	-55
-60	1.0	.01	1.1	.02	.8	.01	.7	.01	1.1	.02	1.1	.02	1.0	.02	1.0	.02	.9	.01	.9	.01	.7	.01	.8	.01	.7	.01	.7	.01	.7	.01	.7	.01	.7	.01	.6	.01	.5	.01	.5	.01	-60
-65	.8	.01	1.0	.01	.7	.01	.6	.01	1.0	.01	1.0	.01	.9	.01	.9	.01	.8	.01	.8	.01	.7	.01	.7	.01	.6	.01	.6	.01	.6	.01	.6	.01	.6	.01	.5	.01	.4	.01	.4	.01	-65
-70	.7	.01	.9	.01	.6	.01	.6	.01	.9	.01	.9	.01	.8	.01	.8	.01	.7	.01	.7	.01	.6	.01	.6	.01	.6	.01	.5	.01	.5	.01	.5	.01	.5	.01	.4	.01	.4	.01	.3	.01	-70
-75	.6	.01	.8	.01	.5	.01	.5	.01	.8	.01	.8	.01	.7	.01	.7	.01	.6	.01	.6	.01	.5	.01	.5	.01	.5	.01	.5	.01	.4	.01	.4	.01	.4	.01	.4	.01	.3	.01	.3	.00	-75
-80	.5	.01	.7	.01	.4	.01	.4	.01	.7	.01	.7	.01	.6	.01	.6	.01	.5	.01	.5	.01	.4	.01	.4	.01	.4	.01	.4	.01	.4	.01	.3	.01	.4	.01	.3	.01	.2	.00	.2	.00	-80
-85	.4	.01	.6	.01	.3	.01	.3	.01	.6	.01	.6	.01	.5	.01	.5	.01	.4	.01	.4	.01	.3	.01	.4	.01	.3	.01	.3	.01	.3	.01	.3	.01	.3	.01	.2	.01	.2	.00	.1	.00	-85
-90	.4	.01	.5	.01	.3	.00	.2	.00	.5	.01	.5	.01	.5	.01	.4	.01	.4	.01	.3	.01	.3	.01	.3	.01	.3	.01	.3	.01	.2	.01	.2	.00	.2	.01	.2	.00	.1	.00	.1	.00	-90
-95	.3	.00	.4	.01	.2	.00	.2	.00	.4	.01	.4	.01	.4	.01	.4	.01	.3	.01	.3	.01	.2	.00	.2	.00	.2	.01	.2	.00	.2	.00	.2	.00	.2	.00	.2	.00	.1	.00	.1	.00	-95
-100	.2	.00	.3	.01	.2	.00	.1	.00	.3	.01	.3	.01	.3	.01	.3	.01	.3	.01	.2	.00	.2	.00	.2	.00	.2	.00	.2	.00	.1	.00	.1	.00	.2	.00	.1	.00	.1	.00	.1	.00	-100

Note: Unit must be moving at least at base rate to use this table, otherwise use Spear table. There is a +20 bonus for charging (or see Optional rules).

POLE ARM UNIT ATTACK TABLE

A–7.3

	AT 1		AT 2		AT 3		AT 4		AT 5		AT 6		AT 7		AT 8		AT 9		AT 10		AT 11		AT 12		AT 13		AT 14		AT 15		AT 16		AT 17		AT 18		AT 19		AT 20		
	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	
100	41.8	.52	40.9	.52	37.2	.51	34.5	.51	40.6	.52	38.1	.51	34.1	.51	34.1	.50	35.0	.51	34.9	.50	31.3	.50	29.9	.49	31.5	.49	31.4	.48	28.8	.47	28.1	.46	26.3	.48	23.7	.45	20.3	.41	17.9	.38	100
95	40.5	.51	39.9	.52	36.0	.51	33.3	.50	39.5	.51	37.1	.51	33.3	.50	33.3	.49	33.9	.50	33.8	.49	30.3	.49	29.0	.48	30.5	.48	30.4	.47	27.3	.45	26.4	.43	25.4	.47	22.2	.42	19.0	.38	16.6	.36	95
90	39.1	.51	38.7	.51	34.6	.50	31.9	.49	38.2	.50	35.9	.50	32.3	.50	32.3	.48	32.7	.50	32.6	.48	29.1	.48	28.0	.47	29.4	.47	28.7	.45	25.6	.42	24.7	.40	24.0	.45	20.8	.39	17.6	.35	15.4	.33	90
85	37.5	.50	37.5	.50	33.1	.49	30.0	.47	36.8	.49	34.6	.49	31.3	.49	31.3	.47	31.4	.49	31.2	.47	27.9	.47	26.4	.45	28.2	.46	26.9	.42	23.9	.39	23.0	.37	22.5	.42	19.3	.37	16.3	.32	14.1	.30	85
80	35.5	.48	36.1	.50	31.0	.46	28.0	.44	35.3	.49	33.3	.48	30.2	.48	30.2	.46	30.0	.48	29.8	.46	26.1	.45	24.6	.42	26.5	.44	25.0	.39	22.2	.37	21.3	.35	20.9	.39	17.9	.34	14.9	.30	12.9	.27	80
75	33.0	.45	34.5	.49	28.8	.44	25.9	.41	33.7	.48	31.8	.47	28.9	.47	28.4	.44	28.4	.47	27.8	.44	24.3	.42	22.9	.39	24.7	.41	23.2	.36	20.5	.34	19.6	.32	19.4	.36	16.4	.31	13.6	.27	11.6	.25	75
70	30.6	.43	32.6	.47	26.6	.41	23.9	.38	31.9	.47	30.2	.46	27.1	.44	26.4	.41	26.6	.45	25.8	.41	22.4	.39	21.1	.36	22.8	.38	21.3	.34	18.8	.31	17.9	.29	17.8	.34	15.0	.28	12.2	.24	10.4	.22	70
65	28.1	.40	30.2	.44	24.4	.38	21.8	.36	29.9	.45	28.1	.44	25.2	.42	24.5	.38	24.6	.42	23.7	.38	20.6	.37	19.4	.34	21.0	.36	19.5	.31	17.1	.28	16.2	.26	16.3	.31	13.5	.26	10.9	.21	9.1	.19	65
60	25.7	.37	27.9	.41	22.2	.35	19.8	.33	27.5	.42	25.9	.41	23.2	.39	22.5	.36	22.5	.40	21.7	.36	18.7	.34	17.6	.31	19.1	.33	17.6	.28	15.4	.26	14.5	.24	14.7	.28	12.1	.23	9.5	.19	7.9	.16	60
55	23.2	.34	25.5	.39	20.0	.33	17.7	.30	25.2	.39	23.7	.38	21.3	.36	20.6	.33	20.5	.37	19.6	.33	16.9	.31	15.9	.28	17.3	.30	15.8	.25	13.7	.23	12.8	.21	13.2	.25	10.6	.20	8.2	.16	6.6	.14	55
50	21.0	.32	23.4	.36	18.0	.30	15.8	.27	23.0	.37	21.6	.35	19.4	.33	18.8	.30	18.6	.34	17.7	.30	15.2	.28	14.3	.26	15.6	.28	14.1	.23	12.1	.20	11.2	.18	11.7	.23	9.3	.18	6.9	.13	5.5	.11	50
45	18.7	.29	21.1	.33	15.9	.27	13.9	.25	20.8	.34	19.6	.33	17.6	.31	16.9	.28	16.7	.31	15.8	.28	13.4	.26	12.6	.23	13.8	.25	12.3	.20	10.5	.18	9.6	.16	10.3	.20	7.9	.15	5.7	.11	4.4	.09	45
40	16.5	.26	19.0	.31	14.0	.24	12.1	.22	18.7	.31	17.6	.30	15.8	.28	15.1	.25	14.8	.29	14.0	.25	11.8	.23	11.1	.20	12.2	.22	10.7	.18	9.0	.15	8.1	.13	8.9	.18	6.7	.13	4.5	.09	3.3	.07	40
35	14.4	.23	17.0	.28	12.2	.22	10.4	.19	16.7	.28	15.7	.27	14.1	.25	13.4	.22	13.1	.26	12.3	.22	10.3	.20	9.6	.18	10.6	.20	9.1	.15	7.6	.13	6.7	.11	7.6	.15	5.5	.11	3.4	.07	2.4	.05	35
30	12.5	.21	15.1	.25	10.5	.19	8.8	.17	14.8	.26	13.9	.25	12.5	.23	11.8	.20	11.5	.24	10.7	.20	8.8	.18	8.2	.15	9.1	.17	7.7	.13	6.2	.11	5.3	.09	6.3	.13	4.4	.09	2.5	.05	1.4	.03	30
25	10.7	.18	13.2	.22	8.9	.17	7.4	.14	13.0	.23	12.2	.22	11.0	.20	10.2	.17	10.0	.21	9.2	.18	7.5	.16	6.9	.13	7.8	.15	6.3	.11	5.0	.09	4.1	.07	5.2	.11	3.4	.07	1.5	.03	1.2	.03	25
20	9.0	.16	11.5	.20	7.4	.14	6.0	.12	11.3	.21	10.6	.20	9.5	.18	8.8	.15	8.6	.19	7.8	.15	6.2	.13	5.6	.11	6.5	.13	5.1	.09	3.8	.07	2.9	.05	4.2	.09	2.4	.05	1.3	.03	1.2	.02	20
15	7.5	.13	9.9	.17	6.1	.12	4.8	.09	9.7	.18	9.1	.17	8.1	.16	7.4	.13	7.3	.16	6.5	.13	5.1	.11	4.5	.09	5.4	.11	3.9	.07	2.8	.05	1.9	.03	3.2	.07	1.6	.03	1.2	.02	1.1	.02	15
10	6.0	.11	8.3	.15	4.8	.09	3.7	.07	8.3	.16	7.8	.15	6.9	.13	6.1	.11	6.1	.14	5.3	.11	4.1	.09	3.5	.07	4.3	.09	2.9	.05	1.8	.03	1.6	.03	2.4	.05	1.3	.03	1.2	.02	1.0	.02	10
5	4.7	.08	6.9	.12	3.7	.07	2.7	.05	7.0	.14	6.5	.13	5.6	.11	4.9	.09	5.0	.12	4.3	.09	3.2	.07	2.6	.05	3.3	.07	1.9	.03	1.6	.03	1.5	.02	1.6	.03	1.3	.02	1.1	.02	1.0	.02	5
0	3.6	.06	5.6	.10	2.8	.05	1.9	.03	5.7	.11	5.3	.11	4.5	.09	3.8	.07	4.1	.10	3.3	.07	2.4	.05	1.7	.03	2.5	.05	1.6	.03	1.5	.02	1.4	.02	1.4	.03	1.2	.02	1.0	.02	.9	.02	0
-5	2.6	.04	4.4	.08	2.0	.03	1.7	.03	4.7	.09	4.3	.09	3.5	.07	2.8	.05	3.2	.08	2.5	.05	1.7	.03	1.5	.03	1.7	.03	1.5	.02	1.4	.02	1.3	.02	1.3	.02	1.1	.02	1.0	.02	.8	.02	-5
-10	2.0	.03	3.3	.06	1.8	.03	1.6	.02	3.7	.07	3.4	.07	2.6	.05	1.9	.03	2.5	.05	1.8	.03	1.5	.03	1.4	.02	1.5	.02	1.5	.02	1.3	.02	1.3	.02	1.2	.02	1.1	.02	.9	.02	.8	.02	-10
-15	1.9	.03	2.4	.04	1.7	.02	1.5	.02	2.9	.05	2.6	.05	1.8	.03	1.6	.02	1.9	.04	1.6	.02	1.4	.02	1.3	.02	1.4	.02	1.4	.02	1.2	.02	1.2	.02	1.1	.02	1.0	.02	.8	.02	.7	.02	-15
-20	1.8	.02	1.9	.03	1.6	.02	1.4	.02	2.2	.04	1.9	.03	1.6	.03	1.5	.02	1.6	.03	1.5	.02	1.3	.02	1.2	.02	1.3	.02	1.3	.02	1.1	.02	1.1	.02	1.1	.02	.9	.02	.8	.02	.7	.01	-20
-25	1.7	.02	1.8	.03	1.5	.02	1.3	.02	1.8	.03	1.6	.02	1.5	.02	1.4	.02	1.5	.02	1.4	.02	1.2	.02	1.2	.02	1.3	.02	1.2	.02	1.0	.02	1.0	.02	1.0	.02	.8	.02	.7	.01	.6	.01	-25
-30	1.6	.02	1.7	.02	1.4	.02	1.2	.02	1.6	.02	1.5	.02	1.4	.02	1.3	.02	1.4	.02	1.3	.02	1.1	.02	1.1	.02	1.2	.02	1.1	.02	1.0	.02	.9	.01	.9	.02	.8	.01	.6	.01	.5	.01	-30
-35	1.4	.02	1.5	.02	1.2	.02	1.1	.02	1.5	.02	1.4	.02	1.3	.02	1.2	.02	1.2	.02	1.2	.02	1.0	.02	1.0	.02	1.1	.02	1.0	.02	.9	.01	.8	.01	.8	.02	.7	.01	.6	.01	.5	.01	-35
-40	1.3	.02	1.4	.02	1.1	.02	1.0	.02	1.4	.02	1.3	.02	1.2	.02	1.1	.02	1.1	.02	1.1	.02	1.0	.02	.9	.02	1.0	.02	.9	.01	.8	.01	.7	.01	.8	.01	.6	.01	.5	.01	.4	.01	-40
-45	1.2	.02	1.3	.02	1.0	.02	.9	.02	1.3	.02	1.2	.02	1.1	.02	1.0	.02	1.0	.02	1.0	.02	.9	.02	.8	.01	.9	.02	.8	.01	.7	.01	.7	.01	.7	.01	.5	.01	.4	.01	.3	.01	-45
-50	1.0	.02	1.2	.02	.9	.01	.8	.01	1.1	.02	1.1	.02	1.0	.02	.9	.02	.9	.02	.9	.02	.8	.01	.7	.01	.8	.01	.7	.01	.6	.01	.6	.01	.6	.01	.5	.01	.3	.01	.3	.01	-50
-55	.9	.01	1.0	.02	.8	.01	.7	.01	1.0	.02	1.0	.02	.9	.02	.8	.01	.8	.02	.8	.01	.7	.01	.6	.01	.7	.01	.6	.01	.5	.01	.5	.01	.5	.01	.4	.01	.3	.01	.2	.00	-55
-60	.8	.01	.9	.02	.7	.01	.6	.01	.9	.02	.9	.01	.8	.01	.7	.01	.7	.01	.7	.01	.6	.01	.5	.01	.6	.01	.5	.01	.4	.01	.4	.01	.4	.01	.3	.01	.2	.00	.2	.00	-60
-65	.7	.01	.8	.01	.6	.01	.5	.01	.8	.01	.8	.01	.7	.01	.7	.01	.7	.01	.6	.01	.5	.01	.5	.01	.5	.01	.5	.01	.4	.01	.3	.01	.4	.01	.3	.01	.2	.00	.1	.00	-65
-70	.6	.01	.7	.01	.5	.01	.4	.01	.7	.01	.7	.01	.6	.01	.6	.01	.6	.01	.5	.01	.4	.01	.4	.01	.5	.01	.4	.01	.3	.01	.3	.00	.3	.01	.2	.00	.1	.00	.1	.00	-70
-75	.5	.01	.7	.01	.4	.01	.4	.01	.6	.01	.6	.01	.5	.01	.5	.01	.5	.01	.5	.01	.4	.01	.3	.01	.4	.01	.3	.01	.2	.00	.2	.00	.3	.01	.2	.00	.1	.00	.1	.00	-75
-80	.4	.01	.6	.01	.4	.01	.3	.01	.6	.01	.5	.01	.5	.01	.4	.01	.4	.01	.4	.01	.3	.01	.3	.01	.3	.01	.2	.00	.2	.00	.1	.00	.2	.00	.1	.00	.1	.00	.1	.00	-80
-85	.4	.01	.5	.01	.3	.01	.2	.00	.5	.01	.5	.01	.4	.01	.4	.01	.4	.01	.3	.01	.3	.01	.2	.00	.3	.01	.2	.00	.1	.00	.1	.00	.2	.00	.1	.00	.1	.00	.1	.00	-85
-90	.3	.01	.4	.01	.2	.00	.2	.00	.4	.01	.4	.01	.3	.01	.3	.01	.3	.01	.3	.01	.2	.00	.2	.00	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	-90
-95	.2	.00	.3	.01	.2	.00	.1	.00	.3	.01	.3	.01	.3	.01	.2	.00	.2	.01	.2	.00	.2	.00	.1	.00	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	-95
-100	.2	.00	.3	.00	.1	.00	.1	.00	.3	.01	.3	.01	.2	.00	.2	.00	.2	.00	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	-100

SPEAR UNIT ATTACK TABLE

	AT 1		AT 2		AT 3		AT 4		AT 5		AT 6		AT 7		AT 8		AT 9		AT 10		AT 11		AT 12		AT 13		AT 14		AT 15		AT 16		AT 17		AT 18		AT 19		AT 20		
	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	
100	33.9	.51	32.8	.52	29.3	.50	26.5	.50	32.2	.51	29.7	.50	25.6	.50	25.4	.49	30.1	.50	30.1	.49	26.4	.49	24.8	.48	27.6	.49	27.3	.47	24.7	.47	24.5	.46	19.5	.47	16.5	.42	13.5	.38	11.2	.34	100
95	33.0	.50	32.1	.51	28.5	.49	25.7	.48	31.3	.50	29.0	.49	25.0	.49	24.8	.48	29.3	.50	29.2	.48	25.6	.48	24.1	.47	26.8	.48	26.6	.46	23.8	.45	23.0	.43	18.6	.45	15.4	.40	12.6	.35	10.4	.31	95
90	32.0	.50	31.3	.50	27.5	.48	24.4	.46	30.4	.49	28.2	.48	24.3	.48	24.1	.47	28.3	.49	28.3	.48	24.7	.47	23.3	.46	25.9	.47	25.6	.45	22.4	.42	21.6	.40	17.4	.42	14.4	.37	11.6	.33	9.5	.29	90
85	30.9	.49	30.4	.50	26.1	.46	22.9	.44	29.4	.48	27.3	.47	23.6	.47	23.4	.46	27.3	.48	27.3	.47	23.8	.45	22.0	.43	25.0	.46	24.0	.42	20.9	.40	20.1	.38	16.3	.39	13.3	.34	10.7	.30	8.7	.26	85
80	29.2	.46	29.4	.49	24.4	.43	21.3	.41	28.2	.47	26.3	.46	22.8	.46	22.0	.43	26.1	.47	26.1	.45	22.3	.43	20.6	.40	23.9	.44	22.4	.39	19.5	.37	18.7	.35	15.1	.36	12.3	.31	9.7	.27	7.9	.24	80
75	27.3	.44	28.3	.48	22.7	.40	19.8	.38	27.0	.46	25.2	.45	21.4	.43	20.5	.40	24.9	.46	24.5	.43	20.8	.40	19.1	.38	22.3	.42	20.8	.37	18.0	.34	17.2	.32	14.0	.34	11.2	.29	8.8	.24	7.1	.21	75
70	25.3	.41	26.7	.45	21.0	.38	18.2	.35	25.7	.45	23.5	.42	19.9	.40	19.1	.37	23.6	.45	22.8	.40	19.2	.38	17.7	.35	20.7	.39	19.2	.34	16.6	.31	15.8	.29	12.8	.31	10.2	.26	7.8	.22	6.2	.19	70
65	23.4	.38	24.9	.43	19.3	.35	16.7	.33	23.9	.42	21.8	.40	18.5	.38	17.6	.35	21.9	.42	21.0	.38	17.7	.35	16.2	.32	19.1	.36	17.6	.31	15.1	.29	14.3	.27	11.7	.28	9.1	.23	6.9	.19	5.4	.16	65
60	21.4	.35	23.0	.40	17.6	.32	15.1	.30	22.0	.39	20.1	.37	17.0	.35	16.2	.32	20.2	.40	19.3	.35	16.1	.32	14.8	.29	17.5	.33	16.0	.28	13.7	.26	12.9	.24	10.5	.25	8.1	.20	5.9	.16	4.6	.14	60
55	19.5	.33	21.2	.37	15.9	.29	13.6	.27	20.2	.36	18.4	.34	15.6	.32	14.7	.29	18.4	.37	17.5	.32	14.6	.29	13.3	.27	15.9	.31	14.4	.26	12.2	.23	11.4	.21	9.4	.23	7.0	.18	5.0	.13	3.8	.11	55
50	17.7	.30	19.5	.35	14.3	.27	12.1	.25	18.5	.34	16.8	.32	14.2	.29	13.4	.27	16.8	.34	15.9	.29	13.1	.27	12.0	.24	14.4	.28	12.9	.23	10.9	.21	10.1	.19	8.3	.20	6.1	.15	4.1	.11	3.0	.09	50
45	15.8	.27	17.7	.32	12.7	.24	10.7	.22	16.7	.31	15.2	.29	12.8	.27	12.0	.24	15.2	.32	14.2	.27	11.7	.24	10.6	.22	12.9	.25	11.4	.21	9.5	.18	8.7	.16	7.2	.18	5.1	.13	3.3	.09	2.3	.07	45
40	14.0	.25	16.0	.29	11.2	.21	9.3	.19	15.0	.28	13.7	.26	11.5	.24	10.7	.21	13.6	.29	12.7	.24	10.3	.22	9.3	.19	11.5	.23	10.0	.18	8.3	.16	7.4	.14	6.2	.15	4.3	.11	2.6	.07	1.7	.05	40
35	12.4	.22	14.4	.26	9.7	.19	7.9	.17	13.4	.26	12.2	.24	10.2	.22	9.4	.19	12.1	.26	11.2	.22	9.0	.19	8.1	.17	10.1	.20	8.6	.16	7.0	.14	6.2	.12	5.2	.13	3.4	.09	1.9	.05	1.1	.03	35
30	10.7	.19	12.8	.24	8.3	.16	6.7	.14	11.9	.23	10.8	.21	9.0	.19	8.2	.17	10.7	.24	9.8	.19	7.8	.17	6.9	.15	8.8	.18	7.4	.14	5.9	.12	5.1	.10	4.4	.11	2.7	.07	1.2	.03	.8	.02	30
25	9.2	.17	11.3	.21	7.0	.14	5.5	.12	10.4	.21	9.4	.19	7.8	.17	7.0	.14	9.4	.22	8.5	.17	6.6	.15	5.9	.12	7.6	.16	6.2	.12	4.8	.10	4.0	.08	3.5	.09	2.0	.05	.9	.03	.8	.02	25
20	7.8	.14	9.8	.19	5.8	.11	4.4	.09	9.1	.18	8.2	.16	6.7	.15	5.9	.12	8.2	.19	7.2	.15	5.6	.12	4.8	.10	6.5	.14	5.0	.10	3.8	.08	3.1	.06	2.8	.07	1.3	.03	.9	.02	.7	.02	20
15	6.4	.12	8.4	.16	4.6	.09	3.4	.07	7.8	.16	7.0	.14	5.6	.12	4.9	.10	7.0	.17	6.1	.13	4.6	.10	3.9	.08	5.4	.12	4.0	.08	2.9	.06	2.1	.04	2.0	.05	1.0	.03	.8	.02	.7	.02	15
10	5.2	.09	7.1	.14	3.6	.07	2.5	.05	6.7	.14	5.9	.12	4.6	.10	3.9	.08	5.9	.15	5.0	.11	3.7	.08	3.0	.07	4.4	.09	3.1	.06	2.0	.04	1.4	.03	1.4	.03	.9	.02	.8	.02	.6	.02	10
5	4.0	.07	5.9	.11	2.7	.05	1.7	.03	5.6	.12	4.8	.10	3.7	.08	3.0	.06	5.0	.13	4.0	.09	2.9	.07	2.2	.05	3.5	.08	2.2	.04	1.4	.03	1.3	.02	1.1	.03	.9	.02	.7	.02	.6	.02	5
0	3.0	.05	4.8	.09	1.9	.03	1.4	.03	4.6	.10	3.9	.08	2.8	.06	2.1	.04	4.1	.11	3.1	.07	2.2	.05	1.5	.03	2.7	.06	1.5	.03	1.3	.02	1.2	.02	1.0	.02	.8	.02	.7	.02	.6	.02	0
-5	2.1	.03	3.7	.07	1.5	.03	1.3	.02	3.7	.08	3.0	.06	2.0	.04	1.3	.03	3.3	.08	2.3	.05	1.5	.03	1.3	.02	2.0	.04	1.4	.02	1.2	.02	1.2	.02	.9	.02	.8	.02	.6	.02	.5	.02	-5
-10	1.7	.03	2.8	.05	1.4	.02	1.2	.02	2.9	.06	2.2	.04	1.3	.03	1.3	.02	2.6	.06	1.6	.03	1.3	.02	1.2	.02	1.4	.03	1.3	.02	1.1	.02	1.1	.02	.9	.02	.7	.02	.6	.02	.5	.01	-10
-15	1.6	.02	1.9	.03	1.3	.02	1.2	.02	2.2	.04	1.4	.03	1.2	.02	1.2	.02	2.0	.05	1.4	.02	1.2	.02	1.1	.02	1.3	.02	1.2	.02	1.1	.02	1.0	.02	.8	.02	.7	.02	.5	.02	.4	.01	-15
-20	1.5	.02	1.5	.03	1.2	.02	1.1	.02	1.5	.03	1.4	.02	1.2	.02	1.1	.02	1.5	.03	1.3	.02	1.1	.02	1.0	.02	1.2	.02	1.1	.02	1.0	.02	.9	.02	.8	.02	.6	.02	.5	.01	.4	.01	-20
-25	1.4	.02	1.4	.02	1.2	.02	1.0	.02	1.4	.02	1.3	.02	1.1	.02	1.0	.02	1.3	.02	1.2	.02	1.1	.02	1.0	.02	1.1	.02	1.1	.02	.9	.02	.9	.02	.7	.02	.6	.01	.4	.01	.4	.01	-25
-30	1.3	.02	1.4	.02	1.1	.02	.9	.02	1.3	.02	1.2	.02	1.0	.02	1.0	.02	1.2	.02	1.2	.02	1.0	.02	.9	.02	1.1	.02	1.0	.02	.8	.02	.8	.01	.7	.02	.5	.01	.4	.01	.3	.01	-30
-35	1.2	.02	1.3	.02	1.0	.02	.8	.02	1.2	.02	1.1	.02	.9	.02	.9	.02	1.1	.02	1.1	.02	.9	.02	.8	.02	1.0	.02	.9	.02	.8	.01	.7	.01	.6	.01	.5	.01	.4	.01	.3	.01	-35
-40	1.1	.02	1.2	.02	.9	.02	.8	.02	1.1	.02	1.0	.02	.9	.02	.8	.02	1.0	.02	1.0	.02	.8	.02	.8	.01	.9	.02	.8	.01	.7	.01	.7	.01	.5	.01	.4	.01	.3	.01	.2	.01	-40
-45	1.0	.02	1.1	.02	.8	.01	.7	.01	1.0	.02	.9	.02	.8	.02	.8	.01	.9	.02	.9	.02	.7	.01	.7	.01	.8	.02	.7	.01	.6	.01	.6	.01	.5	.01	.4	.01	.3	.01	.2	.01	-45
-50	.9	.01	1.0	.02	.7	.01	.6	.01	.9	.02	.8	.02	.7	.01	.7	.01	.8	.02	.8	.01	.7	.01	.6	.01	.7	.01	.6	.01	.5	.01	.5	.01	.4	.01	.3	.01	.2	.01	.1	.00	-50
-55	.8	.01	.9	.02	.6	.01	.5	.01	.8	.02	.8	.01	.6	.01	.6	.01	.8	.02	.7	.01	.6	.01	.5	.01	.6	.01	.6	.01	.5	.01	.4	.01	.4	.01	.3	.01	.2	.00	.1	.00	-55
-60	.7	.01	.8	.01	.6	.01	.5	.01	.7	.01	.7	.01	.6	.01	.5	.01	.7	.01	.6	.01	.5	.01	.5	.01	.6	.01	.5	.01	.4	.01	.4	.01	.3	.01	.2	.01	.1	.00	.1	.00	-60
-65	.6	.01	.7	.01	.5	.01	.4	.01	.7	.01	.6	.01	.5	.01	.5	.01	.6	.01	.6	.01	.4	.01	.4	.01	.5	.01	.4	.01	.3	.01	.3	.01	.3	.01	.2	.00	.1	.00	.1	.00	-65
-70	.5	.01	.6	.01	.4	.01	.3	.01	.6	.01	.5	.01	.4	.01	.4	.01	.5	.01	.5	.01	.4	.01	.3	.01	.4	.01	.4	.01	.3	.01	.3	.00	.2	.01	.1	.00	.1	.00	.0	.00	-70
-75	.5	.01	.6	.01	.3	.01	.3	.01	.5	.01	.5	.01	.4	.01	.3	.01	.5	.01	.4	.01	.3	.01	.3	.01	.4	.01	.3	.01	.2	.00	.2	.00	.2	.00	.1	.00	.0	.00	.0	.00	-75
-80	.4	.01	.5	.01	.3	.01	.2	.00	.4	.01	.4	.01	.3	.01	.3	.01	.4	.01	.4	.01	.3	.01	.2	.01	.3	.01	.2	.00	.2	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	-80
-85	.3	.01	.4	.01	.2	.00	.2	.00	.4	.01	.3	.01	.3	.01	.2	.00	.3	.01	.3	.01	.2	.01	.2	.00	.3	.01	.2	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	.0	.00	-85
-90	.3	.00	.4	.01	.2	.00	.1	.00	.3	.01	.3	.01	.2	.01	.2	.00	.3	.01	.2	.01	.2	.00	.1	.00	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	.0	.00	-90
-95	.2	.00	.3	.01	.1	.00	.1	.00	.3	.01	.2	.00	.2	.00	.1	.00	.2	.01	.2	.00	.1	.00	.1	.00	.2	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	.0	.00	.0	.00	-95
-100	.1	.00	.2	.00	.1	.00	.1	.00	.2	.00	.2	.00	.1	.00	.1	.00	.2	.01	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	.0	.00	.0	.00	-100

Range: 10'(-10), 25'(-20), 50'(-30)

SHOCK BOLT UNIT ATTACK TABLE

A–8.1

	AT 1		AT 2		AT 3		AT 4		AT 5		AT 6		AT 7		AT 8		AT 9		AT 10		AT 11		AT 12		AT 13		AT 14		AT 15		AT 16		AT 17		AT 18		AT 19		AT 20		
	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	
100	17.8	.39	17.9	.38	15.8	.37	15.6	.37	15.7	.37	14.8	.37	14.0	.37	14.1	.37	14.7	.37	13.9	.37	12.1	.36	9.7	.33	17.9	.38	18.0	.38	16.3	.38	16.4	.38	18.0	.38	18.0	.38	14.6	.38	14.6	.38	100
95	17.4	.38	17.5	.38	15.5	.37	15.2	.37	15.2	.37	14.5	.37	13.7	.36	13.8	.36	14.3	.37	13.6	.37	11.8	.36	9.6	.33	17.5	.38	17.6	.38	16.0	.38	16.1	.38	17.6	.38	17.7	.38	14.3	.38	14.4	.38	95
90	16.9	.38	17.1	.38	15.0	.37	14.8	.36	14.8	.37	14.1	.36	13.3	.36	13.4	.36	13.9	.37	13.2	.36	11.5	.36	9.4	.33	17.1	.38	17.2	.38	15.6	.37	15.7	.38	17.2	.38	17.3	.37	14.1	.38	14.1	.37	90
85	16.4	.38	16.6	.37	14.6	.36	14.4	.36	14.3	.36	13.7	.36	13.0	.36	13.1	.36	13.4	.36	12.8	.36	10.8	.34	8.8	.32	16.6	.37	16.7	.37	15.3	.37	15.4	.37	16.7	.37	16.9	.37	13.7	.37	13.8	.37	85
80	15.9	.37	16.1	.37	14.1	.36	13.5	.34	13.8	.36	13.3	.36	12.1	.34	12.3	.34	12.9	.36	12.0	.34	10.1	.32	8.3	.30	16.1	.37	16.2	.37	14.9	.37	15.0	.37	16.2	.37	16.4	.37	13.4	.37	13.5	.37	80
75	15.3	.37	15.6	.37	13.6	.36	12.5	.32	13.2	.36	12.4	.34	11.3	.32	11.5	.32	12.1	.34	11.1	.32	9.4	.30	7.8	.28	15.6	.37	15.7	.37	14.5	.36	14.6	.37	15.7	.37	15.9	.36	13.1	.37	13.2	.36	75
70	14.7	.37	15.0	.36	12.7	.34	11.6	.30	12.3	.34	11.5	.32	10.5	.30	10.7	.30	11.2	.32	10.3	.30	8.7	.28	7.2	.26	14.6	.35	15.2	.36	14.0	.36	14.2	.36	15.2	.36	15.4	.36	12.7	.36	12.8	.36	70
65	14.0	.36	14.4	.36	11.8	.32	10.7	.28	11.4	.32	10.7	.30	9.7	.28	9.9	.28	10.3	.30	9.5	.28	8.0	.26	6.7	.24	13.6	.33	14.2	.34	13.6	.36	13.7	.36	14.2	.34	14.9	.36	12.3	.36	12.5	.36	65
60	13.0	.34	13.8	.36	10.9	.30	9.8	.26	10.5	.30	9.8	.28	8.9	.26	9.1	.26	9.5	.28	8.7	.26	7.3	.24	6.1	.23	12.6	.31	13.2	.32	12.7	.34	13.2	.36	13.2	.32	13.9	.34	11.9	.36	12.1	.35	60
55	12.0	.32	12.8	.34	10.0	.28	8.9	.24	9.6	.28	9.0	.26	8.1	.23	8.3	.24	8.6	.26	7.9	.24	6.6	.22	5.6	.21	11.6	.29	12.2	.30	11.8	.32	12.3	.34	12.2	.30	12.9	.32	11.1	.34	11.7	.35	55
50	11.1	.30	11.9	.32	9.2	.26	8.1	.22	8.8	.26	8.2	.24	7.4	.22	7.5	.22	7.8	.24	7.2	.22	5.9	.20	5.1	.19	10.6	.27	11.2	.28	10.9	.30	11.5	.32	11.2	.28	12.0	.30	10.4	.32	11.0	.33	50
45	10.1	.28	10.9	.30	8.3	.24	7.2	.20	7.9	.24	7.4	.22	6.6	.20	6.7	.20	7.0	.22	6.4	.20	5.2	.18	4.6	.18	9.7	.25	10.3	.26	10.0	.28	10.6	.30	10.3	.26	11.0	.28	9.6	.30	10.2	.31	45
40	9.2	.26	10.0	.28	7.5	.22	6.4	.18	7.1	.22	6.6	.20	5.9	.18	6.0	.18	6.3	.20	5.7	.18	4.6	.16	4.1	.16	8.8	.23	9.3	.24	9.2	.26	9.8	.28	9.3	.24	10.1	.26	8.8	.28	9.4	.29	40
35	8.3	.24	9.1	.26	6.7	.20	5.6	.16	6.3	.20	5.9	.18	5.2	.16	5.3	.16	5.5	.18	5.0	.16	4.1	.14	3.6	.14	7.9	.21	8.4	.22	8.4	.24	8.9	.26	8.4	.22	9.1	.24	8.1	.26	8.7	.27	35
30	7.5	.22	8.2	.24	5.9	.18	4.9	.14	5.6	.18	5.2	.16	4.6	.14	4.7	.14	4.8	.16	4.3	.14	3.5	.13	3.1	.12	7.0	.19	7.5	.20	7.6	.22	8.1	.24	7.5	.20	8.3	.22	7.4	.24	7.9	.25	30
25	6.6	.20	7.4	.22	5.2	.16	4.2	.13	4.9	.16	4.6	.14	4.0	.13	4.1	.13	4.2	.14	3.7	.13	3.0	.11	2.6	.11	6.2	.17	6.7	.18	6.8	.20	7.3	.22	6.7	.18	7.4	.20	6.7	.22	7.2	.23	25
20	5.9	.18	6.6	.20	4.5	.14	3.6	.11	4.3	.14	3.9	.13	3.4	.11	3.4	.11	3.6	.13	3.2	.11	2.5	.09	2.2	.09	5.3	.15	5.9	.16	6.0	.18	6.6	.20	5.9	.16	6.6	.18	6.0	.20	6.6	.21	20
15	5.1	.16	5.8	.18	3.9	.13	3.0	.09	3.7	.13	3.3	.11	2.8	.09	2.9	.09	3.0	.11	2.6	.09	2.0	.07	1.7	.07	4.6	.13	5.1	.14	5.3	.16	5.9	.18	5.1	.14	5.8	.16	5.4	.18	6.0	.20	15
10	4.4	.14	5.1	.16	3.3	.11	2.4	.07	3.1	.11	2.8	.09	2.3	.07	2.3	.07	2.5	.09	2.1	.07	1.5	.06	1.3	.05	3.8	.11	4.4	.13	4.7	.14	5.2	.16	4.4	.13	5.1	.14	4.8	.16	5.4	.18	10
5	3.8	.13	4.5	.14	2.8	.09	1.8	.06	2.6	.09	2.2	.07	1.7	.06	1.8	.06	2.0	.07	1.6	.06	1.1	.04	.9	.04	3.2	.09	3.7	.11	4.1	.13	4.6	.14	3.7	.11	4.4	.13	4.2	.14	4.8	.16	5
0	3.2	.11	3.9	.13	2.2	.07	1.3	.04	2.1	.07	1.7	.06	1.2	.04	1.2	.04	1.6	.06	1.2	.04	.7	.02	.5	.02	2.6	.07	3.1	.09	3.5	.11	4.0	.13	3.1	.09	3.8	.11	3.6	.13	4.2	.14	0
-5	2.7	.09	3.3	.11	1.7	.06	.8	.02	1.6	.06	1.2	.04	.7	.02	.7	.02	1.1	.04	.7	.02	.6	.02	.5	.02	2.0	.06	2.5	.07	2.9	.09	3.4	.11	2.5	.07	3.1	.09	3.1	.11	3.7	.13	-5
-10	2.1	.07	2.7	.09	1.2	.04	.8	.02	1.2	.04	.8	.02	.7	.02	.7	.02	.7	.02	.7	.02	.6	.02	.5	.02	1.4	.04	1.9	.06	2.3	.07	2.8	.09	1.9	.06	2.5	.07	2.6	.09	3.1	.11	-10
-15	1.7	.06	2.2	.07	.8	.02	.7	.02	.8	.02	.7	.02	.7	.02	.7	.02	.7	.02	.6	.02	.5	.02	.4	.02	.9	.02	1.4	.04	1.8	.06	2.3	.07	1.4	.04	1.9	.06	2.1	.07	2.6	.09	-15
-20	1.2	.04	1.7	.06	.7	.02	.7	.02	.7	.02	.7	.02	.6	.02	.6	.02	.7	.02	.6	.02	.5	.02	.4	.02	.8	.02	.9	.02	1.3	.04	1.8	.06	.9	.02	1.4	.04	1.6	.06	2.1	.07	-20
-25	.8	.02	1.2	.04	.7	.02	.6	.02	.7	.02	.6	.02	.6	.02	.6	.02	.6	.02	.6	.02	.5	.02	.4	.01	.8	.02	.8	.02	.8	.02	1.2	.04	.8	.02	.9	.02	1.1	.04	1.6	.05	-25
-30	.8	.02	.8	.02	.6	.02	.6	.02	.6	.02	.6	.02	.5	.01	.5	.02	.6	.02	.5	.02	.4	.01	.4	.01	.7	.02	.8	.02	.7	.02	.8	.02	.8	.02	.8	.02	.7	.02	1.1	.04	-30
-35	.7	.02	.8	.02	.6	.02	.5	.01	.6	.02	.5	.01	.5	.01	.5	.01	.5	.02	.5	.01	.4	.01	.3	.01	.7	.02	.7	.02	.7	.02	.7	.02	.7	.02	.8	.02	.6	.02	.7	.02	-35
-40	.7	.02	.7	.02	.6	.02	.5	.01	.5	.02	.5	.01	.5	.01	.5	.01	.5	.01	.4	.01	.4	.01	.3	.01	.6	.02	.7	.02	.6	.02	.7	.02	.7	.02	.7	.02	.6	.02	.6	.02	-40
-45	.6	.02	.7	.02	.5	.01	.5	.01	.5	.01	.5	.01	.4	.01	.4	.01	.4	.01	.4	.01	.3	.01	.3	.01	.6	.01	.6	.02	.6	.02	.6	.02	.6	.02	.7	.02	.6	.02	.6	.02	-45
-50	.6	.02	.6	.02	.5	.01	.4	.01	.4	.01	.4	.01	.4	.01	.4	.01	.4	.01	.4	.01	.3	.01	.3	.01	.5	.01	.6	.01	.5	.01	.6	.02	.6	.01	.6	.01	.5	.02	.5	.02	-50
-55	.5	.01	.5	.01	.4	.01	.4	.01	.4	.01	.4	.01	.3	.01	.3	.01	.3	.01	.3	.01	.3	.01	.2	.01	.5	.01	.5	.01	.5	.01	.5	.01	.5	.01	.5	.01	.5	.01	.5	.02	-55
-60	.5	.01	.5	.01	.4	.01	.3	.01	.4	.01	.3	.01	.3	.01	.3	.01	.3	.01	.3	.01	.2	.01	.2	.01	.4	.01	.5	.01	.5	.01	.5	.01	.5	.01	.5	.01	.4	.01	.5	.01	-60
-65	.4	.01	.5	.01	.3	.01	.3	.01	.3	.01	.3	.01	.3	.01	.3	.01	.3	.01	.2	.01	.2	.01	.2	.01	.4	.01	.4	.01	.4	.01	.4	.01	.4	.01	.5	.01	.4	.01	.4	.01	-65
-70	.4	.01	.4	.01	.3	.01	.2	.01	.3	.01	.3	.01	.2	.01	.2	.01	.2	.01	.2	.01	.2	.01	.2	.01	.3	.01	.4	.01	.4	.01	.4	.01	.4	.01	.4	.01	.4	.01	.4	.01	-70
-75	.3	.01	.4	.01	.3	.01	.2	.01	.2	.01	.2	.01	.2	.01	.2	.01	.2	.01	.2	.01	.1	.01	.1	.01	.3	.01	.3	.01	.3	.01	.4	.01	.3	.01	.4	.01	.3	.01	.4	.01	-75
-80	.3	.01	.3	.01	.2	.01	.2	.01	.2	.01	.2	.01	.2	.01	.2	.01	.2	.01	.2	.01	.1	.00	.1	.00	.3	.01	.3	.01	.3	.01	.3	.01	.3	.01	.3	.01	.3	.01	.3	.01	-80
-85	.3	.01	.3	.01	.2	.01	.1	.00	.2	.01	.2	.01	.1	.00	.1	.00	.1	.01	.1	.00	.1	.00	.1	.00	.2	.01	.3	.01	.3	.01	.3	.01	.3	.01	.3	.01	.3	.01	.3	.01	-85
-90	.2	.01	.3	.01	.2	.01	.1	.00	.2	.01	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.2	.01	.2	.01	.2	.01	.3	.01	.2	.01	.3	.01	.2	.01	.3	.01	-90
-95	.2	.01	.2	.01	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.2	.00	.2	.01	.2	.01	.2	.01	.2	.01	.2	.01	.2	.01	.2	.01	-95
-100	.2	.01	.2	.01	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.0	.00	.0	.00	.1	.00	.2	.00	.2	.01	.2	.01	.2	.00	.2	.01	.2	.01	.2	.01	-100

Range: 10' (+35), 50' (+0), 100' (-25), 200' (-40), 300' (-55), 301'+ (-75)

WATER BOLT UNIT ATTACK TABLE

A–8.2

	AT 1		AT 2		AT 3		AT 4		AT 5		AT 6		AT 7		AT 8		AT 9		AT 10		AT 11		AT 12		AT 13		AT 14		AT 15		AT 16		AT 17		AT 18		AT 19		AT 20		
	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	
100	29.2	.43	27.7	.44	25.2	.42	23.2	.42	27.2	.43	24.1	.43	22.4	.42	22.5	.42	20.3	.42	19.4	.42	15.0	.41	12.4	.37	20.3	.42	19.5	.41	15.9	.40	15.9	.40	18.7	.42	17.6	.41	14.1	.40	11.6	.37	100
95	28.4	.43	27.1	.43	24.4	.42	22.5	.41	26.4	.43	23.5	.42	21.9	.42	22.0	.42	19.7	.42	18.8	.41	14.6	.40	12.2	.37	19.8	.41	19.0	.41	15.5	.40	15.6	.40	18.2	.41	17.2	.40	13.7	.39	11.3	.36	95
90	27.6	.43	26.3	.43	23.6	.41	21.7	.41	25.6	.42	22.9	.42	21.3	.42	21.4	.41	19.1	.41	18.2	.41	14.2	.40	11.9	.37	19.2	.41	18.4	.40	15.1	.39	15.2	.39	17.7	.40	16.7	.39	13.4	.39	11.1	.36	90
85	26.7	.42	25.5	.43	22.7	.41	20.8	.40	24.7	.42	22.2	.42	20.7	.41	20.7	.41	18.4	.41	17.6	.40	13.7	.39	11.6	.36	18.5	.40	17.8	.40	14.6	.39	14.7	.39	17.1	.40	16.2	.39	13.0	.38	10.9	.36	85
80	25.6	.42	24.7	.42	21.7	.40	19.4	.38	23.7	.41	21.4	.41	20.0	.41	20.1	.40	17.6	.40	16.5	.38	12.9	.37	11.2	.36	17.4	.38	17.2	.39	14.2	.38	14.3	.38	16.0	.38	15.7	.38	12.6	.38	10.6	.35	80
75	24.5	.41	23.7	.42	20.2	.38	18.0	.36	22.1	.39	20.6	.41	19.3	.40	19.4	.40	16.5	.38	15.4	.36	12.0	.35	10.5	.34	16.2	.36	16.1	.37	13.7	.38	13.8	.38	15.0	.35	14.7	.36	11.8	.35	10.3	.35	75
70	23.4	.41	22.7	.41	18.7	.36	16.7	.33	20.5	.37	19.2	.38	18.0	.38	18.6	.39	15.3	.36	14.3	.33	11.1	.33	9.8	.32	15.0	.33	15.0	.35	12.8	.35	12.9	.35	13.9	.33	13.6	.34	11.0	.33	9.7	.33	70
65	21.7	.38	21.6	.41	17.3	.33	15.3	.31	19.0	.34	17.8	.36	16.7	.36	17.3	.37	14.1	.34	13.1	.31	10.2	.30	9.1	.30	13.9	.31	13.8	.32	11.8	.33	12.0	.33	12.8	.31	12.6	.32	10.2	.31	9.0	.31	65
60	20.0	.36	20.4	.40	15.8	.31	13.9	.29	17.4	.32	16.5	.34	15.5	.33	16.1	.35	13.0	.31	12.0	.29	9.4	.28	8.4	.28	12.7	.29	12.7	.30	10.9	.31	11.0	.31	11.8	.29	11.6	.29	9.3	.29	8.4	.29	60
55	18.3	.34	18.9	.38	14.3	.29	12.6	.26	15.8	.30	15.1	.32	14.2	.31	14.8	.32	11.8	.29	10.9	.26	8.5	.26	7.7	.26	11.5	.26	11.6	.28	10.0	.29	10.1	.29	10.7	.26	10.6	.27	8.5	.26	7.7	.27	55
50	16.8	.32	17.4	.36	13.0	.27	11.3	.24	14.4	.28	13.8	.29	13.0	.29	13.6	.30	10.7	.27	9.9	.24	7.7	.24	7.1	.24	10.4	.24	10.6	.26	9.1	.26	9.3	.26	9.7	.24	9.6	.25	7.8	.24	7.1	.25	50
45	15.2	.29	15.9	.34	11.6	.24	10.0	.22	12.9	.25	12.5	.27	11.8	.27	12.4	.28	9.6	.25	8.8	.22	6.9	.21	6.4	.22	9.3	.22	9.5	.23	8.3	.24	8.4	.24	8.7	.22	8.7	.23	7.0	.22	6.5	.23	45
40	13.7	.27	14.5	.31	10.3	.22	8.8	.20	11.5	.23	11.3	.25	10.6	.24	11.2	.26	8.5	.22	7.8	.20	6.1	.19	5.7	.20	8.2	.20	8.5	.21	7.5	.22	7.6	.22	7.7	.20	7.8	.21	6.3	.20	5.9	.21	40
35	12.3	.25	13.1	.29	9.0	.20	7.6	.18	10.1	.21	10.1	.23	9.5	.22	10.1	.23	7.5	.20	6.8	.18	5.4	.17	5.1	.18	7.2	.18	7.5	.19	6.7	.20	6.8	.20	6.7	.17	6.9	.19	5.6	.18	5.4	.20	35
30	10.9	.23	11.8	.27	7.8	.18	6.5	.15	8.9	.19	8.9	.20	8.4	.20	9.0	.21	6.5	.18	5.9	.16	4.7	.15	4.5	.16	6.3	.16	6.6	.17	5.9	.18	6.0	.18	5.9	.15	6.1	.17	5.0	.16	4.8	.18	30
25	9.6	.20	10.6	.25	6.7	.15	5.5	.13	7.6	.16	7.8	.18	7.4	.18	8.0	.19	5.6	.16	5.1	.14	4.0	.13	3.9	.14	5.4	.14	5.8	.15	5.3	.16	5.4	.16	5.0	.13	5.3	.15	4.4	.15	4.3	.16	25
20	8.3	.18	9.4	.22	5.7	.13	4.6	.11	6.5	.14	6.7	.16	6.4	.16	7.0	.17	4.8	.14	4.2	.12	3.4	.11	3.4	.13	4.5	.12	4.9	.13	4.6	.15	4.7	.15	4.2	.11	4.6	.13	3.8	.13	3.8	.14	20
15	7.2	.16	8.2	.20	4.8	.11	3.8	.09	5.4	.12	5.8	.14	5.5	.14	6.1	.15	4.0	.12	3.5	.10	2.8	.09	2.9	.11	3.7	.10	4.1	.11	4.0	.13	4.1	.13	3.5	.09	3.9	.11	3.3	.11	3.3	.13	15
10	6.1	.14	7.1	.18	3.9	.09	3.0	.08	4.4	.10	4.9	.12	4.6	.12	5.2	.13	3.3	.10	2.8	.08	2.2	.08	2.4	.09	2.9	.08	3.4	.09	3.4	.11	3.5	.11	2.8	.08	3.2	.09	2.7	.09	2.8	.11	10
5	5.1	.12	6.1	.16	3.1	.08	2.4	.06	3.5	.08	4.0	.10	3.8	.10	4.4	.11	2.6	.08	2.1	.06	1.7	.06	1.9	.07	2.3	.06	2.8	.08	2.8	.09	2.9	.09	2.1	.06	2.6	.07	2.2	.07	2.3	.09	5
0	4.2	.10	5.2	.14	2.4	.06	1.7	.04	2.7	.06	3.2	.08	3.0	.08	3.7	.09	2.0	.06	1.5	.04	1.2	.04	1.5	.06	1.6	.04	2.1	.06	2.3	.07	2.3	.07	1.5	.04	2.0	.06	1.7	.06	1.9	.07	0
-5	3.3	.08	4.4	.12	1.8	.04	1.2	.02	2.0	.04	2.4	.06	2.3	.06	2.9	.08	1.5	.04	1.0	.02	.8	.02	1.1	.04	1.1	.02	1.5	.04	1.8	.06	1.8	.06	1.0	.02	1.4	.04	1.2	.04	1.4	.05	-5
-10	2.6	.06	3.6	.10	1.2	.02	1.1	.02	1.4	.02	1.8	.04	1.7	.04	2.3	.06	1.0	.02	.9	.02	.7	.02	.6	.02	1.0	.02	1.0	.02	1.3	.04	1.3	.04	.9	.02	.9	.02	.7	.02	1.0	.04	-10
-15	1.9	.04	2.8	.08	1.2	.02	1.1	.02	1.3	.02	1.2	.02	1.1	.02	1.7	.04	1.0	.02	.9	.02	.7	.02	.6	.02	.9	.02	.9	.02	.8	.02	.8	.02	.9	.02	.8	.02	.7	.02	.6	.02	-15
-20	1.4	.02	2.2	.06	1.1	.02	1.0	.02	1.2	.02	1.1	.02	1.0	.02	1.1	.02	.9	.02	.8	.02	.7	.02	.6	.02	.9	.02	.9	.02	.7	.02	.7	.02	.8	.02	.8	.02	.6	.02	.6	.02	-20
-25	1.3	.02	1.7	.04	1.0	.02	.9	.02	1.1	.02	1.0	.02	1.0	.02	1.0	.02	.8	.02	.8	.02	.6	.02	.5	.02	.8	.02	.8	.02	.7	.02	.7	.02	.8	.02	.7	.02	.6	.02	.5	.02	-25
-30	1.2	.02	1.2	.02	1.0	.02	.8	.02	1.0	.02	1.0	.02	.9	.02	.9	.02	.8	.02	.7	.02	.6	.02	.5	.02	.8	.02	.8	.02	.6	.02	.7	.02	.7	.02	.7	.02	.6	.02	.5	.02	-30
-35	1.1	.02	1.1	.02	.9	.02	.8	.02	1.0	.02	.9	.02	.8	.02	.9	.02	.7	.02	.7	.02	.5	.02	.5	.02	.7	.02	.7	.02	.6	.02	.6	.02	.7	.02	.6	.02	.5	.02	.5	.02	-35
-40	1.0	.02	1.0	.02	.8	.02	.7	.01	.9	.02	.8	.02	.8	.02	.8	.02	.7	.02	.6	.01	.5	.01	.4	.01	.6	.01	.6	.02	.6	.02	.6	.02	.6	.01	.6	.01	.5	.01	.4	.01	-40
-45	.9	.02	1.0	.02	.7	.01	.6	.01	.8	.02	.8	.02	.7	.02	.8	.02	.6	.01	.6	.01	.4	.01	.4	.01	.6	.01	.6	.01	.5	.01	.5	.01	.5	.01	.5	.01	.4	.01	.4	.01	-45
-50	.8	.02	.9	.02	.6	.01	.6	.01	.7	.01	.7	.01	.6	.01	.7	.02	.5	.01	.5	.01	.4	.01	.4	.01	.5	.01	.5	.01	.5	.01	.5	.01	.5	.01	.5	.01	.4	.01	.4	.01	-50
-55	.8	.01	.8	.02	.6	.01	.5	.01	.6	.01	.6	.01	.6	.01	.6	.01	.5	.01	.4	.01	.3	.01	.3	.01	.5	.01	.5	.01	.4	.01	.4	.01	.4	.01	.4	.01	.3	.01	.3	.01	-55
-60	.7	.01	.7	.02	.5	.01	.4	.01	.6	.01	.6	.01	.5	.01	.6	.01	.4	.01	.4	.01	.3	.01	.3	.01	.4	.01	.4	.01	.4	.01	.4	.01	.4	.01	.4	.01	.3	.01	.3	.01	-60
-65	.6	.01	.7	.01	.4	.01	.4	.01	.5	.01	.5	.01	.5	.01	.5	.01	.4	.01	.3	.01	.3	.01	.3	.01	.4	.01	.4	.01	.3	.01	.3	.01	.3	.01	.3	.01	.3	.01	.3	.01	-65
-70	.5	.01	.6	.01	.4	.01	.3	.01	.4	.01	.4	.01	.4	.01	.4	.01	.3	.01	.3	.01	.2	.01	.2	.01	.3	.01	.3	.01	.3	.01	.3	.01	.3	.01	.3	.01	.2	.01	.2	.01	-70
-75	.5	.01	.5	.01	.3	.01	.3	.01	.4	.01	.4	.01	.4	.01	.4	.01	.3	.01	.2	.01	.2	.01	.2	.01	.3	.01	.3	.01	.3	.01	.3	.01	.2	.01	.3	.01	.2	.01	.2	.01	-75
-80	.4	.01	.5	.01	.3	.01	.2	.01	.3	.01	.3	.01	.3	.01	.3	.01	.2	.01	.2	.01	.2	.01	.2	.01	.2	.01	.2	.01	.2	.01	.2	.01	.2	.01	.2	.01	.2	.01	.2	.01	-80
-85	.4	.01	.4	.01	.2	.01	.2	.00	.3	.01	.3	.01	.3	.01	.3	.01	.2	.01	.2	.00	.1	.00	.1	.01	.2	.00	.2	.01	.2	.01	.2	.01	.2	.00	.2	.01	.2	.01	.2	.01	-85
-90	.3	.01	.4	.01	.2	.00	.1	.00	.2	.00	.2	.01	.2	.01	.3	.01	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.2	.00	.2	.01	.2	.01	.1	.00	.2	.00	.1	.00	.1	.01	-90
-95	.2	.01	.3	.01	.2	.00	.1	.00	.2	.00	.2	.00	.2	.00	.2	.01	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	-95
-100	.2	.00	.3	.01	.1	.00	.1	.00	.1	.00	.2	.00	.1	.00	.2	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	.1	.00	-100

Range: 10' (+35), 50' (+0), 100' (-25), 200' (-40), 300' (-55), 301'+ (-75)

ICE BOLT UNIT ATTACK TABLE

A–8.3

	AT 1		AT 2		AT 3		AT 4		AT 5		AT 6		AT 7		AT 8		AT 9		AT 10		AT 11		AT 12		AT 13		AT 14		AT 15		AT 16		AT 17		AT 18		AT 19		AT 20		
	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	
100	43.8	.59	41.5	.56	39.2	.56	37.1	.55	40.3	.56	38.0	.56	35.6	.56	34.0	.56	30.1	.55	30.2	.55	25.0	.54	21.5	.54	30.2	.54	30.2	.54	25.0	.53	25.0	.53	26.8	.54	26.7	.53	23.2	.53	17.0	.49	100
95	42.6	.58	40.6	.56	38.2	.55	36.1	.55	39.1	.55	37.0	.55	34.7	.55	33.1	.55	29.3	.55	29.3	.54	24.2	.54	20.9	.53	29.3	.53	29.3	.53	24.2	.52	24.3	.52	26.0	.53	25.9	.52	22.5	.52	16.6	.48	95
90	41.4	.57	39.5	.55	37.1	.55	35.0	.54	37.9	.55	35.9	.54	33.7	.54	32.1	.54	28.4	.54	28.4	.53	23.5	.53	20.2	.52	28.4	.53	28.4	.52	23.5	.51	23.6	.51	25.3	.52	25.1	.51	21.8	.50	16.3	.48	90
85	40.1	.56	38.4	.55	36.0	.54	33.8	.53	36.5	.54	34.6	.54	32.5	.54	31.1	.53	27.4	.53	27.4	.52	22.7	.52	19.5	.51	27.4	.52	27.4	.51	22.6	.50	22.7	.50	24.4	.51	24.3	.50	21.1	.49	15.8	.46	85
80	38.8	.55	37.2	.54	34.7	.53	32.5	.52	35.0	.53	33.3	.53	31.4	.53	30.0	.52	26.3	.52	26.3	.51	21.9	.51	18.7	.50	26.4	.50	26.4	.50	21.7	.48	21.8	.48	23.5	.50	23.3	.49	20.2	.48	15.4	.45	80
75	37.3	.54	36.0	.54	33.4	.52	31.1	.51	33.5	.52	31.9	.52	30.1	.52	28.8	.51	25.2	.51	25.2	.50	20.9	.50	17.9	.48	25.2	.49	25.3	.48	20.8	.47	20.9	.47	22.5	.49	22.3	.47	19.4	.47	14.9	.44	75
70	35.7	.53	34.6	.53	31.9	.51	29.6	.49	31.7	.51	30.4	.51	28.8	.51	27.6	.50	23.9	.50	24.0	.49	19.9	.48	17.0	.47	24.0	.48	24.1	.47	19.8	.46	20.0	.46	21.4	.47	21.3	.46	18.5	.45	14.4	.43	70
65	34.1	.52	33.2	.52	30.4	.50	28.0	.48	29.9	.50	28.8	.50	27.4	.50	26.2	.49	22.6	.49	22.7	.48	18.8	.47	16.2	.46	22.2	.45	22.9	.46	18.9	.44	19.0	.44	20.4	.46	20.3	.45	17.6	.44	13.9	.42	65
60	32.2	.50	31.6	.51	28.7	.49	25.8	.45	28.0	.49	27.2	.49	25.8	.48	24.8	.47	21.2	.48	20.9	.45	17.3	.44	15.2	.44	20.4	.42	21.1	.43	17.9	.43	18.0	.43	18.8	.43	19.2	.43	16.7	.43	13.4	.41	60
55	29.7	.47	30.0	.50	26.4	.46	23.7	.42	25.6	.46	25.4	.47	24.2	.47	23.3	.46	19.4	.45	19.1	.42	15.8	.41	14.0	.41	18.7	.39	19.3	.40	16.8	.42	17.0	.42	17.2	.40	17.6	.40	15.8	.41	12.9	.40	55
50	27.3	.44	28.4	.48	24.3	.43	21.6	.39	23.4	.43	23.3	.44	22.3	.44	21.9	.45	17.8	.42	17.4	.39	14.5	.38	12.8	.38	17.0	.36	17.6	.37	15.4	.39	15.6	.39	15.7	.37	16.1	.37	14.9	.40	12.4	.39	50
45	24.9	.41	26.1	.45	22.4	.40	19.8	.36	21.4	.40	21.4	.42	20.5	.41	20.3	.42	16.3	.39	15.9	.36	13.2	.35	11.7	.36	15.5	.33	16.1	.34	14.2	.36	14.4	.36	14.4	.34	14.8	.35	13.8	.37	11.9	.38	45
40	22.8	.38	24.1	.43	20.5	.37	18.0	.34	19.4	.37	19.6	.39	18.8	.39	18.6	.39	14.9	.36	14.5	.33	12.1	.33	10.7	.33	14.0	.30	14.7	.31	13.0	.33	13.3	.33	13.1	.32	13.5	.32	12.7	.35	11.0	.36	40
35	20.8	.35	22.1	.40	18.6	.35	16.2	.31	17.5	.35	17.8	.36	17.1	.36	17.1	.37	13.5	.33	13.1	.30	10.9	.30	9.8	.30	12.6	.28	13.3	.28	11.9	.31	12.1	.31	11.9	.29	12.3	.29	11.6	.32	10.2	.33	35
30	18.9	.33	20.3	.37	16.9	.32	14.6	.28	15.7	.32	16.1	.33	15.5	.33	15.5	.34	12.1	.31	11.8	.28	9.8	.27	8.8	.28	11.3	.25	11.9	.26	10.8	.28	11.0	.28	10.7	.26	11.1	.27	10.7	.30	9.4	.31	30
25	17.0	.30	18.5	.34	15.2	.29	13.0	.25	14.0	.29	14.5	.31	14.0	.30	14.1	.31	10.9	.28	10.5	.25	8.8	.25	7.9	.25	10.0	.22	10.7	.23	9.8	.26	10.0	.26	9.6	.24	10.0	.25	9.7	.28	8.6	.29	25
20	15.2	.27	16.7	.32	13.5	.26	11.4	.23	12.4	.26	12.9	.28	12.5	.28	12.6	.28	9.6	.25	9.3	.22	7.8	.22	7.1	.23	8.8	.20	9.5	.21	8.8	.24	9.0	.24	8.5	.21	9.0	.22	8.8	.26	7.8	.27	20
15	13.5	.24	15.1	.29	12.0	.24	10.0	.20	10.9	.24	11.4	.25	11.1	.25	11.3	.26	8.5	.23	8.1	.20	6.8	.20	6.3	.21	7.6	.17	8.3	.19	7.8	.21	8.0	.21	7.5	.19	8.0	.20	7.9	.23	7.1	.25	15
10	11.8	.22	13.4	.26	10.5	.21	8.6	.18	9.4	.21	10.1	.23	9.8	.22	10.0	.23	7.4	.20	7.0	.17	5.9	.17	5.5	.18	6.5	.15	7.2	.16	6.9	.19	7.1	.19	6.5	.17	7.0	.18	7.1	.21	6.4	.22	10
5	10.3	.19	11.9	.23	9.1	.18	7.3	.15	8.1	.18	8.7	.20	8.6	.20	8.8	.21	6.4	.18	6.0	.15	5.1	.15	4.8	.16	5.5	.13	6.2	.14	6.1	.17	6.2	.17	5.5	.14	6.1	.16	6.3	.19	5.8	.20	5
0	8.8	.16	10.4	.21	7.8	.16	6.2	.13	6.9	.16	7.5	.18	7.4	.17	7.7	.18	5.4	.15	5.0	.13	4.3	.13	4.1	.14	4.5	.10	5.2	.12	5.3	.15	5.4	.15	4.6	.12	5.2	.14	5.6	.17	5.2	.18	0
-5	7.4	.14	9.1	.18	6.5	.13	5.0	.10	5.7	.13	6.4	.15	6.3	.15	6.6	.16	4.5	.13	4.1	.10	3.5	.10	3.5	.12	3.6	.08	4.3	.10	4.6	.13	4.7	.13	3.8	.10	4.4	.12	4.8	.15	4.6	.17	-5
-10	6.1	.11	7.7	.16	5.3	.11	4.1	.08	4.7	.11	5.3	.13	5.3	.13	5.6	.14	3.7	.10	3.3	.08	2.7	.08	2.9	.10	2.8	.06	3.5	.08	3.9	.11	4.0	.11	3.1	.08	3.7	.10	4.2	.13	4.0	.15	-10
-15	4.9	.09	6.5	.13	4.3	.09	3.1	.06	3.7	.09	4.4	.11	4.3	.10	4.7	.12	3.0	.08	2.6	.06	2.2	.06	2.3	.08	2.1	.05	2.7	.06	3.3	.10	3.4	.10	2.4	.06	3.0	.08	3.6	.11	3.5	.13	-15
-20	3.7	.07	5.3	.11	3.3	.07	2.4	.05	2.9	.07	3.5	.09	3.5	.08	3.9	.10	2.3	.06	1.9	.05	1.6	.04	1.8	.06	1.4	.03	2.0	.04	2.7	.08	2.7	.08	1.8	.04	2.3	.06	3.0	.10	3.0	.11	-20
-25	2.8	.05	4.3	.09	2.4	.05	1.6	.03	2.2	.05	2.8	.07	2.7	.06	3.2	.08	1.8	.05	1.3	.03	1.1	.03	1.4	.04	1.3	.03	1.3	.03	2.1	.06	2.1	.06	1.2	.03	1.7	.04	2.4	.08	2.5	.09	-25
-30	1.9	.03	3.3	.07	1.7	.03	1.5	.03	1.7	.03	2.1	.05	2.0	.04	2.5	.06	1.3	.03	1.2	.03	1.0	.03	.9	.03	1.2	.02	1.3	.02	1.5	.04	1.6	.04	1.1	.02	1.1	.02	1.9	.06	2.0	.08	-30
-35	1.8	.03	2.4	.05	1.6	.03	1.4	.02	1.5	.03	1.5	.03	1.4	.03	1.9	.04	1.2	.03	1.2	.02	1.0	.02	.8	.02	1.1	.02	1.2	.02	1.0	.02	1.0	.02	1.0	.02	1.1	.02	1.4	.04	1.6	.06	-35
-40	1.6	.03	1.7	.03	1.5	.02	1.3	.02	1.4	.02	1.4	.03	1.3	.03	1.3	.03	1.1	.02	1.1	.02	.9	.02	.8	.02	1.0	.02	1.1	.02	.9	.02	.9	.02	1.0	.02	1.0	.02	.9	.02	1.1	.04	-40
-45	1.5	.02	1.6	.03	1.3	.02	1.2	.02	1.3	.02	1.3	.02	1.2	.02	1.2	.02	1.0	.02	1.0	.02	.8	.02	.7	.02	1.0	.02	1.0	.02	.9	.02	.9	.02	.9	.02	.9	.02	.8	.02	.7	.02	-45
-50	1.4	.02	1.4	.02	1.2	.02	1.1	.02	1.2	.02	1.2	.02	1.1	.02	1.1	.02	.9	.02	.9	.02	.7	.02	.6	.02	.8	.02	.9	.02	.8	.02	.8	.02	.8	.02	.8	.02	.7	.02	.6	.02	-50
-55	1.2	.02	1.3	.02	1.1	.02	1.0	.02	1.1	.02	1.1	.02	1.0	.02	1.0	.02	.8	.02	.8	.02	.7	.02	.6	.02	.8	.02	.8	.02	.7	.02	.7	.02	.7	.02	.7	.02	.7	.02	.6	.02	-55
-60	1.1	.02	1.2	.02	1.0	.02	.9	.02	1.0	.02	1.0	.02	.9	.02	.9	.02	.7	.02	.7	.02	.6	.02	.5	.02	.7	.02	.7	.02	.6	.02	.7	.02	.7	.02	.7	.02	.6	.02	.5	.02	-60
-65	1.0	.02	1.1	.02	.9	.02	.8	.02	.9	.02	.9	.02	.9	.02	.8	.02	.7	.02	.7	.02	.5	.01	.5	.01	.6	.01	.7	.01	.6	.02	.6	.02	.6	.01	.6	.01	.6	.02	.5	.02	-65
-70	.9	.02	1.0	.02	.8	.02	.7	.01	.8	.02	.8	.02	.8	.02	.8	.02	.6	.02	.6	.01	.5	.01	.4	.01	.6	.01	.6	.01	.5	.01	.5	.01	.5	.01	.6	.01	.5	.01	.5	.02	-70
-75	.8	.01	.9	.02	.8	.01	.6	.01	.7	.01	.7	.02	.7	.02	.7	.02	.5	.01	.5	.01	.4	.01	.4	.01	.5	.01	.5	.01	.5	.01	.5	.01	.5	.01	.5	.01	.5	.01	.4	.01	-75
-80	.8	.01	.8	.02	.7	.01	.6	.01	.6	.01	.6	.01	.6	.01	.6	.01	.5	.01	.5	.01	.4	.01	.4	.01	.4	.01	.5	.01	.4	.01	.4	.01	.4	.01	.4	.01	.4	.01	.4	.01	-80
-85	.7	.01	.7	.01	.6	.01	.5	.01	.5	.01	.6	.01	.6	.01	.6	.01	.4	.01	.4	.01	.3	.01	.3	.01	.4	.01	.4	.01	.4	.01	.4	.01	.4	.01	.4	.01	.4	.01	.4	.01	-85
-90	.6	.01	.7	.01	.5	.01	.4	.01	.5	.01	.5	.01	.5	.01	.5	.01	.4	.01	.3	.01	.3	.01	.3	.01	.3	.01	.4	.01	.3	.01	.4	.01	.3	.01	.3	.01	.4	.01	.3	.01	-90
-95	.5	.01	.6	.01	.4	.01	.4	.01	.4	.01	.4	.01	.4	.01	.4	.01	.3	.01	.3	.01	.2	.01	.2	.01	.3	.01	.3	.01	.3	.01	.3	.01	.3	.01	.3	.01	.3	.01	.3	.01	-95
-100	.4	.01	.5	.01	.4	.01	.3	.01	.3	.01	.4	.01	.4	.01	.4	.01	.3	.01	.2	.01	.2	.01	.2	.01	.2	.01	.3	.01	.3	.01	.3	.01	.2	.01	.3	.01	.3	.01	.3	.01	-100

Range: 10' (+35), 50' (+0), 100 (-25), 200' (-40), 300' (-55), 301'+ (-75)

FIRE BOLT UNIT ATTACK TABLE

A–8.4

	AT 1		AT 2		AT 3		AT 4		AT 5		AT 6		AT 7		AT 8		AT 9		AT 10		AT 11		AT 12		AT 13		AT 14		AT 15		AT 16		AT 17		AT 18		AT 19		AT 20		
	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	
100	42.3	.54	38.7	.54	36.5	.53	34.7	.52	38.0	.53	31.2	.53	27.7	.52	27.7	.52	32.8	.53	30.3	.53	21.1	.50	17.3	.46	32.1	.53	29.5	.52	22.0	.49	22.1	.49	31.4	.53	28.6	.51	20.3	.49	16.4	.45	100
95	41.5	.53	38.0	.53	35.7	.52	33.9	.51	37.2	.53	30.5	.52	27.2	.51	27.1	.51	32.1	.53	29.7	.52	20.6	.49	16.9	.45	31.4	.52	28.9	.52	21.5	.48	21.6	.48	30.7	.52	28.1	.51	19.9	.48	16.1	.45	95
90	40.6	.53	37.2	.53	34.8	.51	33.1	.51	36.2	.53	29.7	.52	26.5	.51	26.4	.50	31.3	.53	28.9	.52	20.1	.48	16.5	.45	30.6	.52	28.2	.51	21.0	.47	21.1	.47	29.9	.51	27.4	.50	19.4	.47	15.7	.44	90
85	39.7	.53	36.3	.52	33.9	.51	32.1	.50	35.2	.53	28.9	.51	25.8	.50	25.7	.49	30.5	.52	28.2	.51	19.5	.47	16.0	.44	29.8	.51	27.5	.50	20.3	.46	20.5	.46	29.2	.51	26.7	.49	18.9	.46	15.3	.43	85
80	38.6	.52	35.3	.52	32.8	.50	31.1	.49	34.1	.52	28.0	.50	25.0	.49	24.8	.48	29.5	.52	27.3	.50	18.9	.46	15.5	.43	28.9	.51	26.6	.49	19.7	.45	19.9	.45	28.3	.50	25.9	.49	18.4	.45	14.8	.42	80
75	37.5	.52	34.3	.51	31.7	.49	30.0	.48	32.8	.52	27.0	.49	24.1	.48	24.0	.47	28.5	.51	26.4	.50	18.2	.45	14.6	.41	27.9	.50	25.7	.49	19.0	.44	19.2	.44	27.4	.49	25.1	.48	17.8	.44	14.4	.41	75
70	36.3	.51	33.1	.51	30.5	.48	28.8	.47	31.5	.51	25.9	.48	23.2	.47	23.0	.46	27.4	.50	25.3	.49	17.5	.44	13.6	.38	26.9	.49	24.8	.48	18.3	.43	18.5	.43	26.4	.49	24.1	.47	17.1	.43	13.5	.39	70
65	35.0	.51	31.9	.50	29.1	.47	27.6	.46	30.1	.50	24.7	.47	21.7	.44	22.1	.45	26.1	.50	24.2	.48	16.3	.41	12.6	.36	25.7	.48	23.7	.47	17.0	.40	17.8	.42	25.3	.48	23.1	.46	16.5	.42	12.5	.36	65
60	33.5	.50	30.5	.49	27.7	.46	26.2	.45	28.6	.50	23.5	.46	20.1	.42	20.5	.42	24.9	.49	23.0	.47	15.1	.38	11.6	.33	24.4	.47	22.6	.46	15.8	.37	16.6	.39	24.1	.47	22.1	.44	15.3	.39	11.6	.34	60
55	32.0	.49	29.1	.48	26.2	.45	24.8	.44	26.9	.49	21.8	.43	18.6	.39	19.0	.40	23.4	.48	21.3	.44	13.9	.36	10.7	.31	23.1	.46	21.5	.45	14.5	.35	15.3	.37	22.9	.46	21.0	.43	14.2	.37	10.7	.31	55
50	30.5	.48	27.7	.47	24.8	.44	23.5	.43	25.3	.48	20.1	.41	17.1	.36	17.5	.37	22.1	.47	19.8	.41	12.8	.33	9.8	.28	21.9	.45	19.9	.42	13.4	.32	14.2	.34	21.7	.45	20.0	.42	13.1	.34	9.8	.29	50
45	28.9	.47	26.2	.46	23.3	.43	21.7	.40	23.6	.47	18.5	.38	15.6	.33	16.0	.34	20.3	.44	18.1	.38	11.6	.30	8.8	.26	20.5	.44	18.4	.39	12.2	.29	13.0	.31	20.4	.44	18.5	.40	12.0	.31	8.9	.26	45
40	27.3	.46	24.7	.45	21.4	.40	19.9	.37	21.6	.44	16.9	.35	14.2	.31	14.6	.31	18.6	.41	16.6	.36	10.5	.28	7.9	.23	18.9	.41	16.8	.36	11.1	.27	11.8	.29	19.2	.42	17.0	.37	10.9	.29	8.1	.24	40
35	25.2	.43	23.3	.44	19.6	.37	18.1	.35	19.8	.41	15.3	.32	12.8	.28	13.2	.29	17.0	.38	15.1	.33	9.4	.25	7.0	.21	17.3	.39	15.3	.34	9.9	.24	10.7	.26	17.6	.40	15.5	.34	10.0	.27	7.3	.22	35
30	23.2	.40	21.4	.41	17.9	.35	16.4	.32	18.0	.38	13.8	.30	11.4	.25	11.8	.26	15.4	.36	13.6	.30	8.5	.23	6.2	.19	15.7	.36	13.9	.31	8.9	.22	9.7	.24	16.1	.37	14.2	.32	9.0	.24	6.5	.20	30
25	21.2	.38	19.6	.38	16.2	.32	14.9	.29	16.2	.36	12.4	.27	10.1	.22	10.6	.23	13.9	.33	12.2	.27	7.5	.21	5.4	.16	14.2	.33	12.5	.28	7.9	.20	8.6	.22	14.6	.34	12.8	.29	8.1	.22	5.7	.17	25
20	19.3	.35	17.9	.36	14.6	.29	13.3	.27	14.6	.33	11.0	.24	8.9	.20	9.3	.21	12.5	.30	10.8	.25	6.6	.18	4.6	.14	12.8	.30	11.2	.26	6.9	.18	7.7	.20	13.3	.32	11.6	.27	7.2	.20	5.0	.15	20
15	17.5	.32	16.2	.33	13.0	.27	11.9	.24	13.0	.30	9.7	.22	7.7	.17	8.1	.18	11.1	.27	9.6	.22	5.7	.16	3.9	.12	11.5	.28	10.0	.23	6.0	.16	6.8	.18	11.9	.29	10.4	.24	6.3	.18	4.3	.13	15
10	15.8	.29	14.6	.30	11.6	.24	10.5	.22	11.5	.27	8.4	.19	6.6	.15	7.0	.16	9.8	.25	8.4	.20	4.9	.14	3.3	.10	10.2	.25	8.8	.21	5.2	.13	5.9	.15	10.7	.27	9.2	.22	5.5	.16	3.6	.11	10
5	14.1	.27	13.1	.28	10.3	.22	9.3	.20	10.1	.25	7.2	.17	5.5	.13	6.0	.14	8.6	.22	7.2	.17	4.2	.12	2.6	.08	9.0	.23	7.7	.19	4.4	.11	5.1	.13	9.5	.24	8.1	.20	4.8	.14	3.0	.09	5
0	12.5	.24	11.7	.25	9.0	.20	8.0	.18	8.8	.22	6.2	.14	4.5	.10	5.0	.12	7.5	.20	6.1	.15	3.4	.10	2.0	.06	7.9	.21	6.7	.16	3.6	.10	4.3	.11	8.4	.22	7.1	.18	4.0	.12	2.5	.08	0
-5	11.0	.22	10.3	.23	7.8	.18	6.9	.16	7.6	.20	5.1	.12	3.6	.08	4.2	.10	6.4	.17	5.1	.13	2.7	.08	1.4	.04	6.8	.18	5.7	.14	2.9	.08	3.6	.10	7.4	.20	6.2	.15	3.3	.10	1.9	.06	-5
-10	9.6	.19	9.0	.20	6.7	.16	5.9	.13	6.5	.17	4.2	.10	2.8	.06	3.4	.08	5.4	.15	4.2	.10	2.1	.06	.9	.02	5.8	.16	4.8	.12	2.3	.06	2.9	.08	6.4	.18	5.3	.13	2.7	.08	1.3	.04	-10
-15	8.2	.17	7.8	.18	5.7	.13	5.0	.11	5.4	.15	3.4	.08	2.0	.04	2.6	.06	4.5	.13	3.4	.08	1.5	.04	.8	.02	4.9	.14	3.9	.10	1.7	.04	2.2	.06	5.5	.15	4.4	.11	2.1	.06	.8	.02	-15
-20	7.0	.14	6.7	.16	4.8	.11	4.1	.10	4.5	.13	2.7	.06	1.3	.03	1.9	.04	3.6	.10	2.6	.06	1.0	.02	.8	.02	4.1	.12	3.1	.08	1.1	.02	1.6	.04	4.6	.13	3.7	.10	1.5	.04	.8	.02	-20
-25	5.8	.12	5.7	.14	3.9	.10	3.3	.08	3.7	.10	2.0	.04	1.3	.03	1.3	.03	2.9	.08	1.9	.04	.9	.02	.7	.02	3.4	.10	2.5	.06	1.0	.02	1.0	.02	3.9	.11	3.0	.08	.9	.02	.7	.02	-25
-30	4.8	.10	4.7	.11	3.2	.08	2.6	.06	2.9	.08	1.4	.03	1.2	.02	1.2	.02	2.3	.06	1.3	.03	.9	.02	.7	.02	2.7	.08	1.8	.04	.9	.02	1.0	.02	3.2	.10	2.3	.06	.9	.02	.7	.02	-30
-35	3.8	.08	3.9	.10	2.5	.06	2.0	.04	2.3	.06	1.3	.02	1.1	.02	1.1	.02	1.8	.04	1.3	.02	.8	.02	.6	.02	2.2	.06	1.3	.03	.9	.02	.9	.02	2.6	.08	1.7	.04	.8	.02	.6	.02	-35
-40	3.0	.06	3.2	.08	1.9	.04	1.4	.02	1.8	.04	1.2	.02	1.0	.02	1.0	.02	1.3	.03	1.2	.02	.8	.02	.6	.02	1.7	.04	1.2	.02	.8	.02	.8	.02	2.1	.06	1.2	.02	.8	.02	.6	.02	-40
-45	2.3	.04	2.5	.06	1.4	.02	1.3	.02	1.4	.03	1.1	.02	.9	.02	1.0	.02	1.2	.02	1.1	.02	.7	.02	.5	.02	1.2	.03	1.1	.02	.7	.02	.8	.02	1.6	.04	1.1	.02	.7	.02	.5	.02	-45
-50	1.6	.03	1.9	.04	1.3	.02	1.2	.02	1.3	.02	1.0	.02	.9	.02	.9	.02	1.1	.02	1.0	.02	.6	.02	.5	.01	1.1	.02	1.0	.02	.7	.02	.7	.02	1.1	.02	1.0	.02	.7	.02	.5	.01	-50
-55	1.5	.02	1.4	.02	1.2	.02	1.1	.02	1.2	.02	.9	.02	.8	.02	.8	.02	1.0	.02	.9	.02	.6	.01	.4	.01	1.0	.02	.9	.02	.6	.01	.6	.02	1.0	.02	.9	.02	.6	.02	.4	.01	-55
-60	1.4	.02	1.3	.02	1.1	.02	1.0	.02	1.1	.02	.8	.02	.7	.02	.7	.02	.9	.02	.8	.02	.5	.01	.4	.01	.9	.02	.8	.02	.5	.01	.6	.01	1.0	.02	.8	.02	.5	.01	.4	.01	-60
-65	1.3	.02	1.2	.02	1.0	.02	.9	.02	1.0	.02	.8	.02	.6	.01	.7	.01	.8	.02	.7	.02	.5	.01	.3	.01	.9	.02	.8	.02	.5	.01	.5	.01	.9	.02	.8	.02	.5	.01	.4	.01	-65
-70	1.2	.02	1.1	.02	.9	.02	.8	.02	.9	.02	.7	.01	.6	.01	.6	.01	.8	.02	.7	.02	.4	.01	.3	.01	.8	.02	.7	.02	.4	.01	.5	.01	.8	.02	.7	.02	.4	.01	.3	.01	-70
-75	1.1	.02	1.0	.02	.8	.02	.7	.01	.8	.02	.6	.01	.5	.01	.5	.01	.7	.02	.6	.01	.4	.01	.3	.01	.7	.02	.6	.01	.4	.01	.4	.01	.7	.02	.6	.01	.4	.01	.3	.01	-75
-80	1.0	.02	.9	.02	.7	.01	.7	.01	.7	.02	.5	.01	.4	.01	.5	.01	.6	.02	.5	.01	.3	.01	.2	.01	.6	.02	.6	.01	.3	.01	.4	.01	.7	.02	.6	.01	.4	.01	.2	.01	-80
-85	.9	.02	.8	.02	.6	.01	.6	.01	.6	.02	.5	.01	.4	.01	.4	.01	.6	.01	.5	.01	.3	.01	.2	.01	.6	.01	.5	.01	.3	.01	.3	.01	.6	.01	.5	.01	.3	.01	.2	.01	-85
-90	.8	.01	.7	.02	.6	.01	.5	.01	.6	.01	.4	.01	.3	.01	.3	.01	.5	.01	.4	.01	.2	.01	.2	.00	.5	.01	.4	.01	.3	.01	.3	.01	.5	.01	.5	.01	.3	.01	.2	.01	-90
-95	.7	.01	.6	.01	.5	.01	.5	.01	.5	.01	.4	.01	.3	.01	.3	.01	.4	.01	.4	.01	.2	.01	.1	.00	.4	.01	.4	.01	.2	.01	.3	.01	.5	.01	.4	.01	.2	.01	.1	.00	-95
-100	.6	.01	.6	.01	.4	.01	.4	.01	.4	.01	.3	.01	.2	.01	.2	.01	.4	.01	.3	.01	.2	.00	.1	.00	.4	.01	.3	.01	.2	.00	.2	.01	.4	.01	.4	.01	.2	.01	.1	.00	-100

Range: 10' (+35), 50' (+0), 100' (-25), 200' (-40), 300' (-55), 301'+ (-75)

LIGHTNING BOLT UNIT ATTACK TABLE

A–8.5

	AT 1		AT 2		AT 3		AT 4		AT 5		AT 6		AT 7		AT 8		AT 9		AT 10		AT 11		AT 12		AT 13		AT 14		AT 15		AT 16		AT 17		AT 18		AT 19		AT 20		
	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	
100	53.4	.70	52.5	.71	47.3	.68	44.9	.67	48.5	.69	44.0	.69	36.1	.66	35.0	.65	38.6	.67	38.3	.66	28.9	.61	24.5	.57	42.1	.68	41.8	.67	33.6	.64	33.8	.64	41.3	.68	41.1	.67	31.6	.63	28.7	.59	100
95	52.0	.69	51.3	.70	45.9	.67	43.5	.66	47.2	.68	42.6	.68	35.2	.65	34.1	.64	37.3	.66	37.1	.65	28.0	.60	23.7	.56	40.8	.67	40.6	.66	32.8	.62	33.0	.63	40.0	.67	39.9	.66	30.8	.61	28.0	.58	95
90	50.6	.68	50.0	.70	44.4	.66	42.1	.64	45.9	.68	41.2	.66	34.3	.64	33.2	.63	35.9	.64	35.7	.63	27.1	.58	22.9	.55	39.5	.66	39.3	.65	31.8	.61	32.1	.61	38.8	.65	38.6	.65	29.9	.60	27.2	.57	90
85	49.1	.68	48.6	.69	42.8	.64	40.5	.63	44.2	.66	39.8	.65	33.2	.63	32.2	.62	34.5	.62	34.3	.61	26.0	.57	22.0	.53	38.1	.64	37.8	.63	30.8	.60	31.1	.60	37.4	.64	37.2	.63	29.0	.59	26.3	.55	85
80	47.2	.66	47.2	.68	41.0	.63	38.8	.61	42.5	.65	38.2	.64	32.1	.62	31.2	.61	32.9	.61	32.7	.60	25.0	.55	21.1	.52	36.6	.63	36.4	.61	29.7	.58	30.1	.58	36.0	.63	35.8	.61	28.0	.57	25.4	.54	80
75	45.3	.65	45.5	.67	39.2	.61	37.0	.59	40.7	.64	36.6	.63	31.0	.61	30.0	.59	31.3	.59	31.1	.58	23.8	.54	20.1	.50	35.0	.61	34.8	.60	28.6	.57	29.0	.57	34.5	.61	34.3	.60	26.9	.55	24.5	.52	75
70	43.3	.64	43.6	.65	37.3	.59	35.1	.57	38.7	.63	34.9	.61	29.7	.59	28.8	.58	29.6	.57	29.4	.56	22.6	.52	19.2	.49	33.3	.59	33.1	.58	27.4	.55	27.9	.55	33.0	.59	32.7	.58	25.9	.54	23.6	.51	70
65	41.2	.63	41.7	.64	35.3	.57	33.1	.55	36.7	.61	33.1	.60	28.4	.58	27.5	.56	27.8	.55	27.6	.53	21.3	.50	18.1	.47	31.6	.57	31.4	.56	26.1	.53	26.7	.54	31.3	.58	31.1	.56	24.7	.52	22.5	.50	65
60	38.9	.61	39.7	.63	33.1	.55	31.0	.53	34.5	.59	31.2	.58	27.0	.56	26.2	.55	25.9	.53	25.3	.50	19.6	.47	17.1	.46	29.7	.55	29.6	.54	24.8	.52	25.5	.52	29.6	.56	29.4	.54	23.5	.50	21.4	.48	60
55	36.5	.59	37.6	.61	30.9	.53	28.4	.50	32.2	.57	29.2	.56	25.6	.55	24.8	.53	23.6	.49	23.0	.46	17.9	.43	15.6	.42	27.9	.54	27.8	.52	23.4	.50	24.1	.50	27.8	.54	27.6	.52	22.3	.49	20.3	.46	55
50	34.1	.57	35.5	.59	28.3	.50	25.9	.46	29.6	.54	27.3	.54	24.1	.53	23.4	.51	21.4	.46	20.9	.42	16.3	.40	14.3	.39	26.1	.52	26.0	.50	22.1	.48	22.9	.49	26.1	.52	25.9	.50	21.1	.47	19.3	.45	50
45	31.2	.53	33.3	.58	25.7	.46	23.6	.42	26.9	.50	25.0	.51	22.6	.51	21.9	.49	19.4	.42	18.8	.39	14.7	.36	12.9	.36	23.9	.48	24.3	.48	20.7	.46	21.6	.47	24.0	.49	24.3	.48	19.9	.45	18.2	.44	45
40	28.3	.50	31.0	.56	23.3	.42	21.3	.39	24.5	.46	22.9	.47	20.7	.48	20.1	.46	17.5	.39	17.0	.36	13.2	.33	11.6	.33	21.8	.45	22.2	.45	19.0	.43	20.3	.45	22.0	.45	22.3	.45	18.7	.44	17.1	.42	40
35	25.8	.46	28.7	.53	21.0	.39	19.2	.36	22.2	.43	20.7	.44	18.9	.44	18.4	.43	15.7	.35	15.1	.32	11.7	.30	10.5	.30	19.8	.41	20.2	.41	17.3	.40	18.6	.42	20.0	.42	20.3	.42	17.1	.41	16.0	.41	35
30	23.4	.43	26.3	.50	18.9	.36	17.1	.32	19.9	.39	18.8	.40	17.1	.41	16.7	.40	13.9	.32	13.4	.29	10.6	.28	9.5	.28	17.9	.38	18.3	.38	15.6	.37	16.9	.39	18.1	.39	18.4	.38	15.6	.38	14.8	.38	30
25	21.0	.39	24.0	.46	16.8	.32	15.2	.29	17.9	.36	16.9	.37	15.5	.38	15.1	.37	12.3	.29	11.8	.26	9.4	.25	8.5	.25	16.0	.35	16.5	.35	14.1	.34	15.3	.36	16.3	.35	16.7	.35	14.3	.35	13.6	.35	25
20	18.8	.36	21.7	.43	14.9	.29	13.4	.26	15.9	.33	15.0	.34	13.9	.35	13.5	.34	10.7	.26	10.4	.24	8.3	.22	7.6	.23	14.3	.32	14.8	.32	12.8	.31	14.0	.33	14.6	.32	14.9	.32	13.0	.32	12.5	.33	20
15	16.7	.33	19.6	.40	13.1	.26	11.8	.24	13.9	.30	13.3	.31	12.4	.32	12.0	.31	9.4	.23	9.1	.21	7.3	.20	6.7	.20	12.6	.29	13.3	.29	11.5	.28	12.7	.30	12.9	.29	13.5	.30	11.9	.30	11.4	.30	15
10	14.7	.29	17.6	.36	11.5	.24	10.3	.21	12.2	.27	11.6	.28	10.9	.29	10.8	.28	8.2	.20	7.9	.18	6.3	.17	5.9	.18	11.2	.26	11.9	.26	10.3	.26	11.5	.28	11.6	.27	12.1	.27	10.7	.27	10.3	.28	10
5	12.8	.26	15.6	.33	10.0	.21	8.9	.18	10.5	.24	10.3	.25	9.7	.26	9.6	.25	7.1	.18	6.7	.16	5.4	.15	5.1	.16	9.9	.23	10.6	.24	9.2	.23	10.3	.25	10.2	.24	10.8	.24	9.6	.25	9.3	.26	5
0	11.0	.23	13.8	.30	8.7	.18	7.6	.16	8.9	.21	9.0	.22	8.5	.23	8.4	.22	6.0	.16	5.7	.13	4.6	.13	4.4	.14	8.7	.20	9.3	.21	8.1	.21	9.2	.23	9.0	.21	9.5	.22	8.6	.22	8.4	.23	0
-5	9.3	.20	12.1	.27	7.4	.16	6.4	.13	7.6	.18	7.8	.19	7.4	.20	7.4	.20	5.1	.13	4.7	.11	3.8	.11	3.7	.12	7.5	.18	8.1	.19	7.1	.18	8.2	.21	7.8	.19	8.3	.19	7.6	.20	7.5	.21	-5
-10	8.0	.17	10.4	.24	6.2	.13	5.3	.11	6.4	.15	6.6	.17	6.4	.18	6.3	.17	4.2	.11	3.8	.09	3.1	.09	3.1	.10	6.4	.16	7.0	.17	6.2	.16	7.2	.18	6.7	.16	7.2	.17	6.7	.18	6.7	.19	-10
-15	6.7	.15	9.0	.21	5.1	.11	4.3	.09	5.2	.12	5.5	.14	5.4	.15	5.4	.15	3.4	.09	3.0	.07	2.4	.07	2.5	.08	5.4	.13	6.0	.15	5.3	.14	6.3	.16	5.6	.14	6.2	.15	5.9	.16	5.9	.17	-15
-20	5.5	.12	7.8	.18	4.1	.09	3.4	.07	4.2	.10	4.5	.11	4.6	.13	4.5	.13	2.7	.07	2.3	.05	1.8	.05	2.0	.06	4.5	.11	5.1	.13	4.5	.12	5.4	.14	4.7	.11	5.2	.13	5.0	.14	5.1	.15	-20
-25	4.4	.10	6.6	.16	3.3	.07	2.6	.05	3.3	.07	3.6	.09	3.8	.11	3.8	.10	2.1	.05	1.6	.03	1.3	.03	1.5	.04	3.7	.09	4.2	.10	3.7	.10	4.6	.12	3.8	.09	4.3	.10	4.2	.12	4.4	.13	-25
-30	3.5	.07	5.5	.13	2.5	.05	1.8	.03	2.5	.05	2.9	.07	3.0	.09	3.0	.08	1.5	.03	1.5	.03	1.2	.03	1.0	.03	2.9	.07	3.4	.08	3.0	.08	3.8	.10	2.9	.07	3.5	.08	3.5	.10	3.8	.11	-30
-35	2.7	.05	4.5	.11	1.8	.03	1.7	.03	1.9	.03	2.2	.05	2.4	.07	2.4	.07	1.4	.03	1.4	.03	1.1	.03	.9	.02	2.2	.05	2.7	.07	2.4	.06	3.1	.08	2.2	.05	2.8	.07	2.9	.08	3.1	.10	-35
-40	2.0	.03	3.7	.09	1.7	.03	1.6	.03	1.8	.03	1.6	.03	1.8	.05	1.8	.05	1.3	.03	1.3	.03	1.0	.02	.9	.02	1.6	.03	2.1	.05	1.8	.05	2.4	.06	1.6	.03	2.1	.05	2.3	.06	2.5	.08	-40
-45	1.9	.03	2.9	.07	1.6	.03	1.4	.03	1.6	.03	1.5	.03	1.3	.03	1.3	.03	1.2	.02	1.2	.02	.9	.02	.8	.02	1.4	.03	1.5	.03	1.2	.03	1.8	.04	1.4	.03	1.5	.03	1.7	.04	2.0	.06	-45
-50	1.7	.03	2.2	.05	1.4	.02	1.3	.02	1.5	.03	1.4	.03	1.2	.03	1.2	.03	1.1	.02	1.0	.02	.8	.02	.7	.02	1.3	.03	1.3	.03	1.1	.02	1.2	.03	1.3	.03	1.3	.03	1.1	.02	1.4	.04	-50
-55	1.5	.03	1.7	.03	1.3	.02	1.2	.02	1.3	.02	1.2	.03	1.1	.03	1.1	.02	1.0	.02	.9	.02	.7	.02	.6	.02	1.2	.02	1.2	.02	1.0	.02	1.1	.02	1.2	.02	1.2	.02	1.0	.02	.9	.02	-55
-60	1.4	.02	1.6	.03	1.2	.02	1.1	.02	1.2	.02	1.1	.02	1.0	.02	1.0	.02	.9	.02	.8	.02	.7	.02	.6	.02	1.1	.02	1.1	.02	.9	.02	1.0	.02	1.1	.02	1.1	.02	.9	.02	.9	.02	-60
-65	1.3	.02	1.4	.03	1.0	.02	1.0	.02	1.1	.02	1.0	.02	.9	.02	.9	.02	.8	.02	.8	.02	.6	.02	.5	.02	1.0	.02	1.0	.02	.9	.02	.9	.02	1.0	.02	1.0	.02	.9	.02	.8	.02	-65
-70	1.2	.02	1.3	.02	.9	.02	.8	.02	1.0	.02	.9	.02	.9	.02	.8	.02	.7	.02	.7	.01	.5	.01	.5	.01	.9	.02	.9	.02	.8	.02	.8	.02	.9	.02	.9	.02	.8	.02	.7	.02	-70
-75	1.0	.02	1.2	.02	.8	.02	.8	.01	.9	.02	.8	.02	.8	.02	.7	.02	.6	.01	.6	.01	.5	.01	.4	.01	.8	.02	.8	.02	.7	.02	.8	.02	.8	.02	.8	.02	.7	.02	.7	.02	-75
-80	.9	.02	1.1	.02	.7	.01	.7	.01	.8	.02	.7	.02	.7	.02	.7	.02	.5	.01	.5	.01	.4	.01	.4	.01	.7	.02	.7	.02	.6	.02	.7	.02	.7	.02	.7	.02	.6	.02	.6	.02	-80
-85	.8	.02	1.0	.02	.6	.01	.6	.01	.7	.01	.7	.02	.6	.02	.6	.02	.5	.01	.4	.01	.4	.01	.3	.01	.6	.01	.7	.01	.6	.01	.6	.02	.6	.01	.7	.01	.6	.01	.6	.02	-85
-90	.7	.01	.9	.02	.6	.01	.5	.01	.6	.01	.6	.01	.5	.01	.5	.01	.4	.01	.4	.01	.3	.01	.3	.01	.6	.01	.6	.01	.5	.01	.6	.01	.6	.01	.6	.01	.5	.01	.5	.01	-90
-95	.6	.01	.8	.02	.5	.01	.4	.01	.5	.01	.5	.01	.5	.01	.5	.01	.3	.01	.3	.01	.3	.01	.3	.01	.5	.01	.5	.01	.5	.01	.5	.01	.5	.01	.5	.01	.5	.01	.5	.01	-95
-100	.5	.01	.7	.01	.4	.01	.4	.01	.4	.01	.4	.01	.4	.01	.4	.01	.3	.01	.3	.01	.2	.01	.2	.01	.4	.01	.5	.01	.4	.01	.5	.01	.4	.01	.5	.01	.4	.01	.4	.01	-100

Range: 10' (+35), 50' (+0), 100' (-25), 200' (-40), 300' (-55), 301'+ (-75)

COLD BALL UNIT ATTACK TABLE

	AT 1		AT 2		AT 3		AT 4		AT 5		AT 6		AT 7		AT 8		AT 9		AT 10		AT 11		AT 12		AT 13		AT 14		AT 15		AT 16		AT 17		AT 18		AT 19		AT 20		
	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	
100	27.2	.45	26.2	.45	24.3	.44	22.4	.44	24.3	.44	23.3	.44	17.6	.39	17.5	.39	23.4	.44	22.4	.44	16.7	.39	14.0	.39	22.5	.44	21.5	.44	16.6	.39	16.6	.39	21.6	.44	20.7	.44	15.8	.39	13.1	.39	100
95	26.8	.45	25.8	.44	23.9	.44	22.1	.44	24.0	.44	22.9	.44	17.3	.39	17.3	.39	23.0	.44	22.1	.44	16.4	.39	13.8	.39	22.2	.44	21.2	.44	16.4	.39	16.4	.39	21.3	.44	20.4	.44	15.6	.39	12.9	.39	95
90	26.4	.44	25.4	.44	23.5	.44	21.7	.44	23.6	.44	22.6	.44	17.0	.39	17.0	.39	22.7	.44	21.7	.44	16.2	.39	13.6	.39	21.8	.44	20.9	.44	16.1	.39	16.1	.39	21.0	.44	20.0	.44	15.3	.39	12.7	.39	90
85	25.9	.44	25.0	.44	23.1	.44	21.3	.44	23.2	.44	22.1	.44	16.7	.39	16.6	.39	22.3	.44	21.3	.44	15.9	.39	13.4	.39	21.4	.44	20.5	.44	15.8	.39	15.8	.39	20.6	.44	19.7	.44	15.1	.39	12.6	.39	85
80	25.4	.44	24.5	.44	22.6	.44	20.9	.44	22.7	.44	21.7	.44	16.4	.39	16.3	.39	21.8	.44	20.9	.44	15.6	.39	13.1	.39	21.0	.44	20.1	.44	15.5	.39	15.5	.39	20.2	.44	19.3	.44	14.8	.39	12.3	.39	80
75	24.9	.44	23.9	.44	22.1	.44	20.4	.44	22.2	.44	21.2	.44	16.0	.39	15.9	.39	21.3	.44	20.4	.44	15.3	.39	12.9	.39	20.6	.44	19.7	.44	15.2	.39	15.2	.39	19.8	.44	18.9	.43	14.5	.39	12.1	.39	75
70	24.3	.44	23.4	.44	21.6	.44	20.0	.44	21.7	.44	20.6	.43	15.6	.39	15.6	.39	20.8	.44	20.0	.44	14.9	.39	12.6	.38	20.1	.44	19.2	.43	14.8	.39	14.8	.39	19.3	.43	18.4	.43	14.2	.39	11.9	.38	70
65	23.7	.44	22.8	.44	21.0	.43	19.4	.43	21.2	.44	20.0	.43	15.2	.39	15.1	.39	20.3	.43	19.4	.43	14.5	.39	12.3	.38	19.5	.43	18.6	.43	14.4	.39	14.4	.38	18.7	.43	17.8	.43	13.8	.39	11.6	.38	65
60	23.1	.44	22.2	.44	20.3	.43	18.8	.43	20.6	.43	19.4	.43	14.8	.38	14.7	.38	19.7	.43	18.8	.43	14.2	.38	12.0	.38	18.9	.43	18.0	.43	14.0	.38	13.9	.38	18.2	.43	17.3	.42	13.5	.38	11.2	.38	60
55	22.4	.44	21.5	.43	19.7	.43	18.1	.42	19.9	.43	18.7	.42	14.4	.38	14.2	.38	19.0	.43	18.1	.42	13.7	.38	11.6	.38	18.3	.43	17.4	.42	13.5	.38	13.5	.38	17.6	.42	16.7	.42	13.0	.38	10.9	.37	55
50	21.8	.44	20.9	.43	19.0	.43	17.5	.42	19.3	.43	18.0	.42	13.9	.38	13.7	.38	18.4	.43	17.5	.42	13.3	.38	11.2	.37	17.7	.42	16.9	.42	13.1	.38	13.0	.37	17.1	.42	16.2	.42	12.6	.38	10.6	.37	50
45	21.0	.43	20.1	.43	18.3	.42	16.8	.42	18.6	.42	17.3	.41	13.4	.38	13.2	.38	17.7	.42	16.8	.42	12.8	.38	10.9	.37	17.1	.42	16.2	.41	12.6	.37	12.5	.37	16.4	.41	15.5	.41	12.2	.37	10.3	.37	45
40	20.3	.43	19.4	.43	17.5	.41	16.1	.41	17.9	.42	16.5	.41	12.9	.37	12.7	.37	17.0	.41	16.1	.41	12.3	.37	10.3	.36	16.4	.41	15.5	.41	12.1	.37	12.0	.37	15.7	.41	14.9	.40	11.7	.37	9.7	.36	40
35	19.5	.43	18.6	.42	16.8	.41	15.4	.40	17.1	.41	15.8	.40	12.4	.37	12.1	.37	16.3	.41	15.4	.40	11.8	.37	9.6	.34	15.7	.41	14.8	.40	11.6	.37	11.3	.35	15.1	.40	14.2	.40	11.3	.37	9.1	.34	35
30	18.7	.42	17.8	.41	16.0	.40	14.7	.40	16.4	.41	15.0	.39	11.5	.35	11.3	.35	15.5	.40	14.7	.40	11.0	.35	8.9	.32	15.0	.40	14.2	.40	10.8	.35	10.5	.33	14.4	.40	13.6	.39	10.5	.35	8.4	.32	30
25	17.9	.41	17.0	.41	15.2	.40	13.8	.39	15.6	.40	13.9	.37	10.7	.33	10.4	.33	14.8	.40	13.8	.39	10.2	.33	8.2	.30	14.3	.40	13.3	.38	10.0	.33	9.7	.31	13.7	.39	12.8	.38	9.8	.33	7.8	.30	25
20	17.1	.41	16.2	.40	14.3	.38	12.8	.36	14.6	.39	12.8	.35	9.9	.31	9.6	.31	13.8	.38	12.8	.36	9.4	.31	7.6	.28	13.4	.38	12.4	.36	9.2	.31	8.9	.29	12.9	.38	11.9	.36	9.0	.31	7.2	.28	20
15	16.2	.40	15.4	.40	13.2	.36	11.8	.34	13.5	.36	11.7	.32	9.1	.29	8.9	.29	12.8	.36	11.8	.34	8.7	.29	6.9	.26	12.4	.36	11.4	.34	8.5	.29	8.2	.27	11.9	.35	10.9	.33	8.3	.29	6.6	.26	15
10	15.4	.40	14.3	.37	12.1	.34	10.8	.32	12.5	.34	10.7	.30	8.3	.27	8.1	.27	11.8	.34	10.8	.32	8.0	.27	6.3	.24	11.4	.33	10.5	.32	7.8	.27	7.4	.25	11.0	.33	10.0	.31	7.6	.27	6.0	.24	10
5	14.5	.38	13.2	.35	11.1	.31	9.9	.30	11.5	.32	9.8	.28	7.6	.25	7.4	.25	10.8	.31	9.9	.30	7.3	.25	5.7	.22	10.4	.31	9.5	.29	7.1	.25	6.7	.23	10.0	.31	9.2	.29	6.9	.25	5.4	.22	5
0	13.4	.36	12.1	.33	10.1	.29	9.0	.27	10.5	.30	8.8	.26	6.9	.23	6.7	.23	9.8	.29	9.0	.27	6.6	.23	5.1	.20	9.5	.29	8.7	.27	6.4	.23	6.0	.21	9.1	.29	8.3	.27	6.3	.23	4.8	.20	0
-5	12.3	.34	11.0	.31	9.2	.27	8.1	.25	9.5	.27	7.9	.23	6.2	.21	6.0	.21	8.9	.27	8.1	.25	5.9	.21	4.5	.18	8.6	.27	7.8	.25	5.7	.21	5.4	.19	8.3	.26	7.5	.24	5.6	.21	4.3	.18	-5
-10	11.3	.32	10.0	.28	8.2	.25	7.2	.23	8.6	.25	7.0	.21	5.5	.19	5.3	.19	8.0	.25	7.2	.23	5.3	.19	4.0	.16	7.8	.24	7.0	.23	5.1	.19	4.8	.17	7.4	.24	6.7	.22	5.0	.19	3.8	.16	-10
-15	10.2	.29	9.1	.26	7.4	.22	6.4	.21	7.7	.23	6.2	.19	4.8	.17	4.7	.17	7.2	.22	6.4	.21	4.6	.17	3.4	.14	6.9	.22	6.2	.20	4.5	.17	4.1	.15	6.6	.22	5.9	.20	4.4	.17	3.2	.14	-15
-20	9.3	.27	8.1	.24	6.5	.20	5.6	.18	6.8	.21	5.4	.17	4.2	.15	4.1	.15	6.3	.20	5.6	.18	4.0	.15	2.9	.12	6.1	.20	5.5	.18	3.9	.15	3.5	.13	5.9	.20	5.3	.18	3.8	.15	2.7	.12	-20
-25	8.3	.25	7.2	.22	5.7	.18	4.9	.16	6.0	.18	4.7	.15	3.6	.13	3.5	.13	5.6	.18	4.9	.16	3.4	.13	2.4	.10	5.4	.18	4.8	.16	3.3	.13	3.0	.11	5.2	.18	4.6	.16	3.3	.13	2.3	.10	-25
-30	7.4	.23	6.4	.19	5.0	.16	4.2	.14	5.2	.16	4.0	.13	3.0	.11	2.9	.11	4.8	.16	4.2	.14	2.9	.11	2.0	.08	4.7	.16	4.1	.14	2.8	.11	2.5	.09	4.5	.16	4.0	.14	2.8	.11	1.9	.08	-30
-35	6.6	.20	5.5	.17	4.3	.14	3.6	.12	4.5	.14	3.3	.11	2.5	.09	2.4	.09	4.2	.14	3.6	.12	2.4	.09	1.6	.06	4.1	.14	3.5	.12	2.3	.09	2.0	.08	3.9	.14	3.4	.12	2.3	.09	1.5	.06	-35
-40	5.7	.18	4.8	.15	3.6	.12	3.0	.10	3.8	.12	2.8	.09	2.0	.07	1.9	.07	3.5	.12	3.0	.10	1.9	.07	1.2	.05	3.4	.12	2.9	.10	1.9	.07	1.6	.06	3.3	.12	2.8	.10	1.9	.07	1.1	.05	-40
-45	5.0	.16	4.1	.13	3.0	.10	2.5	.09	3.1	.10	2.2	.07	1.5	.06	1.5	.06	2.9	.10	2.5	.09	1.5	.06	.8	.03	2.8	.10	2.4	.09	1.5	.06	1.2	.04	2.8	.10	2.3	.09	1.4	.06	.7	.03	-45
-50	4.3	.14	3.4	.11	2.4	.08	2.0	.07	2.5	.08	1.7	.05	1.1	.04	1.1	.04	2.4	.08	2.0	.07	1.1	.04	.6	.02	2.3	.08	1.9	.07	1.0	.04	.8	.02	2.3	.08	1.9	.07	1.0	.04	.6	.02	-50
-55	3.6	.12	2.8	.09	1.9	.06	1.5	.05	2.0	.06	1.2	.04	.7	.02	.7	.02	1.9	.06	1.5	.05	.7	.02	.5	.02	1.8	.06	1.5	.05	.7	.02	.6	.02	1.8	.06	1.4	.05	.6	.02	.5	.02	-55
-60	3.0	.10	2.3	.08	1.5	.05	1.1	.03	1.5	.05	.9	.02	.7	.02	.6	.02	1.4	.05	1.1	.03	.6	.02	.5	.02	1.4	.05	1.0	.03	.6	.02	.6	.02	1.3	.05	1.0	.03	.6	.02	.5	.02	-60
-65	2.5	.09	1.8	.06	1.0	.03	.8	.02	1.1	.03	.8	.02	.6	.02	.6	.02	1.0	.03	.8	.02	.6	.02	.5	.02	1.0	.03	.8	.02	.6	.02	.6	.02	.9	.03	.7	.02	.6	.02	.5	.02	-65
-70	2.0	.07	1.3	.04	.8	.02	.7	.02	.8	.02	.7	.02	.6	.02	.6	.02	.8	.02	.7	.02	.5	.02	.4	.02	.8	.02	.7	.02	.5	.02	.5	.02	.7	.02	.7	.02	.5	.02	.4	.02	-70
-75	1.5	.05	.9	.02	.8	.02	.7	.02	.8	.02	.7	.02	.5	.02	.5	.02	.7	.02	.7	.02	.5	.02	.4	.01	.7	.02	.7	.02	.5	.02	.5	.02	.7	.02	.6	.02	.5	.02	.4	.01	-75
-80	1.1	.03	.8	.02	.7	.02	.6	.02	.7	.02	.6	.02	.5	.02	.5	.02	.7	.02	.6	.02	.5	.02	.4	.01	.7	.02	.6	.02	.5	.02	.4	.01	.6	.02	.6	.02	.4	.02	.4	.01	-80
-85	.8	.02	.8	.02	.7	.02	.6	.02	.7	.02	.6	.02	.5	.01	.4	.01	.6	.02	.6	.02	.4	.01	.3	.01	.6	.02	.6	.02	.4	.01	.4	.01	.6	.02	.5	.02	.4	.01	.3	.01	-85
-90	.8	.02	.7	.02	.6	.02	.5	.02	.6	.02	.5	.01	.4	.01	.4	.01	.6	.02	.5	.02	.4	.01	.3	.01	.6	.02	.5	.02	.4	.01	.4	.01	.5	.02	.5	.02	.4	.01	.3	.01	-90
-95	.7	.02	.7	.02	.6	.02	.5	.01	.6	.02	.5	.01	.4	.01	.4	.01	.5	.02	.5	.01	.4	.01	.3	.01	.5	.02	.5	.01	.4	.01	.3	.01	.5	.02	.5	.01	.3	.01	.3	.01	-95
-100	.7	.02	.6	.02	.5	.01	.4	.01	.5	.01	.4	.01	.3	.01	.3	.01	.5	.01	.4	.01	.3	.01	.3	.01	.5	.01	.4	.01	.3	.01	.3	.01	.5	.01	.4	.01	.3	.01	.2	.01	-100

Range: 10' (+35), 50' (0), 100' (-25), 200' (55), 301'+ (-75)

FIRE BALL UNIT ATTACK TABLE

A-8.7

	AT 1		AT 2		AT 3		AT 4		AT 5		AT 6		AT 7		AT 8		AT 9		AT 10		AT 11		AT 12		AT 13		AT 14		AT 15		AT 16		AT 17		AT 18		AT 19		AT 20		
	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	HPs	Cas	
100	33.7	.50	31.9	.50	29.9	.49	27.0	.44	31.8	.49	30.8	.49	26.3	.49	26.2	.49	29.1	.49	28.1	.49	22.5	.44	19.8	.44	24.4	.45	23.4	.44	19.8	.44	19.7	.44	23.5	.44	22.5	.44	18.9	.44	16.2	.44	100
95	33.2	.49	31.4	.49	29.4	.49	26.5	.44	31.3	.49	30.3	.49	25.9	.49	25.8	.49	28.7	.49	27.7	.49	22.2	.44	19.5	.44	24.0	.44	23.1	.44	19.5	.44	19.4	.44	23.1	.44	22.2	.44	18.6	.44	15.9	.44	95
90	32.6	.49	30.9	.49	28.9	.49	26.1	.44	30.8	.49	29.8	.49	25.4	.49	25.3	.49	28.2	.49	27.2	.49	21.8	.44	19.2	.44	23.6	.44	22.7	.44	19.2	.44	19.1	.44	22.8	.44	21.8	.44	18.3	.44	15.7	.44	90
85	32.0	.49	30.3	.49	28.4	.49	25.6	.44	30.2	.49	29.2	.49	25.0	.49	24.9	.49	27.7	.49	26.7	.49	21.4	.44	18.9	.44	23.2	.44	22.3	.44	18.9	.44	18.8	.44	22.4	.44	21.4	.44	18.0	.44	15.5	.44	85
80	31.4	.49	29.7	.49	27.8	.49	25.0	.44	29.6	.49	28.6	.49	24.5	.49	24.3	.48	27.2	.49	26.2	.49	21.0	.44	18.5	.44	22.7	.44	21.8	.44	18.5	.44	18.4	.44	21.9	.44	21.0	.44	17.7	.44	15.2	.43	80
75	30.7	.49	29.1	.49	27.1	.48	24.5	.44	28.9	.49	28.0	.49	23.9	.48	23.7	.48	26.6	.49	25.6	.48	20.6	.44	18.1	.44	22.3	.44	21.4	.44	18.1	.44	18.0	.43	21.5	.44	20.6	.44	17.4	.44	14.9	.43	75
70	30.0	.49	28.4	.49	26.4	.48	23.9	.44	28.2	.49	27.3	.48	23.3	.48	23.1	.48	25.9	.48	25.0	.48	20.1	.44	17.7	.44	21.7	.44	20.9	.44	17.7	.43	17.5	.43	21.0	.44	20.1	.44	16.9	.43	14.5	.43	70
65	29.2	.49	27.6	.48	25.7	.48	23.2	.44	27.4	.48	26.5	.48	22.7	.48	22.4	.47	25.2	.48	24.3	.48	19.6	.44	17.2	.43	21.2	.44	20.3	.44	17.2	.43	17.0	.43	20.5	.44	19.6	.44	16.5	.43	14.1	.42	65
60	28.3	.48	26.8	.48	24.9	.47	22.5	.43	26.6	.48	25.7	.48	22.0	.47	21.7	.47	24.5	.48	23.5	.47	19.0	.43	16.7	.43	20.6	.44	19.7	.43	16.7	.43	16.5	.42	19.9	.43	19.0	.43	16.0	.43	13.7	.42	60
55	27.4	.48	26.0	.48	24.0	.47	21.7	.43	25.7	.47	24.8	.47	21.2	.47	20.9	.46	23.7	.47	22.8	.47	18.4	.43	16.2	.42	20.0	.43	19.1	.43	16.2	.42	15.9	.42	19.3	.43	18.4	.43	15.5	.42	13.3	.41	55
50	26.6	.48	25.2	.47	23.2	.46	21.0	.43	25.0	.47	24.0	.47	20.5	.46	20.2	.46	23.0	.47	22.0	.47	17.8	.43	15.7	.42	19.4	.43	18.5	.43	15.6	.42	15.3	.41	18.7	.43	17.8	.43	15.0	.42	12.8	.41	50
45	25.6	.47	24.3	.47	22.3	.46	20.2	.42	24.0	.47	23.0	.46	19.7	.46	19.4	.45	22.1	.46	21.2	.46	17.2	.42	15.1	.42	18.7	.43	17.8	.42	15.0	.41	14.7	.41	18.0	.43	17.1	.42	14.4	.41	12.4	.40	45
40	24.6	.47	23.4	.46	21.4	.45	19.3	.42	23.1	.46	22.1	.46	18.9	.45	18.5	.44	21.3	.46	20.3	.45	16.5	.42	14.5	.41	18.0	.42	17.1	.42	14.4	.41	14.1	.40	17.4	.42	16.4	.42	13.8	.41	11.9	.40	40
35	23.6	.46	22.4	.46	20.4	.44	18.4	.41	22.1	.46	21.1	.45	18.1	.44	17.6	.44	20.4	.45	19.5	.45	15.8	.41	13.9	.40	17.3	.42	16.4	.42	13.8	.40	13.5	.40	16.7	.42	15.7	.41	13.3	.40	11.4	.39	35
30	22.6	.46	21.5	.45	19.4	.43	17.6	.41	21.1	.45	20.1	.44	17.2	.43	16.8	.43	19.5	.45	18.6	.44	15.1	.41	13.3	.40	16.5	.41	15.7	.41	13.2	.39	12.8	.39	15.9	.41	15.0	.40	12.6	.39	10.6	.37	30
25	21.6	.45	20.5	.44	18.5	.43	16.7	.40	20.1	.44	19.1	.43	16.4	.43	15.9	.42	18.6	.44	17.7	.43	14.4	.40	12.5	.39	15.8	.41	15.0	.40	12.4	.38	11.9	.36	15.2	.40	14.4	.40	11.7	.37	9.8	.35	25
20	20.6	.44	19.5	.43	17.5	.42	15.8	.40	19.1	.43	18.1	.42	15.5	.42	14.8	.40	17.7	.43	16.8	.42	13.5	.39	11.6	.36	15.0	.40	14.2	.40	11.5	.36	10.9	.34	14.5	.40	13.7	.39	10.8	.35	9.1	.32	20
15	19.5	.43	18.5	.43	16.5	.41	14.7	.38	18.0	.42	17.1	.42	14.4	.40	13.7	.38	16.8	.42	15.9	.41	12.5	.36	10.7	.34	14.3	.40	13.2	.38	10.6	.34	10.1	.32	13.8	.39	12.7	.37	10.0	.32	8.3	.30	15
10	18.4	.42	17.5	.42	15.2	.38	13.5	.35	16.7	.40	15.8	.39	13.2	.37	12.5	.35	15.8	.41	14.6	.39	11.6	.34	9.9	.32	13.2	.37	12.2	.36	9.8	.31	9.2	.30	12.8	.37	11.7	.35	9.2	.30	7.6	.28	10
5	17.2	.41	16.4	.40	14.0	.36	12.4	.33	15.3	.37	14.5	.37	12.1	.35	11.4	.33	14.6	.38	13.5	.36	10.6	.32	9.0	.30	12.2	.35	11.2	.33	8.9	.29	8.4	.27	11.8	.35	10.8	.33	8.3	.28	6.9	.26	5
0	15.9	.38	15.1	.38	12.8	.33	11.3	.31	14.0	.35	13.2	.34	11.1	.32	10.4	.30	13.4	.36	12.3	.34	9.7	.30	8.2	.27	11.2	.33	10.3	.31	8.1	.27	7.5	.25	10.8	.33	9.9	.31	7.6	.26	6.2	.23	0
-5	14.5	.36	13.8	.35	11.6	.31	10.3	.29	12.8	.32	12.0	.32	10.0	.30	9.3	.28	12.2	.33	11.2	.31	8.8	.27	7.4	.25	10.2	.31	9.4	.29	7.3	.25	6.8	.23	9.9	.30	9.0	.28	6.8	.23	5.5	.21	-5
-10	13.3	.33	12.6	.33	10.5	.28	9.3	.26	11.6	.30	10.9	.29	9.0	.27	8.4	.25	11.1	.31	10.1	.29	7.9	.25	6.6	.23	9.3	.28	8.5	.27	6.5	.22	6.0	.21	9.0	.28	8.1	.26	6.0	.21	4.9	.19	-10
-15	12.0	.31	11.4	.30	9.4	.26	8.3	.24	10.4	.27	9.8	.27	8.1	.25	7.5	.23	10.0	.28	9.1	.27	7.1	.23	5.9	.21	8.4	.26	7.6	.24	5.8	.20	5.3	.19	8.1	.26	7.3	.24	5.3	.19	4.3	.17	-15
-20	10.8	.28	10.3	.28	8.5	.24	7.4	.22	9.3	.25	8.7	.24	7.2	.23	6.6	.21	9.0	.26	8.2	.24	6.3	.21	5.2	.18	7.5	.24	6.8	.22	5.1	.18	4.6	.17	7.2	.24	6.4	.22	4.7	.17	3.8	.15	-20
-25	9.7	.26	9.2	.26	7.5	.22	6.5	.20	8.3	.23	7.8	.22	6.4	.20	5.8	.19	8.1	.24	7.3	.22	5.5	.18	4.5	.16	6.7	.22	6.0	.20	4.5	.16	4.0	.15	6.4	.21	5.7	.19	4.1	.15	3.2	.13	-25
-30	8.7	.24	8.2	.23	6.6	.19	5.7	.18	7.3	.20	6.8	.20	5.5	.18	5.0	.16	7.2	.22	6.4	.20	4.8	.16	3.9	.14	5.9	.19	5.2	.18	3.9	.14	3.4	.13	5.7	.19	5.0	.17	3.5	.13	2.7	.11	-30
-35	7.7	.21	7.3	.21	5.7	.17	4.9	.16	6.4	.18	5.9	.18	4.8	.16	4.3	.14	6.3	.19	5.6	.18	4.1	.14	3.3	.12	5.2	.17	4.6	.16	3.3	.12	2.9	.11	5.0	.17	4.3	.15	2.9	.11	2.3	.09	-35
-40	6.7	.19	6.4	.19	5.0	.15	4.2	.14	5.5	.16	5.1	.16	4.1	.14	3.6	.12	5.5	.17	4.8	.16	3.5	.12	2.8	.10	4.5	.15	3.9	.14	2.8	.10	2.4	.09	4.3	.15	3.7	.13	2.4	.09	1.8	.08	-40
-45	5.8	.17	5.5	.17	4.2	.13	3.5	.12	4.7	.14	4.4	.14	3.5	.12	3.0	.10	4.7	.15	4.1	.14	2.9	.10	2.3	.09	3.8	.13	3.3	.12	2.3	.09	1.9	.07	3.7	.13	3.1	.11	1.9	.07	1.4	.06	-45
-50	4.9	.15	4.7	.15	3.5	.11	2.9	.10	3.9	.12	3.6	.11	2.8	.10	2.4	.08	4.0	.13	3.4	.11	2.3	.08	1.8	.07	3.2	.11	2.7	.10	1.8	.07	1.5	.05	3.1	.11	2.6	.10	1.5	.05	1.0	.04	-50
-55	4.2	.13	4.0	.13	2.9	.09	2.4	.08	3.2	.10	3.0	.09	2.3	.08	1.9	.07	3.3	.11	2.8	.09	1.8	.06	1.4	.05	2.6	.09	2.2	.08	1.4	.05	1.1	.04	2.5	.09	2.1	.08	1.1	.04	.6	.02	-55
-60	3.5	.11	3.3	.11	2.4	.08	1.9	.06	2.6	.08	2.4	.08	1.8	.06	1.5	.05	2.7	.09	2.3	.08	1.4	.05	1.0	.03	2.1	.08	1.7	.06	1.0	.03	.7	.02	2.1	.08	1.7	.06	.7	.02	.6	.02	-60
-65	2.8	.09	2.7	.09	1.8	.06	1.4	.04	2.0	.06	1.9	.06	1.4	.04	1.1	.03	2.2	.07	1.8	.06	1.0	.03	.7	.02	1.6	.06	1.3	.04	.7	.02	.7	.02	1.6	.06	1.2	.04	.7	.02	.6	.02	-65
-70	2.3	.07	2.2	.07	1.4	.04	1.0	.03	1.5	.04	1.4	.04	1.0	.03	.9	.02	1.7	.06	1.3	.04	.8	.02	.7	.02	1.2	.04	.9	.03	.7	.02	.6	.02	1.2	.04	.9	.03	.6	.02	.5	.02	-70
-75	1.8	.05	1.7	.05	1.0	.02	.9	.02	1.0	.02	1.0	.02	.8	.02	.8	.02	1.3	.04	.9	.02	.7	.02	.6	.02	.8	.02	.8	.02	.6	.02	.6	.02	.8	.02	.7	.02	.6	.02	.5	.02	-75
-80	1.3	.03	1.2	.03	.9	.02	.8	.02	1.0	.02	.9	.02	.8	.02	.7	.02	.9	.02	.9	.02	.7	.02	.6	.02	.8	.02	.7	.02	.6	.02	.5	.02	.7	.02	.7	.02	.5	.02	.5	.02	-80
-85	1.0	.02	.9	.02	.8	.02	.7	.02	.9	.02	.8	.02	.7	.02	.7	.02	.8	.02	.8	.02	.6	.02	.5	.02	.7	.02	.7	.02	.5	.02	.5	.02	.7	.02	.6	.02	.5	.02	.4	.01	-85
-90	.9	.02	.9	.02	.8	.02	.7	.02	.8	.02	.8	.02	.7	.02	.6	.02	.8	.02	.7	.02	.6	.02	.5	.02	.7	.02	.6	.02	.5	.02	.5	.01	.6	.02	.6	.02	.5	.01	.4	.01	-90
-95	.9	.02	.8	.02	.7	.02	.6	.02	.8	.02	.7	.02	.6	.02	.6	.02	.7	.02	.7	.02	.5	.02	.4	.01	.6	.02	.6	.02	.4	.01	.4	.01	.6	.02	.5	.02	.4	.01	.3	.01	-95
-100	.8	.02	.7	.02	.6	.02	.6	.02	.7	.02	.7	.02	.5	.02	.5	.01	.7	.02	.6	.02	.5	.01	.4	.01	.6	.02	.5	.02	.4	.01	.4	.01	.5	.02	.5	.02	.4	.01	.3	.01	-100

Range: 10' (+35), 50' (+0), 100' (-25), 200' (-55), 301'+ (-75)

M-1 • MANEUVER / MOVEMENT TABLE

	Routine	Easy	Light	Medium	Hard	Very Hard	Extremely Hard	Sheer Folly	Absurd
-201	Fall down. +2 Hits. You are out 3 rounds.	Fall. Knock self out. You are out for 12 rounds. +9 Hits.	Fall. Break arms. +10 Hits. You are out for 6 rounds.	Fall. +15 Hits. Break arm. You are out for 9 rounds.	Fall. Break arms. +20 Hits. You are out 18 rounds. Arms useless.	Fall. Break both arms and neck. +30 Hits. You ar out 60 rounds.	Fall sends you into a coma for 3 years. +30 Hits. Broken spine.	Fall breaks neck. You die in 3 rounds.	Fall crushes skull.
(-200) — (-151)	Fail to act.	Fall down. Lose 2 rounds. +2 Hits.	Fall down. +3 Hits. You are out for 4 rounds.	Fall. Break wrist. +10 Hits. You are out for 6 rounds.	Fall. Break leg. +15 Hits. You are out 9 rounds.	Fall. Break arms.+20 Hits. You are out 18 rounds. Arms useless.	Fall. Break back and legs. +25 Hits. Paralysis of lower body.	Fall. You smash your backbone and are in a coma for 1 year.	Fall paralyzes you from neck down.
(-150) — (-101)	10	Fail to act.	Fall down. +2 Hits. You are out for 2 rounds.	Fall down. Sprain ankle. You are at -25. +6 Hits.	Fall. Break arm. +10 Hits. You are out 6 rnds, stunned 3 rnds.	Fall. Break leg. +15 Hits. You are out for 6 rounds.	Fall. +30 Hits. You are out 6 rnds. Shatter knee. You are at -80.	Fall. Break both arms and neck. +30 Hits. You are out 60 rnds.	Fall. You smash your backbone and are in a coma for 1 year.
(-100) — (-51)	30	10	Fail to act.	Fall down. Lose 2 rounds. +3 Hits.	Fall down. Sprain ankle. You are at -25. +5 Hits.	Fall. +20 Hits. Break your wrist. Out 2 rnds. Not very smooth.	Fall. +12 Hits. Break arm. You are out for 6 rounds.	Fall.. +30 Hits. You are out 9 rnds. Shatter knee. You are at -80.	Fall. Break back and legs. +25 Hits. Paralysis of lower body.
(-50) — (-26)	50	30	10	Fail to act.	Fall down. +5 Hits. You are out 3 rounds.	Fall. Sprain ankle and tear ligament. You are at -30. +15 Hits.	Fall. +10 Hits. Knock yourself out. Out for 18 rnds. You lose, pal.	Fall. +12 Hits. Break arm. You are out for 6 rounds.	Fall. You are out 18 rounds. You break both arms. +25 Hits.
(-25) — 0	70	50	30	5	Fail to act.	Fall down. +5 Hits. You are out of action for 3 rounds.	Fall. Sprain ankle and tear muscle. You are at -30. +10 Hits.	Fall. +20 Hits. Break your wrist. Out 2 rnds. Not very smooth.	Fall. +10 Hits. Break your leg. You are at -75. Out 6 rounds.
01 — 20	80	60	50	10	5	Fails to act.	Fall down. +5 Hits. you are out for 3 rounds.	Fall. +5 Hits. You pull a leg muscle. You are at -25. Out 2 rounds.	Fall. +15 Hits. Break your arm. You are out for 6 rounds.
21 — 40	90	70	60	20	10	5	Fail to act.	Fall down. +7 Hits. You take 3 hits per round. Out for 2 rnds.	Fall. Knock yourself out. You are out for 30 rounds. +10 Hits.
41 — 55	100	80	70	30	20	10	5	Fall down. +5 Hits. Out for 3 rounds.	Fall. Sprain ankle. You are -30. +15 Hits.
56 — 65	100	90	80	40	30	20	10	Fail to act.	Fall. +7 Hits. 3 hits/rnd. Out for 2 rounds.
66 — 75	100	100	90	50	40	30	20	5	Freeze for 2 rounds.
76 — 85	100	100	100	60	50	40	30	10	Fail to act.
86 — 95	100	100	100	70	60	50	40	20	5
96 — 105	110	100	100	80	70	60	50	25	10
106 — 115	110	110	100	90	80	70	60	30	20
116 — 125	120	110	110	100	90	80	70	40	30
126 — 135	120	120	110	100	100	90	80	50	40
136 — 145	130	120	120	110	100	100	90	60	50
146 — 155	130	130	120	120	110	100	100	70	60
156 — 165	140	130	120	120	120	110	100	80	70
166 — 185	140	140	130	Super move. You feel great. Take 4 hits from your current total.	Excellent move. You are unstunned. +10 to allies' rolls for 2 rnds.	120	110	90	80
186 — 225	150	140	Great move. You feel better. Subtract 4 hits from current total.	Move inspires all. You are unstunned. Allies are at +10 for 2 rnds.	Move inspires your allies. +20 to friendly rolls for 3 rounds.	Move inspires your allies. +30 to friendly rolls for 2 rounds.	120	100	90
226 — 275	150	Incredible move. You feel great. Take 3 from your hit total.	Move inspires all. You are unstunned. Allies are +10 for 2 rnds.	Move inspires your allies. +20 to friendly rolls for 3 rounds.	Move inspires your allies. +25 to friendly rolls for 3 rounds.	Move inspires your allies. +30 to friendly rolls for 3 rounds.	You have half the round to act.	100	100
276+	Incredible move. You feel great. Take 3 from your current hit total.	Brilliant. Move inspires all. Allies are at +10 for 2 rnds.	Move inspires your allies. +20 to friendly rolls for 3 rounds.	Move inspires your allies. +25 to friendly rolls for 3 rounds.	Move inspires your allies. +30 to friendly rolls for 3 rounds.	Move inspires your allies. +30 to friendly rolls for 4 rounds.	Move inspires your allies. +30 to friendly rolls for 6 rounds.	Move stuns all foes within 30' for 1 rnd. You still have half a rnd to act.	Move stuns all foes within 50 feet for 1 rnd.

T-1 • LUCK TABLE

Die Roll	NUMBER OF ATTACKS 01–15	16–35	36–75	76–150	151–250	251–750	751+
286 to 295	+73	+46	+33	+24	+18	+12	+9
276 to 285	+69	+44	+32	+23	+17	+11	+8
266 to 275	+66	+43	+31	+22	+17	+10	+7
256 to 265	+65	+42	+30	+21	+16	+10	+7
246 to 255	+63	+41	+29	+21	+15	+10	+7
236 to 245	+62	+40	+28	+20	+15	+10	+7
226 to 235	+61	+39	+28	+20	+15	+9	+7
216 to 225	+61	+39	+27	+20	+15	+9	+7
206 to 215	+60	+38	+27	+19	+14	+9	+7
196 to 205	+59	+37	+27	+19	+14	+9	+7
186 to 195	+51	+33	+24	+17	+13	+9	+6
176 to 185	+48	+31	+22	+16	+12	+8	+6
166 to 175	+45	+29	+21	+15	+11	+8	+6
156 to 165	+43	+27	+20	+14	+10	+8	+6
146 to 155	+41	+26	+19	+14	+10	+7	+5
136 to 145	+39	+25	+18	+13	+9	+6	+5
126 to 135	+38	+25	+18	+13	+9	+6	+5
116 to 125	+37	+24	+17	+12	+9	+6	+5
106 to 115	+36	+23	+17	+12	+9	+6	+4
96 to 105	+35	+23	+16	+12	+9	+6	+4
86 to 95	+23	+15	+11	+8	+6	+5	+4
76 to 85	+16	+11	+8	+6	+4	+4	+3
66 to 75	+10	+7	+5	+4	+3	+3	+2
56 to 65	+4	+4	+3	+2	+2	+2	+1
46 to 55	0	0	0	0	0	0	0
36 to 45	-4	-4	-3	-2	-2	-2	-1
26 to 35	-10	-7	-5	-4	-3	-3	-2
16 to 25	-16	-11	-8	-6	-4	-4	-3
06 to 15	-23	-15	-11	-8	-6	-5	-4
-04 to 05	-35	-23	-16	-12	-9	-6	-4
-14 to -05	-36	-23	-17	-12	-9	-6	-4
-24 to -15	-37	-24	-17	-12	-9	-6	-5
-34 to -25	-38	-25	-18	-13	-9	-6	-5
-44 to -35	-39	-25	-18	-13	-9	-6	-5
-54 to -45	-41	-26	-19	-14	-10	-7	-5
-64 to -55	-43	-27	-20	-14	-10	-8	-6
-74 to -65	-45	-29	-21	-15	-11	-8	-6
-84 to -75	-48	-31	-22	-16	-12	-8	-6
-94 to -85	-51	-33	-24	-17	-13	-9	-6
-104 to -95	-59	-37	-27	-19	-14	-9	-7
-114 to -105	-60	-38	-27	-19	-14	-9	-7
-124 to -115	-61	-39	-27	-20	-15	-9	-7
-134 to -125	-61	-39	-28	-20	-15	-9	-7
-144 to -135	-62	-40	-28	-20	-15	-10	-7
-154 to -145	-63	-41	-29	-21	-15	-10	-7
-164 to -155	-65	-42	-30	-21	-16	-10	-7
-174 to -165	-66	-43	-31	-22	-17	-10	-7
-184 to -175	-69	-44	-32	-23	-17	-11	-8
-195 to -185	-73	-46	-33	-24	-18	-12	-9

T-2 • MOVEMENT/TIME CONVERSION TABLE

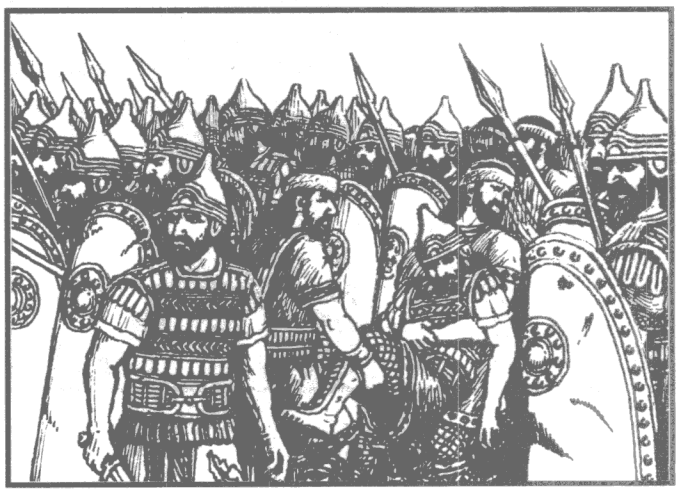
UNIT CONVERTED MOVEMENT RATE CHART

Unit Base Movement Rate	Time per Turn of Movement									(in Miles)		
	10 Sec	20 Sec	30 Sec	40 Sec	50 Sec	1 Min	2 Min	5 Min	10 Min	15 Min	30 Min	1 Hour
5	5	10	15	20	25	30	60	150	300	0.09	0.17	0.35
10	10	20	30	40	50	60	120	300	600	0.17	0.34	0.7
20	20	40	60	80	100	120	240	600	1,200	0.34	0.68	1.4
30	30	60	90	120	150	180	360	900	1,800	0.54	1.02	2.1
40	40	80	120	160	200	240	480	1,200	2,400	0.68	1.36	2.8
50	50	100	150	200	250	300	600	1,500	3,000	0.85	1.70	3.5
60	60	120	180	240	300	360	720	1,800	3,600	1.02	2.04	4.2
70	70	140	210	280	350	420	840	2,100	4,200	1.19	2.38	4.9
80	80	160	240	320	400	480	960	2,400	4,800	1.36	2.72	5.6
90	90	180	270	360	450	540	1080	2,700	5,400	1.53	3.06	6.3
100	100	200	300	400	500	600	1200	3,000	6,000	1.70	3.40	7.0
110	110	220	330	440	550	660	1320	3,300	6,600	1.87	3.74	7.7
120	120	240	360	480	600	720	1440	3,600	7,200	2.04	4.08	8.4
130	130	260	390	520	650	780	1560	3,900	7,800	2.21	4.42	9.1
140	140	280	420	560	700	840	1680	4,200	8,400	2.38	4.76	9.8
150	150	300	450	600	750	900	1800	4,500	9,000	2.55	5.10	10.5
160	160	320	480	640	800	960	1920	4,800	9,600	2.72	5.44	11.2
170	170	340	510	680	850	1,020	2040	5,100	10,200	2.89	5.78	11.9
180	180	360	540	720	900	1,080	2160	5,400	10,800	3.06	6.12	12.6
190	190	380	570	760	950	1,140	2280	5,700	11,400	3.23	6.46	13.3
200	200	400	600	800	1,000	1,200	2400	6,000	12,000	3.40	6.80	14.0
210	210	420	630	840	1,050	1,260	2520	6,300	12,600	3.57	7.14	14.7
220	220	440	660	880	1,100	1,320	2640	6,600	13,200	3.74	7.48	15.4
230	230	460	690	920	1,150	1,380	2760	6,900	13,800	3.91	7.82	16.1
240	240	480	720	960	1,200	1,440	2880	7,200	14,400	4.08	8.16	16.8
250	250	500	750	1,000	1,250	1,500	3000	7,500	15,000	4.20	8.40	17.5
260	260	520	780	1,040	1,300	1,560	3120	7,800	15,600	4.37	8.74	18.2
270	270	540	810	1,080	1,350	1,620	3240	8,100	16,200	4.54	9.08	18.9
280	280	560	840	1,120	1,400	1,680	3360	8,400	16,800	4.71	9.42	19.6
290	290	580	870	1,160	1,450	1,740	3480	8,700	17,400	4.88	9.76	10.3
300	300	600	900	1,200	1,500	1,800	3600	9,000	18,000	5.05	10.10	21.0

TIME CHART

Size of smallest unit in combat *	Time per Turn	Number of *RM* Rounds
1–10	10 seconds	1
11–20	30 seconds	3
21–50	1 minute	6
51–100	2 minute	12
101–200	4 minute	24
201–300	6 minutes	36
301–500	8 minutes	48
501–1000	10 minutes	60
1001+	15 minutes	90

* — In a static situation, use the smallest number of attacks being made.



MORALE CHART

Roll	Result
301 +	+25 MC Mod *
276–300	+20 MC Mod *
241–275	+15 MC Mod *
201–240	+10 MC Mod *
151–200	+5 MC Mod *
100–150	No Effect
90–99	'A' Morale Failure †
75-89	'B' Morale Failure †
55-74	'C' Morale Failure †
30-54	'D' Morale Failure †
≤ 29	'E' Morale Failure †

* — These Morale Check Mods only apply for one turn (i.e., until the end of the next Morale Phase).

† — Roll on the appropriate column of the Morale Failure Table T-4.

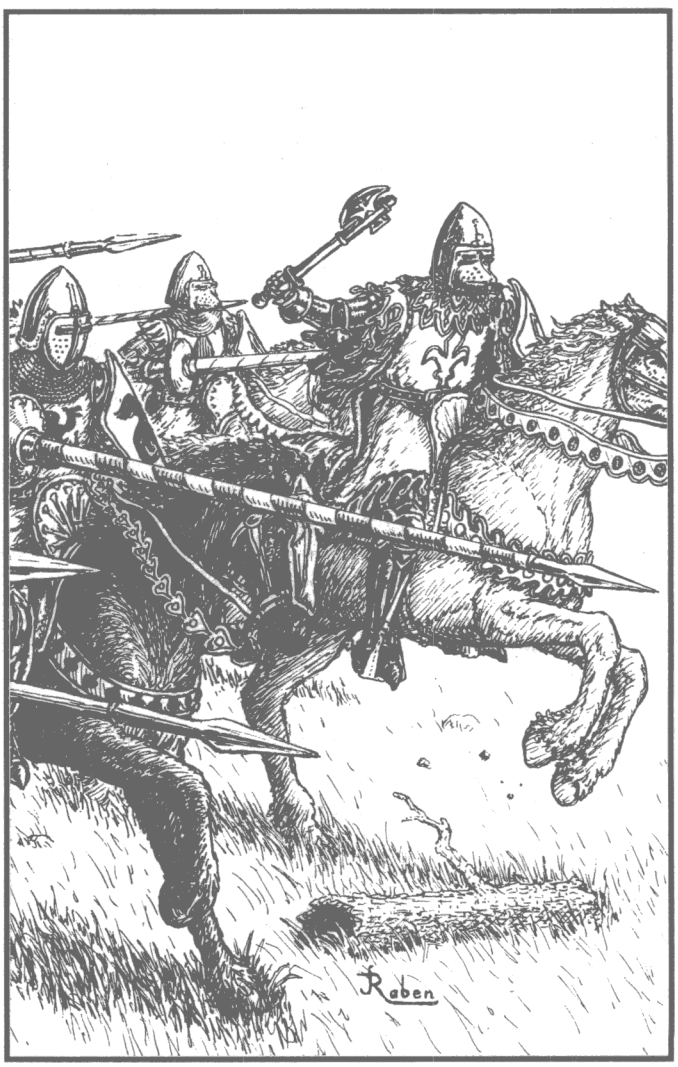
MORALE ROLL MODIFIERS CHART

Effect	Category & Note
+100	*Base Morale Rating* (MR), Sec. 17.0 & 19.2.1.
– (variable)	MR modification for every 25% total *casualties* based on the unit's Dis stat, see the Discipline & Morale Chart.
– (variable)	For *casualties taken this round*, -1 for every 1% of unit's Size.
+0.5 x LR	Half of the current leader's *Leadership Rating* (round up).
+1 per level	*Experience level* of the unit.
	Attack Ratio against unit making MC (16.5.3):
+0	1-1
-5	3-2
-10	2-1
-20	3-1
-30	4-1
-40	5-1
-0.5 x LR	Leader in command becomes a casualty (17.4).
-10	Standard (if any) falls.
+15	An enemy unit routs.
-15	An adjacent friendly unit routs.
-10	Infantry unit making MC is next to an enemy Cavalry unit.
-10	First time unit is attacked.
– (variable)	-10 for every 25% Exhaustion Points used (optional, Section 25.8).
± (variable)	Magic (Section 17.6).
± (variable)	Terrain (see Table 5.9 for suggestions):
± (variable)	Significant tactical maneuvers.
± (variable)	Weather.
± (variable)	Logistics.

DISCIPLINE AND MORALE CHART

Discipline Stat	Incremental Mod to Morale Rating ‡
101+	-2
100	-4
98-99	-6
95-98	-8
90-94	-10
86-89	-13
80-85	-15
76-79	-17
70-75	-19
66-69	-21
60-65	-23
50-59	-25
40-49	-30
30-39	-35
20-29	-40
10-19	-45
1-9	-50

‡ — MR Mod for every 25% casualties.



T-4 • MORALE FAILURE TABLE

	A	B	C	D	E
01–10	A man sees his brother on the other side and defects: 1 desertion.	-10 for one rnd due to lack of communication.	Promotion unlikely as leader orders a -10 attack next rnd.	10% of unit desert. Make a successful C/C roll or lose 10% per rnd to desertion.	Disorganization. -15 to next attack.
11–20	People confused. -5 to next attack.	Next C/C roll at -20. 10% desertion.	10% desertion, MR -25, Maneuver -15 for 3 rnds.	15% desertion, rest fight at -20.	-20 to Maneuver rolls for 3 rnds -15 to C/C rolls.
21–25	Formation weakening. Roll C/C at -20.	Leader takes 'B' critical. 4% desertion.	Unit will retreat unless a successful C/C roll is made. Unit at -20.	Unit will retreat unless a successful C/C roll is made. Unit at -30.	Leader must make a RR vs 5th lvl "Fear" or lose effectiveness.
26–30	Part of unit is isolated and slaughtered: 4% Cas. -10 to MR.	Unit at -20 for 3 rnds.	Standard bearer falls. -10 MR and -10 to maneuvers.	Part of unit thought they heard a retreat order. Make a successful C/C roll or retreat.	40% of unit deserts.
31–35	Part of unit takes off for the nearest high ground. 5% desertion.	Leader must make 8th level RR vs Fear or lose effectiveness.	25% desertion, -15 MR, -10 maneuvers.	40% desertion as leader takes a 'D' slash critical.	Unit retreats, but thumbs (collective) nose at enemy.
36–40	Unit may make no maneuvers for 3 rnds.	Men are shaken. -20 MR. If leader inactive, roll again on 'E' column.	15% desertion per rnd until a -20 C/C roll is successfully made.	Men confused. 10% leave and attack nearest friendly unit for one rnd.	65% of unit deserts as right flank falls.
41–45	Messenger killed. No maneuver or C/C attempts for 4 rnds.	Leader shaken. Maneuver and C/C rolls at -20 for remainder of battle.	Rumor of leader's death. -30 MR for 2 rnds.	Unit retreats.	Unit retreats, -40 to MR.
46–50	Left flank collapses. 10% desertion, -15 MR. Unit is pushed back 50'.	Enemy soldier attacks leader at +50.	Senior NCO is mad enough to attack leader at +25.	20% desertion, make a successful C/C roll or the rest retreat.	50% desertion per rnd until a successful -50 C/C roll is made. -40 MR.
51–55	Formation becomes Open Hoard. What a mess.	Leader finds himself on the wrong side of the line, and is ineffective for 3 rnds.	Unit at -30, 30% desertion per rnd.	Unit at -40, 40% desertion per rnd.	Unit at -40, 50% desertion per rnd.
56-60	Unit at -10, -10 MR, 10% desertion per rnd.	Unit at -20, 15% desertion per rnd.	Unit routs unless C/C is successfully made, in which case it merely retreats.	Unit at -40, 40% desertion per rnd, -40 MR.	Unit at -50, -50 MR, 60% desertion.
61–65	Unit at -20, -20 to MR, 15% desertion per rnd.	Leader takes 'E' crit. If he goes down unit routs.	Leader must make a RR vs 12th level Fear. Unit routs if he fails.	40% desertion, -40 MR.	Formation dissolves. 60% desertion. Looks grim.
66	Leader's poor enunciation causes unit to retreat.	Crossed signals result in immediate enemy +20 attack.	Questionable joke uninspires troops to -50 MR.	Spectacular blunder by leader causes whole unit to desert. Permanent -3 to his LR.	Leader's ineptitude causes all his troops to rout. They'll never fight for him again.
67–70	30% desertion per rnd, unit at -40, -30 MR.	40% desertion per rnd, formation collapses.	50% desertion per rnd. Enemy gets an immediate +10 attack.	60% desertion per rnd, leader leaves to take up farming.	Unit retreats after an immediate +20 enemy attack.
71–75	40% desertion per rnd, unit at -50, -40 MR.	50% desertion per rnd, formation dissolves into Open Horde, -50 MR.	80% desertion, -50 MR.	Unit retreats.	Unit retreats after an immediate +25 attack by gracious foes.
76–80	Foe offers to accept your surrender. Unit retreats otherwise.	10% of unit surrender, the rest retreat.	20% of unit surrender, the rest retreat.	30% of unit surrender, the rest retreat.	40% of unit surrender, the rest retreat.
81–85	Unit routs unless -20 C/C roll is successfully made, in which case it retreats.	Unit routs.	Unit routs after an immediate +10 attack by foe.	Unit routs after taking an immediate +20 attack by foe.	Unit routs after an immediate +30 attack by foe.
86–90	Not a good day. Unit routs.	Everyone deserts but the leader. Command is lonely.	30% surrender, the rest desert.	40% of unit surrender, the rest desert.	Everyone feigns death at the same time. Foe gets immediate +60 attack. MR -50.
91–95	Men trample each other in haste to vacate the premises. Take Trample attack at -10.	30% surrender, rest desert & vow to study war no more.	If spectacular magic has been used during battle, unit surrenders, otherwise it routs.	50% surrender, the rest rout.	Make a -20 C/C otherwise unit surrenders. Leader gets permanent +1 to LR.
96–99	Leader loses all self-confidence. Permanent -3 to LR. Unit routs.	Unit routs in such disarray that the enemy pauses in dismay.	50% of unit surrenders, rest rout.	Troops fight to the death. If leader stays he gets +2 LR, if he leaves he loses 2 LR.	Unit surrenders over leader's protests.
100	Unit Surrenders.	Entire unit deserts and throws down weapons. 50% will never fight again.	Enemy leader smiles as your men drop everything and ask his pardon (i.e., surrender).	Unit surrenders en masse. Its leaders are publicly executed.	Troops make last stand with OB at +20 and DB at -20, literally fighting to the death.

T-5 • MANEUVER & COMMAND/CONTROL TABLE

	GENERAL	COMMAND/ CONTROL	DISENGAGE	FORMATION MAINTENANCE
176+	Absolute success! +20 to next maneuver roll.	Control regained. Leader's LR at +2 permanently. Unit's next maneuver at +10.	Unit gets away without difficulty. +10 to next maneuver.	Looks like unit is passing in review! +5 to MR. +10 to next maneuver attempt.
111–175	Good job.	Control is regained. All penalties are negated.	Unit disengages successfully.	Formation stable.
91–110	Near success. Action takes one extra rnd for success, but next maneuver attempt is at -20 (GM's discretion).	Control is almost regained. Next try is at +30, maneuver attempts at -20 until fully regained.	Unit disengages, but foe gets a half-OB attack first.	Formation is sloppy. All positive bonuses for it are halved.
26–90	May try next round at +20.	Leader is asserting self. May try again next round with a +10.	Foe gets a full-OB attack during the Melee Phase, you only get a half-OB attack. +20 to next attempt.	Really weak formation. All positive bonuses for it are zero.
05–25	Failure. Next attempt is at -20.	Partial loss of control. Next attempt is at -30.	Foe gets a full-OB attack during the Melee Phase, you only get no attack. Leader is losing control.	That's a formation? All positive bonuses for it are zero. -10 to next maneuver attempt.
-25–04	Losing control. Maneuver rolls at -30,-5 to MR. Unit will not take further orders until control is regained.	Complete loss of control. Leader is ineffective for the duration of battle (see Section 17.4).	Foe gets a +20 full-OB attack during the Melee Phase, you only get no attack. Leader is losing control.	Unit is a mess. Formation becomes Open Horde. -20 to next maneuver attempt. Leader is losing control.
-26 or less	Leader has lost control. Subtract his LR from their original MR. See Section 17.4 for details.	Leader has lost control, and suffers a permanent -5 to his LR (see Section 17.4).	Foe gets a full-OB attack during the Melee Phase, you only get no attack. Leader has lost control of the unit (see Section 7.4).	Formation turns into a mob (retreat formation). Leader has lost control (see Section 17.4).

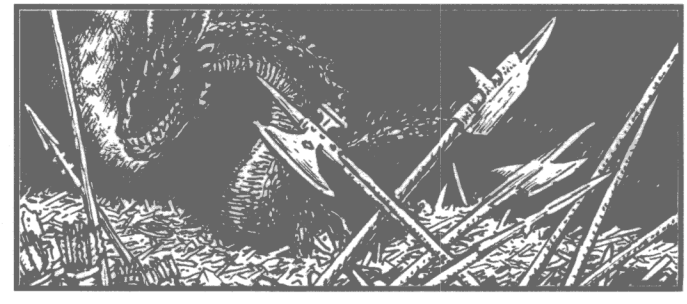
Note: The effects listed in the C/C for permanently changing a leader's LR apply only if the unit is in a combat situation, and may apply only once per battle.

MANEUVER & C/C MODIFIERS CHART

Effect	Category & Note
+LR	The current leader's Leadership Rating.
+⅓ LR	If *no current leader*, use ⅓ of old leader's LR.
± (variable)	Unit's *Dis* stat bonus.
± (variable)	Unit's applicable *skill* rank bonus (if any).
± (variable)	Terrain (Table T-10).
± (variable)	Formation (Table T-6 or optional Table T-18).
-30	If unit is in *Retreat* formation.
+50	If the unit is not engaged.
	Difficulty:
+30	Routine Difficulty
+20	Easy Difficulty
+10	Light Difficulty
+0	Medium Difficulty
-10	Hard Difficulty
-20	Very Hard Difficulty
-30	Extremely Hard Difficulty
-50	Sheer Folly Difficulty
-70	Absurd Difficulty

MANEUVER & C/C MODIFIERS CHART (Cont'd)

	Hits Taken:
-10	25-49% of total *hits* taken (Section 16.4).
-20	50-74% of total *hits* taken (Section 16.4).
-30	75%-100% of total *hits* taken (Section 16.4).
– (variable)	Optional (Section 25.8): -10 per 25% EhPs used.
± (variable)	Weather (Table T-11).
± (variable)	**C/C only:** Leader's Military Organization skill bonus.
	Disengage only:
+10	Disengaging unit is cavalry.
+10	Disengaging unit has a larger movement rate than adjacent enemy units.
+40	Involved units are not yet engaged. Used for evasive maneuvers when units start a turn adjacent but are not yet engaged. If neither unit wants to engage, no roll is necessary.



T–6 • FORMATION TABLE

Formation/Defense	Density Rating[1] Men	Horses	Missile Attack Mods[2] OB mod	DB mod	Area Attack Mod[3]	Movement Rate Mod[4]	Maneuver Mod [5]	Command/ Control Mod [6]
Formations:								
Chequered *	10	40	+5	-5	0	-5	0	+10
Column	6	50	0	-5	+6	0	0	+5
Legion Battle *	8	35	+5	-5	0	-5	0	+15
Line	6	50	-5	-5	+5	-5	-10	-15
Open Horde	50	150	-10	+10	0	0	-10	-20
Phalanx * † §	6	50	-10	+5	0	-15	-15	+10
Retreat	100	200	-25	-20	0	0	-25	-30
Spear * †	18	75	+5	0	+5	0	0	+5
Square *	8	50	-5	-10	+5	-50	-25	+10
Wedge	25	100	+5	0	+5	0	0	+5
Defenses:								
Shield Wall ‡ * †	4	30	0	+15	+5	-10	-10	0
Tortoise Shell ‡ * †	4	30	-15	+20	-10	-15	-15	-5

Notes:

1. Measured as square feet per combatant (see Sections 12.2, 16.2, and 25.1).

2. Used as a modifier in conjunction with the unit's OB and DB. A unit's DB may not be lowered below zero by this Mod.

3. The Area Attack Modifier is to be added to the Density Rating when a unit is attacked by an area effect attack (see Sections 16.6.6 and 16.6.7).

4. Modifier to unit's base movement rate in feet per 10 second round (see Section 15.1).

5. Modifies unit's maneuver roll (see Section 15.2).

6. Modifies unit's Command/Control roll (see Section 13.2 and Table T-3)).

* — These formations are not usually used with cavalry.

† — It is usually impossible to fire a missle weapon from such a formation.

§ — A unit in Phalanx formation may make twice its normal number attacks against units in front of it. This represents such a units ability to have its 2nd, 3rd, and even 4th rank combatants all attack with varying length polearms.

‡ — The Shield Wall defense may be used with Legion Battle, Line, Spear, Square, and Wedge formations (see Section 21.2). The Tortoise Shell defense may be used with Legion Battle and Square formations. Use the Density rating of the defense instead of the formation. For the other modifications use the sum of the formation Mod and the defense Mod.

T–7 • FORMATION VS. FORMATION MELEE TABLE

Attacking Formation	Defending Formation Ch	Co	LB	Li	OH	Ph	Re	Sp	Sq	We	SW	TS
Chequered (Ch) *	0	+5	-5	+5	+20	-5	+15	-5	+5	-5	-10	-15
Column (Co)	-10	0	-15	-10	-15	-15	0	-10	-5	-5	-10	-15
Legion Battle (LB) *	+5	+10	0	+10	+25	+5	+20	0	+5	0	-10	-15
Line (Li)	-5	+10	-10	0	+15	-10	+15	0	0	0	-10	-15
Open Horde (OH)	-20	+10	-25	-15	0	-20	+10	-15	-10	-15	-10	-15
Phalanx (Ph) * † §	+5	+10	-5	+15	+20	0	+20	+5	+10	+10	-10	-15
Retreat (Re)	-15	-10	-20	-15	-10	-20	0	-15	-10	-15	-10	-15
Spear (Sp) * †	+5	+5	+10	+5	+15	-5	+15	0	+10	0	-10	-15
Square (Sq) *	-5	0	0	0	+10	-10	+10	-10	0	-10	-10	-15
Wedge (We)	+5	+5	+10	+5	+15	-10	+15	0	+10	0	-10	-15
Shield Wall (SW) ‡ * †	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-10	-15
Tortoise Shell (TS) ‡ * †	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-10	-15

Notes:

Cross-index the Attacking Formation against the Defending Formation; the result will be the melee OB modifier.

Formations — Ch = Chequered; Co = Column; LB = Legion Battle; Li = Line; OH = Open Horde; Ph = Phalanx; Re = Retreat; Sp = Spear; Sq = Square; We = Wedge; **Defenses:** SW = Shield Wall; TS = Tortoise Shell.

***, †, ‡, §** — See Table T-6 notes.

T–8 • OFFENSIVE MODS TABLE

Effect	Category & Note
± (variable)	Attacker's OB (skill bonus, Fer stat bonus, etc.).
– (variable)	Parrying bonus (Section 16.5.1).
+20	Flank attack.
+35	Rear attack (flank mod does not apply).
+20	Surprise.
+10	Charging infantry.
+20	Charging cavalry (see opt. rules for alternative).
-20/-10	Infantry vs. Cavalry: -15 riders, -5 mount.
-10	Cavalry using melee attack.
-20	Cavalry using missile attack.
-15	Missile attack against moving unit.
	Attack Ratio against defender (Sec. 16.5.3):
+0	1-1
+5	3-2
+10	2-1
+15	3-1
+20	4-1
+25	5-1
	Hits Taken:
-10	25-49% of total *hits* taken (Section 16.4).
-20	50-74% of total *hits* taken (Section 16.4).
-30	75%-100% of total *hits* taken (Section 16.4).
± (variable)	Missile attack range mods (Section 16.6.3).
± (variable)	Formation vs. Form. melee mod (Table T-7).
± (variable)	Formation missile attack mod (Table T-6).
– (variable)	Rate of fire missile mod (Section 16.6.5).
± (variable)	Terrain (to be determined by the GM).
± (variable)	Weather (see Table T-11).
± (variable)	Miscellaneous (to be determined by the GM).

T–9 • DEFENSIVE MODS TABLE

Effect	Category & Note
+ (variable)	Defender's DB (stat bonus, armor penalty, etc.).
+ (variable)	Parrying bonus (Section 16.5.1).
+ (variable)	Shield bonus.
± (variable)	Formation vs. Form. melee mod (Table T-7).
± (variable)	Formation missile attack mod (Table T-6).
± (variable)	Terrain (see Table 5.9 for suggestions):
± (variable)	Miscellaneous (to be determined by the GM).

T–11 • WEATHER TABLE

Weather	Movement	Maneuver, C/C OB Mods
Fair	Full	0
Rain, Light	Full	-5
Rain, Heavy	Three-quarters	-10
Snow, Light	Three-quarters	-10
Snow, Heavy	Half	-20
Hot (ATs 1-12)	Full	-5
Hot (ATs 13-20)	Half	-10
Ext. Cold (Arctic)	Three-quarters	-15
Fog	Half	0*
Night	Half	0†

* — Ranges for missile weapons are halved.
† — Ranges for missile weapons are quartered.

T–10 • COMBAT TERRAIN EFFECTS TABLE

	TERRAIN DIFFICULTY				
Terrain Type	**Slight**	**Light**	**Medium**	**Heavy**	**Dense**
Hills	2° grade	10° grade	20° grade	30° grade	40° grade
Mountains	foot hills	up to 1000'	up to 3000'	up to 8000'	up to 15000'
Mud	2" deep	6" deep	12" deep	20" deep	30"+ wide / 10' deep
Rough	small pebbles	small rocks	close set boulders	large boulders	falling rock
Sand	packed hard	lightly packed	loose	shifting	loose to 1'
Snow	6" deep	1' deep	2' deep	3' deep	4'+ deep
Urban	small village	reg. village / ruin	town or mod. ruins	sm. city / lrg. ruin	large city
Vegetation	1.5' high grass	4' grass/scub oak	light forest	moderate forest	heavy forest
Water	10' wide / 2' deep	15' wide / 4' deep	20' wide / 6' deep	30' wide / 8' deep	40' wide / 10' deep
Movement Rate:	90% of normal	75% of normal	50% of normal	30% of normal	10% of normal
Maneuver & Formation Maintenance Mods: *(Infantry Mod / Cavalry Mod / Camouflage & Stalk bonus)*	0 / -5 / 0	-5 / -10 / +5	-10 / -15 / +10	-15 / -20 / +15	-20 / -35 / +20

Notes: Table 5.9 provides some other suggested Terrain modifications. *Hedges* — Treat hedges as wall type obstacles.

T–12 • STAT BONUS TABLE

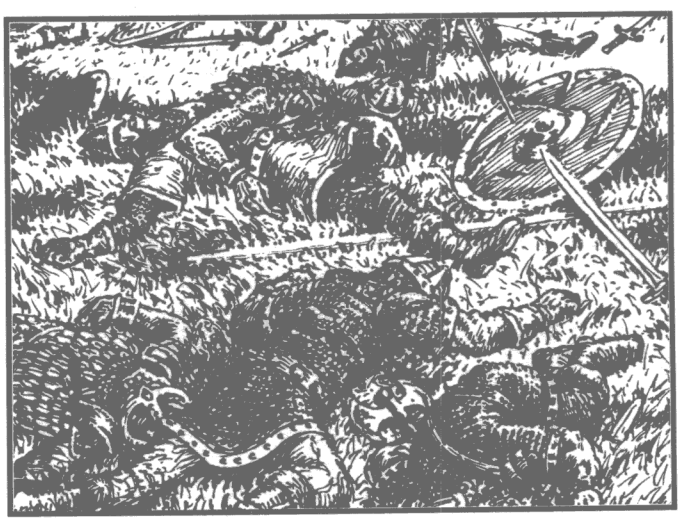
Stat	Bonus	Development Points	Exh. Pt. Recovery
113	+77	13.0	20.6
112	+74	12.8	20.4
111	+71	12.6	20.2
110	+68	12.4	20.0
109	+65	12.2	19.8
108	+61	12.0	19.6
107	+57	11.8	19.4
106	+53	11.6	19.2
105	+49	11.4	19.0
104	+45	11.2	18.6
103	+40	11.0	18.2
102	+35	10.7	17.8
101	+30	10.4	17.4
100	+25	10.0	17.0
99	+23	9.8	16.6
98	+21	9.6	16.2
97	+19	9.4	15.8
96	+17	9.2	15.4
95	+15	9.0	15.0
94	+14	8.9	14.6
93	+13	8.8	14.2
92	+12	8.7	13.8
91	+11	8.6	13.4
90	+10	8.4	13.0
87–89	+9	8.2	12.6
84–86	+8	8.0	12.2
81–83	+7	7.7	11.8
78–80	+6	7.4	11.4
75–77	+5	7.0	11.0
72–74	+4	6.8	10.6
68–71	+3	6.6	10.2
64–67	+2	6.3	9.8
60–63	+1	6.0	9.4
41–59	+0	5.5	9.0
37–40	-1	5.0	8.6
33–36	-2	4.8	8.2
29–32	-3	4.6	7.8
27–28	-4	4.3	7.4
24–25	-5	4.0	7.0
22–23	-6	3.8	6.6
19–21	-7	3.6	6.2
16–18	-8	3.3	5.8
12–15	-9	3.0	5.4
11	-10	2.9	5.0
10	-11	2.8	4.6
9	-12	2.7	4.2
8	-13	2.6	3.8
7	-14	2.4	3.4
6	-15	2.2	3.0
5	-17	2.0	2.6
4	-19	1.8	2.2
3	-21	1.6	1.8
2	-23	1.3	1.4
1	-25	1.0	1.0

Note: Instead of this table, a GM may want to use the standard *ChL* Table 15.1.3.

T–13 • UNIT RACE ABILITIES TABLE

Race	STAT BONUS MODS Dis	Fer	Sur	End	Recovery Mult.
Centaur	+10	+10	0	0	.8x
Common Man	0	+5	0	0	1x
Cyclops	0	+15	+30	+30	.5x
Dwarf	+15	+20	+15	+15	.5x
Elf	0	+5	+10	0	2x
Gark	-10	+10	+15	+15	1.5x
Giant, Greater	-5	+30	+25	+25	.5x
Giant, Lesser	-10	-10	+20	+20	.5x
Gnoll	0	-20	+5	+5	1x
Gnome	+10	-45	+5	+5	.6x
Goblin	-5	+10	+10	+10	.7x
Half Elf	+5	0	+5	+5	.7x
Halfling	0	-15	+15	+15	.5x
High Man	+5	0	+10	+10	.7x
Hira'rayhir	0	-20	-10	-10	2x
Hobgoblin	+5	+20	+15	+15	.7x
Idiyva	0	+10	0	0	.5x
Kobold	-5	0	+10	+10	1x
Maazhat	+25	+30	0	0	.3x
Merman	0	+20	0	0	1x
Neanderthal	-10	+25	+10	+10	1x
Ogre	-5	+25	+10	+10	.7x
Orc, Greater	0	+30	+10	+10	.5x
Orc, Lesser	-5	+10	+5	+5	.5x
Sea-Kral	-5	+20	+5	+5	1x
Sohleugir	0	+25	+10	+10	1x
Sstoi'isslythi	-5	-20	-5	-5	.6x
Titan	+5	+100	+30	+30	.4x
Troglodyte	-10	+20	+10	+10	.8x
Troll	0	+0	+10	+10	.5x
Vulfen	+5	+20	+10	+10	.6x

Note — Dis = Discipline; Fer = Ferocity; Sur = Survivability; End = Endurance. The modifications to OB for Fer are not used if the stats from *C&T* are being used. A race's culture may modify these mods.



T–14 • UNIT DEVELOPMENT POINT TABLE

	Cavalry				Infantry								Support Units							
	Auxiliary	Regular	Light & Heavy	Engineer	Auxiliary	Regular	Light & Heavy	Missile	Intelligence	Naval	Scout	Special	Administration	Animal Handler	Armorer	Cook	Medical	Signal	Supply	Transportation
Formation Skills (* Defenses for use with another formation):																				
Chequered	3/6	2/6	2/6	3/6	4/6	3/6	3/6	3/6	2/6	3/6	3/5	2/6	3/6	3/6	3/8	3/8	5	2/5	3/6	4/6
Column	3/*	2/*	2/*	3/*	3/*	2/*	2/*	2/*	2/*	3/*	2/*	2/*	4/5	3/5	3/7	3/7	4	2/4	3/5	4/5
Legion Battle	4/7	3/7	3/7	4	6	4	4	5	3/7	4	4	3/7	4/7	4	5	5	7	3/6	4	6
Line	3/*	2/*	2/*	2/*	3/*	2/*	2/*	2/*	2/*	3/*	2/*	2/*	3/5	2/5	3/5	3/5	2/5	2/4	2/5	3/4
Open Horde	2/*	2/*	2/*	2/4	1/*	2/*	2/*	3/*	2/6	3/4	2/4	3/5	2/5	2/4	2/5	2/5	2/4	2/4	2/4	2/4
Phalanx	4	3	3	3	5	3	3	4	4	3	3	3	5	3	4	4	6	4	3	5
Retreat	2/5	1/5	1/5	3/5	4/5	3/5	3/5	3/5	2/6	3/5	2/5	2/5	3/5	2/5	3/5	4/5	3/6	3/5	3/5	3/5
Shield Wall *	3/5	3/4	3/4	2/4	3/4	2/4	2/4	2/4	2/5	2/6	2/4	2/4	3/4	3/5	3/4	3/4	3/5	2/5	2/4	2/5
Spear	3/5	2/4	2/4	2/4	3/5	2/4	2/4	3/4	2/5	2/6	2/4	1/5	3/5	3/5	3/5	3/5	3/5	2/5	2/5	3/4
Square	2/5	1/4	2/4	1/4	3/5	1/4	1/4	2/4	1/5	2/4	1/4	1/3	3/5	3/5	3/7	2/7	4/7	3/4	2/5	3/5
Tortoise Shell *	3/7	3/6	3/6	3/5	4/5	3/5	3/5	3/5	3/5	3/6	3/5	2/6	4/5	3/7	4/5	4/5	3/6	3/5	3/5	3/6
Wedge	3/6	3/5	3/5	3/5	4/6	2/5	2/5	2/5	3/5	3/6	2/5	2/4	4/6	3/6	4/5	4/6	3/7	3/4	2/6	3/5
Characteristics Skills:																				
Frenzy	2/5	2/4	2/5	2/6	2/6	2/4	2/5	2/6	6	2/6	2/6	1/3	6	2/6	2/6	2/6	6	2/6	2/6	2/6
General Perception	2/6	2/4	2/5	1/3	2/6	2/4	2/5	2/5	1/3	2/4	1/3	1/3	2/4	1/3	2/6	2/6	3	2/5	1/3	2/4
Grappling Hooks	2/7	2/5	2/6	1/5	2/6	2/4	2/5	2/6	2/4	1/5	2/5	1/3	2/4	2/6	2/6	2/6	3/6	2/5	2/4	1/5
Martial Arts	3/7	3/5	3/5	3/7	3/7	3/4	3/5	3/6	3	3/7	3/5	2/4	3	3/7	3/6	3/6	6	3	3/7	3/7
Missile Artillery	3/6	2/5	3/5	1/3	3/6	2/5	2/6	3/6	2/5	2/5	2/5	1/4	2/5	2/5	3/6	3/6	4	2/5	1/4	3/6
Physical Training	2/5	1/5	2/4	2/5	1/5	1/3	1/3	1/4	7	2/4	2/5	2/4	7	2/7	2/6	2/6	2/3	3/6	3/7	2/6
Primary Weapon	2/5	2/4	2/4	2/5	1/5	1/4	1/4	1/4	4/8	2/5	1/5	1/5	4/8	3/7	2/6	2/6	9	3/6	2/7	2/7
Secondary Weapon	2/5	2/4	2/4	2/5	1/5	1/4	1/4	1/4	4/8	2/5	1/5	1/5	4/8	3/7	2/6	2/6	9	3/6	2/7	2/7
Maneuver Skills:																				
Assume Hasty Amb.	3/5	2/4	2/5	3/5	3/5	2/5	2/5	2/4	2/4	3/4	2/4	3/4	4/5	3/4	4/5	3/6	3/4	3/4	3/4	3/5
Assume Quick Def.	3/6	2/5	3/5	3/5	4/5	3/5	3/5	3/4	2/4	3/5	3/4	3/5	3/6	3/6	4/7	3/7	3/5	3/5	3/5	3/6
Climbing	5	4	4	2/6	3/7	2/6	2/7	3/6	6	3/7	3/5	2/5	6	2/5	2/6	3/7	6	3/6	3/6	4
Disengage	3/6	2/5	2/6	3/6	3/7	2/6	3/6	3/6	3/6	3/6	3	2/6	2/7	3	4	4	6	3	3/7	4
Evade	3/6	2/5	2/6	3/6	3/7	2/6	3/6	3/6	3/6	3/6	3	2/6	2/7	3	4	4	6	3	3/7	4
Rappelling	3/7	3/5	3/5	3/7	3/7	2/5	2/6	3/5	6	3/7	3/5	2/5	7	3/7	2/6	2/6	7	3/5	2/5	3/7
React to Ambush	3/5	2/4	2/5	3/5	3/5	2/5	2/5	2/4	2/4	3/4	2/4	3/4	4/5	3/4	4/5	3/6	3/4	3/4	3/4	3/5
React to Artillery	2/5	2/3	2/4	2/5	2/5	2/3	2/3	1/4	2/4	2/4	2/3	2/4	3/5	2/4	3/5	2/6	2/4	2/4	2/4	2/5
Retreat	2/*	1/*	1/*	3/*	4/*	3/*	3/*	3/*	2/*	3/*	2/*	2/*	3/5	2/5	3/7	2/6	5	2/3	3/5	3
Riding	1/4	1/3	1/3	2/5	2/6	2/4	2/6	2/4	3	2/5	1/4	1/4	3	1/3	2/6	2/6	4	2/6	2/6	1/4
Scale Walls	4/6	3/6	3/6	3/6	3/7	2/5	2/6	3/5	6	3/7	3/5	2/5	6	2/6	2/6	3/6	7	3/6	2/6	3/7
Sprinting	2/5	1/5	2/4	2/5	2/5	2/4	2/4	2/5	3	2/5	2/6	2/5	4	2/5	2/6	2/6	4	1/3	2/4	2/5
Stalk	3/5	3/4	3/4	2/4	2/6	2/4	2/5	2/4	3	2/4	1/5	1/3	3	1/4	2/6	2/6	6	2/7	2/5	2/6
Wheel	1/5	1/4	1/5	2/5	3/5	3/4	2/5	2/5	2/5	3/5	3/4	2/5	2/5	2/5	2/5	3/5	3/5	2/5	3/6	3/5
Combat Skills:																				
Ambush	2/5	2/4	2/5	2/5	2/5	1/5	1/5	1/4	2/4	3/4	1/4	1/4	2/6	2/6	3/6	2/6	3/4	2/5	2/4	2/5
Blitz	2/5	1/5	1/5	2/5	3/5	2/5	2/5	3/5	2/5	3/5	2/4	1/5	2/5	2/5	2/7	2/7	4	2/4	2/5	3/5
Divided Assault	2/6	2/4	2/5	3/5	2/6	2/4	2/5	2/6	2/5	3/5	2/4	2/4	3/5	3/4	3/4	3/6	3/7	2/5	3/5	3/5
Divided Defense	3/5	2/4	2/5	2/5	3/5	2/5	2/5	2/5	2/5	3/5	2/4	2/5	3/5	3/5	3/7	2/7	4/7	3/4	2/5	3/5
Envelope	3/6	2/5	2/6	3/6	3/7	2/6	2/6	3/6	3/6	3/6	3	2/5	3/6	3	4	4	6	3	3	4
Flank Assault	2/6	2/4	2/5	3/5	2/6	2/4	2/5	2/6	2/5	3/5	2/4	2/4	3/5	3/4	3/5	3/6	3/6	2/4	2/5	2/5
Frontal Assault	2/5	1/4	1/5	2/5	2/5	1/4	1/5	2/5	2/4	2/5	1/4	1/4	2/5	2/4	2/4	2/6	3/6	2/4	2/5	2/5
Hammer & Anvil	2/6	2/4	2/5	3/5	2/6	2/5	2/5	2/6	3/5	3/5	2/4	2/4	2/6	3/5	3/6	3/6	4/7	2/5	2/6	3/6
Pincer	2/7	2/5	2/6	3/7	4/7	3/6	4/6	3/6	3/7	3/7	3	3/7	3/7	4/7	4	4	7	3	4/7	5
React to a Melee Att.	4/5	3/5	2/5	3/6	4/6	3/6	3/6	3/6	2/5	3/5	2/6	2/5	4/6	3/6	3/6	4/6	3/7	3/5	3/6	3/6
Rear Assault	3/5	2/4	2/5	3/5	3/5	2/4	2/5	3/5	2/5	3/5	2/4	2/4	3/5	3/4	3/4	3/6	3/6	2/5	3/5	3/5

T–14 • UNIT DEVELOPMENT POINT TABLE (Cont'd)

	Cavalry			Infantry								Support Units							
	Auxiliary	Regular	Light & Heavy	Engineer	Auxiliary	Regular	Light & Heavy	Missile	Intelligence	Naval	Scout	Special	Administration	Animal Handler	Armorer	Cook	Medical	Signal	Supply	Transportation
General Skills:																				
Animal Handling	2/4	1/4	1/5	1/4	2/6	2/4	2/4	2/6	2/5	1/4	1/3	1/4	2/5	1/2	2/6	2/6	2	1/5	2/5	1/3
Animal Healing	3/4	2/4	2/5	2/4	3/6	3/4	3/4	3/6	3/5	2/4	2/4	2/4	3/6	2/3	3/5	3/6	3	2/5	3/5	2/4
Animal Training	2/5	1/5	2/4	2/4	3/6	3/4	3/4	3/6	3/5	2/4	2/3	2/4	2/6	1/3	2/6	3/5	3	2/5	3/5	2/3
Beast Mastery	3/4	2/4	2/5	2/5	3/6	3/5	3/5	3/6	3/6	3/4	3/4	3/4	4	1/4	2/6	3/6	4	3/5	3/5	3/4
Camouflage	3/5	2/4	2/5	2/3	3/5	2/4	2/5	2/5	3/7	2/4	1/3	1/4	3/7	2/5	2/6	2/6	6	2/7	2/4	2/5
Diagnostics	2/6	2/4	2/5	3	5	4	3	2/6	2/5	3	2/4	3	2/5	3	2/6	2/6	1/2	2/4	3	3
Direction Senses	3/5	2/4	2/5	3/5	3/4	2/4	2/5	2/3	3/5	2/4	2/3	1/4	3/5	4	4/7	4/7	6	2/4	4/5	2/6
Distance Running	2/6	2/5	2/5	2/5	2/5	2/4	2/4	2/4	3	2/5	2/6	1/5	3	2/5	2/6	2/6	3	1/2	1/3	2/5
Diving	3/5	2/6	2/6	2/4	2/6	2/5	2/5	2/5	3	1/3	2/5	1/3	3	2/4	2/6	2/6	2/5	2/5	1/3	2/5
Driving	2/6	2/5	2/5	1/5	2/5	2/4	2/4	2/5	2/6	2/6	2/7	2/4	2/6	1/4	2/6	2/6	3	2/7	2/6	1/2
Engineering	3/6	2/5	3/5	1/3	3/6	2/5	3/6	2/6	1/3	2/5	3/7	2/5	1/3	2/5	2/6	2/6	3/7	2/4	1/4	2/5
Fauna Lore	2/5	2/6	2/6	2	2/6	2/4	2/5	2/5	1/4	2	1/4	1/4	1/4	2	2/6	2/6	1/3	1/4	2	1/4
First Aid	2/5	1/5	2/4	2/6	4/6	2/6	3/6	2/6	1/4	2/6	2/4	2/6	1/4	2/6	2/6	2/6	1/2	2/6	2/6	2/6
Flora Lore	2/5	2/6	2/6	2	2/6	2/4	2/5	2/5	1/4	2	1/2	1/4	1/4	2	2/6	2/6	1/3	2/4	2	1/4
Foraging	2/5	2/6	2/5	2/5	2/4	2/6	2/5	2/5	2/6	2/5	1/3	2/5	2/6	1/4	2/6	2/4	2/5	2/6	1/3	2/5
Guide	3/5	2/5	2/6	2/4	3/6	2/5	2/6	2/6	1/4	2/4	1/3	1/4	1/5	2/4	2/6	2/6	2/6	3/5	1/5	1/4
Hostile Environments	2/5	2/4	2/5	1/4	1/5	1/4	1/4	1/5	2/7	1/4	1/3	1/3	2/7	1/4	2/6	2/6	3	2/6	2/6	1/4
Interrogation	3/6	2/5	2/6	2/7	3/7	2/6	3/5	3/5	1/4	2/7	1/2	1/4	3/6	2/4	2/6	2/6	3/7	1/4	2/6	3/5
Loading	2/6	2/4	2/5	1/5	2/4	1/4	1/5	2/4	3	2/5	2/7	2/5	3	1/4	2/6	2/6	2	2/7	2/4	1/2
Mechanition	2/5	2/4	2/4	1/4	2/5	2/4	2/5	2/5	2/4	2/5	3/7	2/5	2/4	2/5	2/6	2/6	3/7	2/4	1/4	2/5
Messenger	2/5	2/3	2/4	2/4	2/6	2/3	2/4	2/4	1/5	2/4	1/4	2/4	1/5	2/4	2/6	2/6	2/6	1/3	1/5	1/4
Mining	2/6	2/4	2/5	2/4	2/6	2/4	2/4	2/5	2/4	2/4	2/6	2/4	2/4	2/6	2/6	2/6	3/7	2/6	1/4	2/6
Navigation	2/6	2/5	2/5	2/5	3/5	2/5	2/6	2/6	2/5	1/4	2/4	1/5	2/5	2/5	2/6	2/6	2/4	2/6	2/6	1/4
Propaganda	3/7	3/5	3/6	2/4	3/7	3/5	3/6	3/5	1/5	2/4	1/2	2/3	2/3	3/6	2/6	2/6	2/6	1/5	2/4	1/2
Region Lore	3/6	2/6	3/6	2/5	3/7	2/6	3/6	3/6	1/3	2/5	1/3	1/4	1/4	1/3	2/6	2/6	2/5	2/6	2/6	2/5
Rope Mastery	2/6	2/4	2/5	2/5	2/5	2/5	2/5	2/4	3	1/5	2/5	2/4	3	2/6	2/6	2/6	4	2/5	1/3	1/4
Rowing	2/4	2/5	2/5	1/3	1/4	1/5	1/4	1/5	3	1/3	2/4	1/3	3	1/3	2/6	2/6	2/6	2/5	1/4	1/4
Sail Making	2/5	2/4	2/5	2/4	2/5	2/6	2/5	2/5	1/5	1/3	2/4	2/4	1/5	2/4	2/6	2/6	2/6	3/5	1/5	1/4
Sailing	2/6	2/5	2/5	2/6	3/5	2/5	2/6	2/6	3	2/4	2/5	2/5	3	2/6	2/6	2/6	2/5	2/6	2/6	2/6
Scrounging	2/6	3/6	3/5	2/4	2/4	2/6	2/5	2/5	2/5	2/4	2/6	2/4	2/6	2/5	2/6	2/6	2/6	2/6	1/3	2/4
Second Aid	3/5	2/5	2/6	3/7	5/7	3/7	3/7	3/7	2/4	3/7	2/5	3/7	2/4	3/7	3/7	3/7	1/5	3/7	3/7	3/7
Sense Ambush	1/5	1/4	1/4	1/4	1/5	1/3	1/4	1/5	2/5	2/5	1/4	1/3	2/5	1/3	2/6	2/6	3	1/5	2/4	2/5
Siege Engineering	3/6	2/5	2/6	1/2	3/6	2/5	2/6	2/6	1/4	2/5	1/4	1/4	1/4	1/3	2/6	2/6	2/5	2/4	2/6	2/5
Signaling	2/6	2/4	2/5	1/4	2/6	2/4	2/5	2/5	1/5	1/4	1/5	1/4	1/5	1/4	2/6	2/6	2/6	1/3	1/3	1/4
Surgery	4	3	3	7	8	6	7	7	3/6	7	3/6	3/5	3/6	7	5	5	2/5	6	6	7
Surveillance	3/5	2/5	2/6	1/4	3/6	2/4	2/5	2/5	1/2	1/4	1/2	1/4	2/3	3/6	2/6	2/6	3/6	2/5	1/2	1/4
Tactics	2/4	1/3	1/4	2/4	2/6	2/4	2/5	2/4	1/4	1/4	2/4	1/4	2/4	2/4	2/6	2/6	2/5	2/4	2/4	2/5
Tracking	3/4	2/4	2/5	1/4	3/5	2/4	2/5	2/5	1/3	1/4	1/2	1/4	1/4	1/2	1/2	2/6	2/7	2/4	1/4	2/5
Trap Building	2/4	2/6	2/5	2/4	2/4	2/6	2/5	2/4	2/6	2/5	2/4	1/4	2/6	2/6	2/6	2/6	3/6	2/6	2/5	2/6
Weather Watch	2/4	2/5	2/5	3/7	2/4	2/5	2/5	2/5	1/5	3/7	1/4	1/5	2/5	1/4	2/6	2/6	1/3	2/6	3/7	2/5
Xeno Lore	7	5	6	6	7	5	5	6	3/8	6	3/5	4	3/8	4	6	6	4/7	3/5	5	5

Basic Skills (Special skill bonuses or a 3/8 DP cost, see Sections 20.1, 20.2, and 21.1):

Appraisal
Armor Evaluation
Bartering
Basic Care
Billeting
Boat Handling
Campsite Preparation
Change Facing
Convoy Movement
Cookery
Destroy Building
Dig
Diplomacy
Document Gen./Recognition
Driving
Drop/Retrieve Packs
Equipment Maintenance
Fall into Formation
Falsification
Feeding
Fill in the Ranks
Fire Signals
Flag Signals
Fletching
Foraging
Forging
Hand and Arm Signals
Harnessing
Heraldry
Hospital
Kitchen Area Preparation
Languages
Light Signals
Loading
Message Memorization
Mount/Dismount
Move Animals
Move Discreetly
Record Maintenance
Scrounging
Smithing
Sound Signals
Start Movement
Stop Movement
Surveillance
Survey
Taming
Weapon Evaluation

T–15 • LEADER CHARACTERISTICS TABLE

Pr/Em Average + skill rank	Leadership Rating	Recruitment Potential	Command Potential
110+	+2.5 + *	90 + †	24 + ‡
109	+2.5	90	24
108	+2.5	85	23
107	+2.4	80	22
106	+2.4	75	21
105	+2.3	70	20
104	+2.3	65	19
103	+2.2	60	18
102	+2.2	55	17
101	+2.1	50	16
100	+2.1	46	15
99	+2.0	42	14
98	+2.0	38	13
97	+1.9	35	12
96	+1.9	32	11
95	+1.8	29	10
94	+1.8	27	9
93	+1.7	25	8
92	+1.7	23	8
91	+1.6	21	7
90	+1.6	19	7
87–89	+1.5	18	6
84–86	+1.4	17	6
81–83	+1.3	16	5
78–80	+1.2	15	5
75–77	+1.0	14	4
72–74	+0.8	13	4
68–71	+0.6	12	4
64–67	+0.4	11	3
60–63	+0.2	10	3
41–59	+0	9	3
37–40	-0.2	8	2
33–36	-0.4	7	2
29–32	-0.6	6	2
27–28	-0.8	5	1
24–25	-1.0	4	1
22–23	-1.2	3	1
19–21	-1.4	2	0
16–18	-1.6	1	0
12–15	-1.8	0	0
11	-2.0	0	0
10	-3.0	0	0
9	-4.0	0	0
8	-5.0	0	0
7	-6.0	0	0
6	-7.0	0	0
5	-8.0	0	0
4	-9.0	0	0
3	-10.0	0	0
2	-11.0	0	0
1	-12.0	0	0

* — LR increases by +0.5 per +1 over 109.
† — RP increases by +2 per +1 over 109.
‡ — CP increases by +1 per +1 over 109.

T–16 • EP VS. LEVEL TABLE

Level	Experience Points	Level	Experience Points
1	10,000	11	180,000
2	20,000	12	210,000
3	30,000	13	240,000
4	40,000	14	270,000
5	50,000	15	300,000
6	70,000	16	340,000
7	90,000	17	380,000
8	110,000	18	420,000
9	130,000	19	460,000
10	150,000	20	500,000
		21+	*

* — Subsequent levels require 50,000 Experience Points.

T–17 • EXPERIENCE POINT TABLE

Action — **Experience Points**

Basic Experience Point Multipliers:

1st Time x5
2nd Time x2
Subsequent Times x1
Routine x0.5

1) Victory Points — If an enemy unit or a "significant" enemy combatant is overcome:

Rout	Enemy	20 x level
	Unit	1/2 HPT
Defeat	Enemy	30 x level
	Unit	1/2 HPT
Destroy	Enemy	50 x level
	Unit	1/2 HPT

Bonus: Of a Different Race ..... +500

2) Hit Points — Given for hits delivered:

Hits	Enemy	2 x HPs
	Unit	1 x HPs

Bonus: If in single combat x2
If in multiple combat x0.5

3) Casualty Points — Given for casualties caused:

Casualties	Enemy	5 x Cas
	Unit	2 x Cas

Bonus: If in single combat x2
If in multiple combat x0.5

4) Travel Points — Given for travel:

Condition	Normal	1 point / mile
	Rough	5 points / mile
	Water	0.5 points / mile

5) Maneuver Points — Given for significant tactical maneuvers; hit points delivered or casualties caused as a result of the maneuver:

Difficulty	Hard – Very Hard	x2
	Sheer Folly – Absurd	x3

Note: These EPs are only intended to be used for units; they are **not** intended to be used for characters.

T-3 • MORALE TABLE

MANEUVER MOD CHART

	Formation										
Maneuver	**Ch**	**Co**	**LB**	**Li**	**OH**	**Ph**	**Re**	**Sp**	**We**	**SW**	**TS**
Assume Hasty Ambush	-15	-15	-15	-15	-15	-15	-15	-15	-15	-30	-40
Assume Quick Defense	-15	-15	-15	-15	-15	-15	-15	-15	-15	-10	-15
Disengage	-5	-5	-5	-5	-10	-10	-5	-5	-5	-10	-20
Evade	-15	-10	-10	-15	-25	-15	-10	-10	-5	-10	-20
React to Ambush	-10	-10	-10	-10	-10	-10	-10	-10	-10	-15	-20
React to Artillery	-5	-5	-5	-10	-5	-10	-5	-5	-5	-10	-15
Retreat	-5	-5	-5	-5	-5	-10	0	-5	-5	-10	-20
Wheel	0	0	0	-10	-15	-5	0	0	0	-5	-10
Ambush	-15	-15	-15	-15	-15	-15	-15	-15	-15	-30	-40
Blitz	0	0	-5	0	-10	0	-10	0	0	-10	-15
Divided Assault	-5	-5	-10	-10	-20	-10	-10	0	-5	-5	-15
Divided Defense	-15	-15	-15	-15	-15	-15	-15	-15	-15	-10	-15
Envelope	0	-5	-5	-5	-10	-10	-10	0	0	-10	-15
Flank Assault	0	-5	0	-10	-25	-10	-10	-5	-5	-20	-25
Frontal Assault	0	-5	0	0	0	0	-10	0	0	-10	-15
Hammer & Anvil	0	-5	0	-10	-25	-10	-10	-5	-5	-15	-20
Pincer	0	-5	-5	-5	-10	-10	-10	0	0	-10	-15
React to a Melee Attack	-10	-10	-10	-10	-10	-10	-10	-10	-10	-20	-30
Rear Assault	0	-5	0	0	0	0	-10	0	0	-10	-15

Note: See Section 25.1. A maneuver mod based on a unit's formation can be obtained by cross-indexing the unit's formation and the maneuver being attempted. If a unit is using Shield Wall or Tortoise Shell, use both the defense mod and the formation mod.

Formations — Ch = Chequered; Co = Column; LB = Legion Battle; Li = Line; OH = Open Horde; Ph = Phalanx; Re = Retreat; Sp = Spear; Sq = Square; We = Wedge; Defenses: SW = Shield Wall; TS = Tortoise Shell.

SIZE CHART

		Number of Men in Formation							
Formation	**Frontage or Depth**	**50**	**100**	**200**	**300**	**400**	**500**	**1000**	**2000**
Column	Frontage	6 ft per number of columns							
	Depth	4 ft times number of men in column							
Phalanx	Frontage	20	30	40	50	60	65	95	135
	Depth	15	20	30	35	40	45	65	90
Line	Frontage	3 ft per man in front row							
	Depth	2 ft per row							
Open Horde	Frontage	50	70	100	120	140	155	220	315
	Depth	50	70	100	120	140	155	220	315
Retreat	Frontage	70	100	140	170	200	225	315	450
	Depth	70	100	140	170	200	225	315	450
Chequered	Frontage	25	30	45	55	65	70	100	140
	Depth	25	30	45	55	65	70	100	140
Legion Battle	Frontage	20	30	40	50	55	65	90	125
	Depth	20	30	40	50	55	65	90	125
Square	Frontage	3.5 feet per man in first rank							
	Depth	3.5 feet per rank							
Wedge *(Frontage is width of the wedge)*	Frontage	50	70	100	120	140	160	225	315
	Depth	50	70	100	120	140	160	225	315
Shield Wall	Frontage	2 feet per man in first rank							
	Depth	2 feet per rank							
Tortoise Shell	Frontage	15	20	30	35	40	45	65	90
	Depth	15	20	30	35	40	45	65	90

T–19 • BATTLEFIELD DENSITY TABLE (Optional)

DENSITY RATING Men	Horses	Effect
20	72	no effect
18	60	-5 to OB
15	50	-5 to OB
12	45	-10 to OB / 0.90 DB
11	40	-10 to OB / 0.75 DB
10	35	-15 to OB / 0.50 DB
9	30	-20 to OB / 0.50 DB
8	28	-30 to OB / 0.25 DB
7	26	-40 to OB / 0.25 DB
6	25	-50 to OB / 0.00 DB / may attack only every other round due to profusion of bodies.

Note: A unit in a formation doesn't use these modifications as long as it enough area to operate normally (see Sections 13.1 and 25.1). A unit's DB cannot be reduced below zero because of these mods. The Density Rating for a given unit in a given area can be obtained by using the following formula:

Density Rating =
area occupied (in sq.ft.) ÷ # of combatants in the area

T–20 • FORTIFICATION MOD. TABLE (Optional)

Type	OB Melee	OB Missile	DB Melee	DB Missile
Stone Wall	-5	-10	+15	+20
Earthen Wall	-5	-10	+10	+15
Wooden Wall	-5	-10	+5	+10
Stone Building	-5	-10	+15	+20
Earthen Building	-5	-10	+10	+15
Wooden Building	-5	-10	+5	+10
Stone Castle/Keep/Fort	-5	-10	+20	+25
Wood Castle/Keep/Fort	-5	-10	+10	+15
Barricade	-5	-10	+variable	

T–21 • DEFENSIVE WEAPONS TABLE (Optional)

DEFENSE	EFFECT
Moat	
empty	fall
water	fall and swim
spiked	fall and puncture (spear -10)
Palisade	puncture (spear -10)
Barricade	
barrier	force troops to stop (DB -5)
spiked	puncture (spear -25)
Wall	force troops to climb or jump
Ditch	
empty	fall
water	fall and swim
spiked	fall and puncture (spear -20)

T–22 • SEQUENTIAL WPN. ATTACK TABLE (Optional)

Attacker Type	Defender Type I	II	III	IV	V
I	S	1	1	1	1
II	–	S	.25	.35	.45
III	–	–	S	.25	.35
IV	–	–	–	S	.25
V	–	–	–	–	S

S — Simultaneous, effects are determined concurrently.

— Percentage of casualties and hits allocated during the particular phase.

Type I — All melee usable missile weapons. This designation is only a definition of the means of delivery. They are considered to inflict 100% of their hits and casualties before all of a foe's attacks are resolved as explained in Section 25.2.

Type II — Polearms to include spears, lances, pikes, etc.

Type III — Two handed weapons such as two-handed swords, battle axes, bastard swords, etc.

Type IV — One handed weapons.

Type V — Melee weapons such as broken bottles, table legs, fists, chairs, etc.

***Note:** This process does not work as well for long* WL *turns (i.e., 5+ minutes).*

T–23 • EXHAUSTION EFFECTS TABLE (Optional)

Category	Effect
Combat	-3 pts/minute
Normal March (1.0 speed)	-12 pts/hour
Forced March (1.3 speed)	-20 pts/hour
Double Time (1.5 speed)	-60 pts/hour
Charge (2.0 speed)	-3 pts/minute
Fast Run (3.0 speed)	-30 pts/minute
Weather	-up to 3 pts/hour
Terrain	-variable

Notes: All effects should be cumulative. Hence, under extreme conditions, it is possible for a unit who has not eaten in two days, is running cross country in extreme heat and rain will be completely exhausted in about an hour.

CHARACTER ENCOUNTER SEVERITY

Roll	Encounter Type	Situation	Mods
≤ 3	None	Player's choice	-3 to +3
4-5	A	Unit attack ratio	-3 to +3
6-7	B		
8	C		
9	D		
9+	E		

T–24 • CHARACTER ENCOUNTER TABLE (Optional)

	A	B	C	D	E
01–06	Foe is an enemy soldier who is at -20.	You step on a dead soldier who isn't dead. He attacks with dagger.	You surprise foe. Free back attack.	A friendly soldier is playing dead. What do you do?	Foe is an enemy soldier at +10.
07–10	Foe is an enemy soldier who is at -15.	Foe loses weapon and appeals to your sense of fairness.	You can prevent a casualty if you stop a man's bleeding.	Foe is a +5 enemy.	Foe is an enemy soldier at +15.
11–15	Foe is an enemy soldier who is at -10.	Foe is an enemy soldier at -5.	Foe is a +5 enemy.	Foe is a +10 enemy.	Foe is an enemy soldier at +20.
16–20	Foe is an enemy soldier who is at -5.	Foe spits in your eye and swings. You are at -10 first rnd.	Fight a +15 enemy for 3 rnds.	Fight 2 foes for 3 rnds.	You must fight 2 foes.
21–30	Foe is an enemy soldier.	Sweat in your eyes causes you to fight at -10 vs foe.	Fight 3 -20 foes for 5 rnds.	Enemy wants to surrender to you. Now what?	Fight 2 foes at +10 for 3 rnds.
31–35	Foe is a friendly soldier who is berserk (+10).	Two men are deserting your unit. What to do?	Fight 2 foes for 3 rnds.	Make Hard maneuver or cut your leader's ear off.	Fight 2 -10 foes.
36–40	Must fight a +10 foe for 1 rnd.	Fight wounded a -20 foe. Learn some new curses.	You intercept a +15 enemy messenger. -5 to his unit if you kill him.	Foe is a +15 enemy.	Fight a +25 foe.
41–45	You face two foes who will be stunned for the 1st 3 rnds.	Make a Medium perception roll or be surprised by foe.	Fight 2 foes. You get an inital back attack on one.	Fight 2 -15 foes.	Fight 2 -15 foes.
46–50	Foe throws a dagger at you and then engages.	Your leader sees you fighting a +15 foe. Show off a little.	Nature calls. You fight 2 foes at -10. Plan ahead next time.	Foe is a +20 enemy.	Fight 3 foes for 3 rnds.
51–55	You must fight 2 foes, but for only 3 rnds.	Fight 2 -10 foes.	A berserker splits your sheild and attacks you at +10.	Foe is a +25 enemy.	Fight 2 foes.
56–60	Wounded foe throws a poisoned dagger at you and begs for mercy.	Fight a +10 foe.	Save a friendly messenger by defeating a +10 foe.	Helmet slips over your eyes. Fight a foe at -15.	Fight a +30 foe.
61–65	Drunk enemy attacks you once at +30 and passes out.	Fight 2 foes for 2 rnds.	Strap comes loose. Fight a foe while at -10.	Fight 2 -10 foes.	Fight 3 foes.
66	Make a Hard maneuver or trip over a body. A +30 foe attacks.	A large flying object impacts on you body. Take an 'A' crush crit.	Sprained ankle puts you at -20. Now fight a +10 foe.	You swing at a +30 foe and break your weapon.	Fancy footwork presents back to a +30 foe. He smiles.
67–70	Defend your leader from 2 foes for 2 rnds.	A friendly soldier covets your gold and back stabs you.	Fight 2 -10 foes.	Foe is a subordinate leader. He's at +50. -5 to enemy MR if he dies.	Fight two +10 foes.
71–75	Recapture your standard from a +10 foe or lose it for good.	Fight 2 foes for 3 rnds.	Fight a +15 foe.	Slip on blood. Play dead or fight a foe (you are at -50 for the 1st rnd).	Fight a +35 foe.
76–80	Fight a +15 foe.	Fight a +15 foe.	Fight a +20 foe.	Fight 3 foes for 2 rnds.	Fight of 5 foes for 1 rnd.
81–85	Fight 2 +10 foes for 2 rnds.	Fight a +20 foe.	Fight 2 foes.	Fight 2 foes.	Fight 2 foes to capture standard. Then defend it from 3 men for 3 rnds.
86–90	Fight 2 -10 foes.	Fight 2 foes.	Fight 2 +10 foes.	Fight a +30 foe.	Get a back attack on enemy leader. Then 3 foes attack you.
91–95	Fight a +20 foe.	Fight 2 +10 foes.	Fight 3 foes for 3 rnds.	Fight 2 +10 foes.	Fight 4 foes to capture enemy standard. Good luck.
96–99	Defeat two foes or your standard will fall. They are surprised.	Fight an enemy subordinate leader. He is +25.	Fight 2 foes who are at -10.	Fight 3 foes.	You are surrounded by 6 foes. Try diplomacy.
100	You get one attack on the enemy leader.	You fight 2 rnds with the enemy leader.	You can capture the enemy standard if you get past those 4 guys.	Fight 4 foes. Get a rear attack on one.	Foes are enemy leader and his bodyguards. Oops.

T–25 • GENERIC UNIT TABLE

Level	Cavalry (level)							Engineers (level)							Infantry (level)						
	1	3	5	7	10	15	20	1	3	5	7	10	15	20	1	3	5	7	10	15	20
Characteristics:																					
Armor Type	16	16	16	16	16	16	16	10	10	10	10	10	10	10	Any	Any	Any	Any	Any	Any	Any
Defensive Bonus	20	20	20	20	20	20	20	30	30	30	30	30	30	30	25	25	25	25	25	25	25
Shield Bonus	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
OB, Melee	15	25	30	40	55	68	80	15	25	25	30	40	62	66	20	30	40	50	62	72	81
Missile	15	25	25	35	45	60	70	15	25	25	30	35	45	55	20	30	40	50	62	72	81
Hit Pts per Man	25	40	60	80	100	120	150	20	35	50	65	80	100	120	25	40	60	80	100	120	150
Formation Skills:																					
Column	10	10	10	15	20	30	40	0	5	10	10	10	15	20	5	10	10	15	15	25	30
Line	10	10	15	20	25	35	45	0	5	10	10	10	15	20	0	5	5	10	15	20	25
Open Horde	10	10	15	20	25	35	45	5	5	10	10	10	15	15	0	5	5	10	15	20	30
Square	10	10	15	20	25	35	45	10	10	10	10	15	20	25	5	15	15	25	30	35	45
Shield Wall	0	5	10	15	20	30	40	5	5	10	10	10	15	20	0	5	5	10	15	20	25
Characteristic Skills:																					
General Perception	0	0	5	10	15	25	35	10	10	10	10	20	25	30	0	5	5	5	10	15	20
Missile Artillery	0	5	5	10	15	25	35	20	40	54	62	72	82	92	0	0	0	5	10	15	20
Primary Weapon	10	25	35	45	56	66	73	10	20	30	40	52	62	71	20	40	54	62	72	82	92
Secondary Weapon	10	25	35	45	56	66	73	10	20	30	40	52	62	71	20	40	54	62	72	82	92
Maneuver Skills:																					
Disengage	10	15	20	20	25	35	45	0	0	5	5	10	15	20	5	5	10	10	10	15	20
Evade	10	10	15	15	20	30	40	0	0	5	5	10	10	15	5	5	10	10	10	20	25
React to Ambush	10	10	15	15	20	30	40	0	5	5	10	10	15	20	5	10	15	15	15	20	25
Riding	15	25	30	35	40	50	54	0	5	5	10	10	15	20	0	0	0	0	5	10	15
Wheel	0	10	15	15	20	30	40	0	5	5	10	10	15	20	5	5	10	10	10	15	20
Combat Skills:																					
Ambush	0	0	5	5	10	20	30	0	5	5	10	10	15	20	5	5	10	10	15	20	30
Blitz	0	5	10	10	15	25	35	0	0	5	5	10	15	20	5	5	10	10	10	20	25
Divided Defense	10	15	20	25	30	40	50	0	5	5	10	10	15	20	0	0	10	10	15	25	30
Frontal Assault	0	5	10	15	20	30	40	0	5	5	10	10	15	20	5	10	15	15	20	30	40
React to Melee Att.	0	0	5	10	15	25	35	0	5	5	10	10	15	20	5	5	10	10	15	20	30
General Skills:																					
Camouflage	0	0	5	5	10	20	30	5	5	5	10	15	15	20	5	5	10	10	10	15	20
Foraging	0	5	10	15	20	30	40	5	5	10	10	10	15	20	0	5	5	5	10	20	25
Guide	0	5	5	10	10	20	30	5	5	10	10	10	15	15	0	5	5	10	15	20	25
Hostile Environ.	0	0	5	5	10	15	25	5	5	5	10	15	15	20	5	5	10	10	10	15	20
Siege Engineering	0	5	5	10	15	25	35	20	40	54	62	72	82	92	0	0	0	5	10	15	20
Signaling	0	5	5	10	15	25	35	10	10	10	10	10	15	15	0	0	0	5	10	15	20
Surveillance	0	5	5	10	15	25	35	10	10	10	10	15	20	20	0	5	5	10	15	20	25
Tracking	0	5	5	10	10	20	30	10	10	10	10	15	20	20	0	5	5	10	15	20	25

COMBAT UNITS:

Cavalry Units — *Basic Skills:* Four Standard Movement Skills, Campsite Preparation, Equipment Maintenance, Fill in the Ranks, Mount/Dismount.
Related General Skills: Animal Handling, Characteristic Skills, Combat Skills, Formation Skills, Maneuver Skills, Riding.

Engineer Units — *Basic Skills:* Four Standard Movement Skills, Campsite Preparation, Survey, Dig, Destroy Building.
Related General Skills: Characteristic Skills, Combat Skills, Engineering, Maneuver Skills, Mechanition, Mining, Riding, Siege Engineering, Trap Building.

Infantry Units — *Basic Skills:* Four Standard Movement Skills, Campsite Preparation, Drop/Retrieve Packs, Equipment Maintenance, Fill in the Ranks.
Related General Skills: Characteristic Skills, Combat Skills, Formation Skills, Maneuver Skills.

Intelligence Units — *Basic Skills:* Four Standard Movement Skills, Move Discreetly, Surveillance.
Related General Skills: Characteristic Skills, Combat Skills, Interrogation, Maneuver Skills, Messenger, Propaganda, Region Lore .

Naval Units — *Basic Skills* (* Marine units only)**:** Four Standard Movement Skills, Boat Handling, Equipment Maintenance *, Fill in the Ranks *.
Related General Skills: Characteristic Skills, Combat Skills, Diving, Formation Skills*, Maneuver Skills, Navigation, Rope Mastery, Rowing, Sailing, Sail Making.

Scout Units — *Basic Skills:* Four Standard Movement Skills, Move Discreetly, Surveillance.
Related General Skills: Camouflage, Characteristic Skills, Combat Skills, Distance Running, Direction Senses, Guide, Maneuver Skills, Region Lore, Sense Ambush, Tracking.

Special Units — *Basic Skills:* Four Standard Movement Skills, special skills specifically designed for the specific unit.
Related General Skills: Characteristic Skills, Combat Skills, Maneuver Skills, skills appropriate for the specific unit .

T–25 • GENERIC UNIT TABLE (Cont'd)

Level	Intelligence (level)							Scouts (level)							Others (level)						
	1	3	5	7	10	15	20	1	3	5	7	10	15	20	1	3	5	7	10	15	20
Characteristics:																					
Armor Type	8	8	8	8	8	8	8	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Defensive Bonus	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Shield Bonus	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
OB, Melee †	5	5	10	10	15	20	25	10	15	25	25	40	45	50	5	10	15	20	30	40	45
Missile †	5	5	10	10	15	20	25	10	15	25	25	40	45	50	0	5	5	10	15	20	25
Hit Pts per Man	20	35	50	65	80	100	120	20	35	50	65	80	100	120	15	30	40	50	60	80	100
Formation Skills:																					
Column	0	5	5	5	10	10	15	0	0	0	0	0	5	10	5	10	15	20	25	35	40
Line	0	5	5	5	10	15	20	0	0	0	0	0	5	10	0	0	0	0	5	15	15
Open Horde	0	5	5	5	10	15	20	0	0	0	0	0	5	10	5	10	15	20	25	35	45
Square	5	5	10	10	10	15	20	5	10	15	20	25	30	35	5	10	15	20	25	35	40
Shield Wall	0	5	5	5	10	15	20	0	0	0	0	0	5	10	5	10	15	20	25	35	40
Characteristic Skills:																					
General Perception	10	15	25	30	35	40	45	20	40	54	62	72	82	92	5	10	15	20	25	35	45
Missile Artillery	5	5	10	10	10	10	15	5	10	15	20	25	30	35	5	10	15	20	25	35	40
Primary Weapon †	5	10	15	20	25	30	35	5	10	15	20	30	35	40	5	10	15	20	30	45	54
Secondary Weapon †	5	10	15	20	25	30	35	5	10	15	20	30	35	40	5	10	15	20	30	45	54
Maneuver Skills:																					
Disengage	0	0	0	5	5	10	15	0	0	0	0	5	10	15	0	0	0	0	5	10	15
Evade	0	0	0	5	5	10	15	0	0	0	0	5	10	15	0	0	0	0	0	5	10
React to Ambush	0	0	0	0	5	10	15	0	0	0	0	0	5	10	0	0	0	0	5	10	15
Riding	0	0	0	0	0	5	10	20	40	54	62	72	82	92	5	10	15	20	25	35	45
Wheel	0	0	0	0	5	10	15	0	0	0	0	0	5	10	0	0	0	0	5	10	15
Combat Skills:																					
Ambush	0	0	0	0	5	10	15	10	20	30	40	50	54	58	5	10	15	20	25	35	40
Blitz	0	0	0	5	5	10	15	0	0	0	0	0	5	10	5	10	15	20	25	30	40
Divided Defense	5	5	10	10	15	20	25	5	10	15	20	25	30	35	5	10	15	20	25	35	40
Frontal Assault	0	0	0	0	5	10	15	5	10	15	20	25	30	35	5	10	15	20	25	30	40
React to Melee Att.	0	5	5	5	5	10	15	0	0	0	0	0	5	10	0	0	0	0	5	10	15
General Skills:																					
Camouflage	0	0	0	5	5	10	15	5	10	15	20	30	35	45	5	5	10	10	15	20	25
Foraging	5	5	10	10	10	15	20	20	40	54	62	72	82	92	5	10	15	20	25	35	45
Guide	20	40	54	62	72	82	92	5	10	15	20	25	35	45	5	10	15	20	25	35	40
Hostile Environ.	0	0	0	0	0	5	5	5	10	15	20	25	30	40	0	5	5	10	10	15	20
Siege Engineering	5	5	10	10	15	15	20	5	10	15	20	25	30	35	5	10	15	20	25	35	40
Signaling	10	10	20	20	25	25	30	5	10	15	20	25	30	35	5	10	15	20	25	35	40
Surveillance	20	40	54	62	72	82	92	5	10	15	20	25	35	45	5	10	15	20	25	35	40
Tracking	20	40	54	62	72	82	92	5	10	15	20	25	35	45	5	10	15	20	25	35	40

† — To get a unit's total OB from this table add its Weapon skill bonus and its OB characteristic.

Note: In addition to the skill bonuses given in the table, a GM may wish to assign +50 skill bonuses to each of a unit's Basic skills and +10-50 skill bonuses to two or three of a unit's Related General skills (see Sections 20.1, 20.2, and 21.1).

SUPPORT UNITS:

Administration Units — *Basic Skills:* Billeting, Campsite Preparation, Diplomacy, Document Generation/Recognition, Falsification, Languages, Record Maintenance.
Related General Skills: Messenger, Propaganda.

Animal Handler Units — *Basic Skills* (one animal type): Feeding, Harnessing, Taming, Move Animals.
Related General Skills: Animal Handling, Animal Healing, Animal Training, Beast Mastery, Driving, Loading.

Armorer Units — *Basic Skills:* Appraisal, Armor Evaluation, Fletching, Forging, Heraldry, Smithing, Weapon Evaluation.
Related General Skills: Mechanition, Mining, Trap Building.

Cook Units — *Basic Skills:* Cookery, Kitchen Area Preparation, Loading. *Related General Skills:* Foraging, Scrounging.

Medical Units — *Basic Skills:* Basic Care, Hospital. *Related General Skills:* Diagnosis, First Aid, Second Aid, Surgery.

Signal Units — *Basic Skills:* Message Memorization, Fire Signals, Flag Signals, Hand and Arm Signals, Light Signals, Sound Signals.
Related General Skills: Distance Running, Direction Senses, Messenger, Riding, Signaling.

Supply Units — *Basic Skills:* Bartering, Convoy Movement, Foraging, Languages, Loading, Move Discreetly, Scrounging.
Related General Skills: Direction Senses, Driving, Fauna Lore, Flora Lore, Region Lore.

Transportation Units — *Basic Skills:* Boat Handling, Driving, Harnessing. *Related General Skills:* Animal Handling, Navigation, Loading, Region Lore, Rowing, Sailing.

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SG SCENARIO #1 — "Sands of Bayahn"

Setting: Central Bayahn basin, near the Nome of Pte-Magna, Early Spring, 6050 TE. (*Shadow World* product – Kingdom of the Desert Jewel).

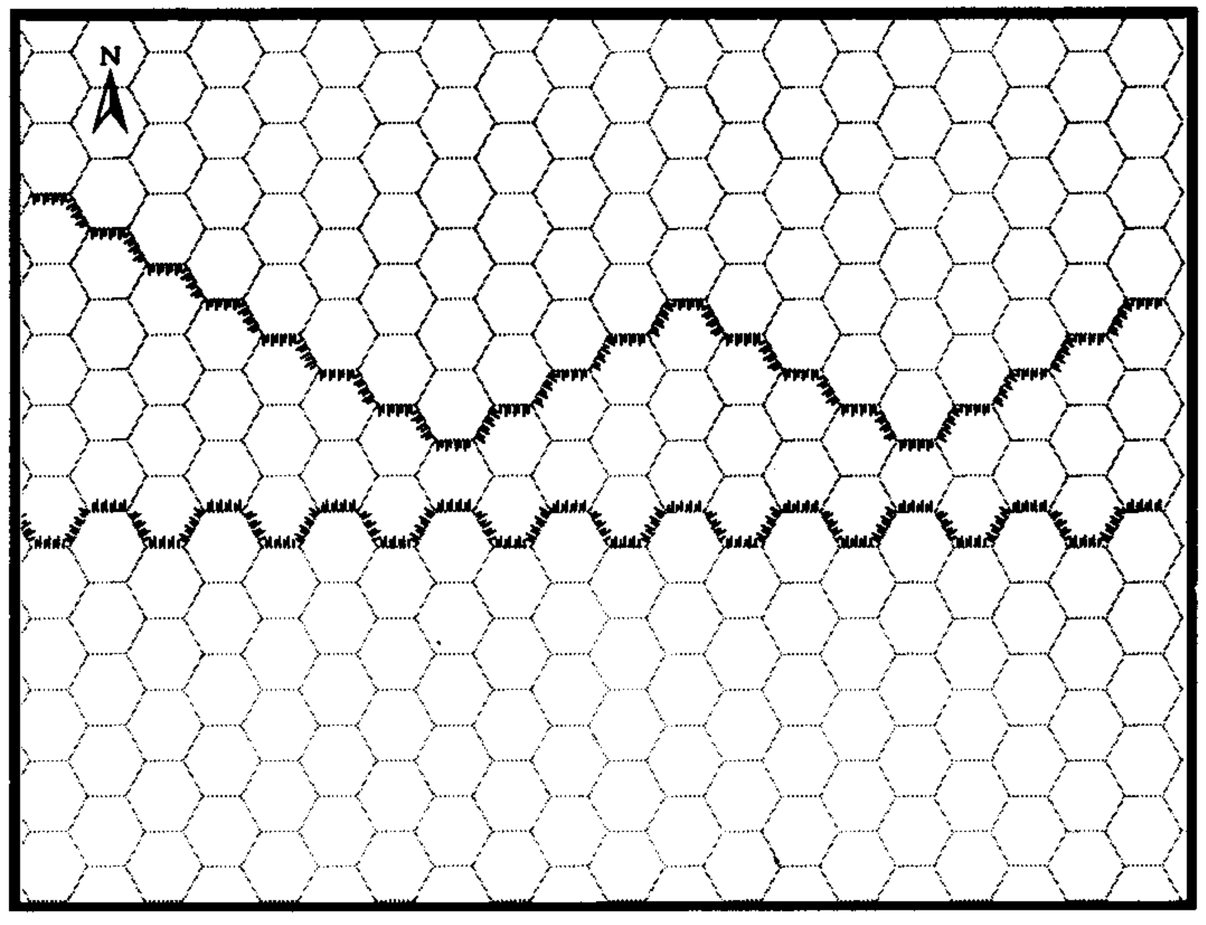
The Tale: Kainil's Etkaethkan raiders encounter Gethryn forces and slaves arrayed near Nome Pte-Magna. On advice from Royal Astrologers, the local military commander, Oktuva, sends his "Trass" to do battle with Kainil's raiders.

Terrain: [8½" (N–S) by 11" (E–W)] The only non-clear terrain is the slope hexsides indicated on the terrain diagram.

Victory Conditions: The winner is the player who still has an unrouted unit on the map after all his opponent's units have been eliminated or have fled the battlefield.

Side-A — *Etkaethkan Raiders:* Set up first within 2 hexes of the north edge of map. Unit ls1 starts in a Prepared Morale State. Move first. The north edge is friendly.

Side-B — *Gethryn Trass:* Set up last within 2 hexes of the south edge of map. Move last. The south edge is friendly.



ETKAETHKAN RAIDERS *(ls1 is a Veteran unit):*

#	Unit Name (# combatants)	UT	Melee OB	Missile OB	DB	SB	AT	MPT	Lvl	MR	Prep.	Parry State
ls1	1st Etkaethkan Veteran Raiders (80)	ls	40sc	—	0	25	7	6	3	5	❑	❑0% – ❑50% – ❑100%
	Casualty State: ❑❑❑❑❑ ❑❑❑❑❑ ¼ ❑❑❑❑❑ ❑❑❑❑❑ ½ ❑❑❑❑❑ ❑❑❑❑❑ ¼ ❑❑❑❑❑ ❑❑❑❑❑											
ls2	2nd Etkaethkan Raiders (80)	ls	40sc	—	0	25	7	6	3	4	❑	❑0% – ❑50% – ❑100%
	Casualty State: ❑❑❑❑❑ ❑❑❑❑❑ ¼ ❑❑❑❑❑ ❑❑❑❑❑ ½ ❑❑❑❑❑ ❑❑❑❑❑ ¾ ❑❑❑❑❑ ❑❑❑❑❑											
ls3	3rd Etkaethkan Raiders (80)	ls	40sc	—	0	25	7	6	3	3	❑	❑0% – ❑50% – ❑100%
	Casualty State: ❑❑❑❑❑ ❑❑❑❑❑ ¼ ❑❑❑❑❑ ❑❑❑❑❑ ½ ❑❑❑❑❑ ❑❑❑❑❑ ¾ ❑❑❑❑❑ ❑❑❑❑❑											
hc1	1st Etkaethkan Camel Raiders (40)	hc	40sc	—	0	25	8	10	3	4	❑	❑0% – ❑50% – ❑100%
	Casualty State: ❑❑❑❑❑ ❑❑❑❑❑ ¼ ❑❑❑❑❑ ❑❑❑❑❑ ½ ❑❑❑❑❑ ❑❑❑❑❑ ¾ ❑❑❑❑❑ ❑❑❑❑❑											

Leader: Kainil (**L1**, 5th level) — **MPT:** 10 — **Melee Bonus:** +18 — **Morale Bonus:** +12

GETHRYN TRASS *(hs15 is a Veteran unit):*

#	Unit Name (# combatants)	UT	Melee OB	Missile OB	DB	SB	AT	MPT	Lvl	MR	Prep.	Parry State
hs15	1st Gethryn Vet. Legionaires (80)	hs	80sc	—	0	20	18	4	5	7	❑	❑0% – ❑50% – ❑100%
	Casualty State: ❑❑❑❑❑ ❑❑❑❑❑ ¼ ❑❑❑❑❑ ❑❑❑❑❑ ½ ❑❑❑❑❑ ❑❑❑❑❑ ¾ ❑❑❑❑❑ ❑❑❑❑❑											
hs16	2nd Gethryn Legionaires (80)	hs	80sc	—	0	20	18	4	5	6	❑	❑0% – ❑50% – ❑100%
	Casualty State: ❑❑❑❑❑ ❑❑❑❑❑ ¼ ❑❑❑❑❑ ❑❑❑❑❑ ½ ❑❑❑❑❑ ❑❑❑❑❑ ¾ ❑❑❑❑❑ ❑❑❑❑❑											
ls15	1st Gethryn Slaves (80)	ls	30cl	—	0	0	1	6	1	2	❑	❑0% – ❑50% – ❑100%
	Casualty State: ❑❑❑❑❑ ❑❑❑❑❑ ¼ ❑❑❑❑❑ ❑❑❑❑❑ ½ ❑❑❑❑❑ ❑❑❑❑❑ ¾ ❑❑❑❑❑ ❑❑❑❑❑											
ls16	2nd Gethryn Slaves (80)	ls	30cl	—	0	0	1	6	1	1	❑	❑0% – ❑50% – ❑100%
	Casualty State: ❑❑❑❑❑ ❑❑❑❑❑ ¼ ❑❑❑❑❑ ❑❑❑❑❑ ½ ❑❑❑❑❑ ❑❑❑❑❑ ¾ ❑❑❑❑❑ ❑❑❑❑❑											

Leader: Oktuva (**L15**, 7th level) — **MPT:** 4 — **Melee Bonus:** +28 — **Morale Bonus:** +17

SCENARIO STAT KEY (for all three scenarios)—

1-H Slashing – 1-H Slashing Weapon Attack Table 6.3.2: bs = broadsword, da = dagger, ha = handaxe, sc = scimitar, ss = short sword.
1-H Concussion – 1-H Concussion Attack Table 6.3.3: cl = club, ma = mace, ms = morning star, wh = war hammer.
2-H weapons – Two-handed Weapon Attack Table 6.3.4: ba = battle axe, fl = flail, LPi = large pincher, th = two-hand sword.
Polearms – Polearm Weapon Attack Table 6.3.5: pa = polearm, ml = mounted lance, sp = spear.
Missile weapons – Missile Weapon Attack Table 6.3.6: lcb = light crossbow, sb = short bow, SSt = small stinger (treat as a thrown weapon with the range as a dagger).

SG SCENARIO #2 — "Argul's Raid"

Setting: Northern Tenryk, Morgen province, late summer, 6050 TE. (*Shadow World* product – Star Crown Empire and the Sea of Fates).

The Tale: Harking back to the terrible Inhuman Wars, three Lugroki (Orc-type creatures) clans, united under Chief Argul, raid northern Tenryk. Captain Arlen Marshwood of the Tenryki Border Guards must halt the Lugroki warriors before they reach Morgen's rich interior.

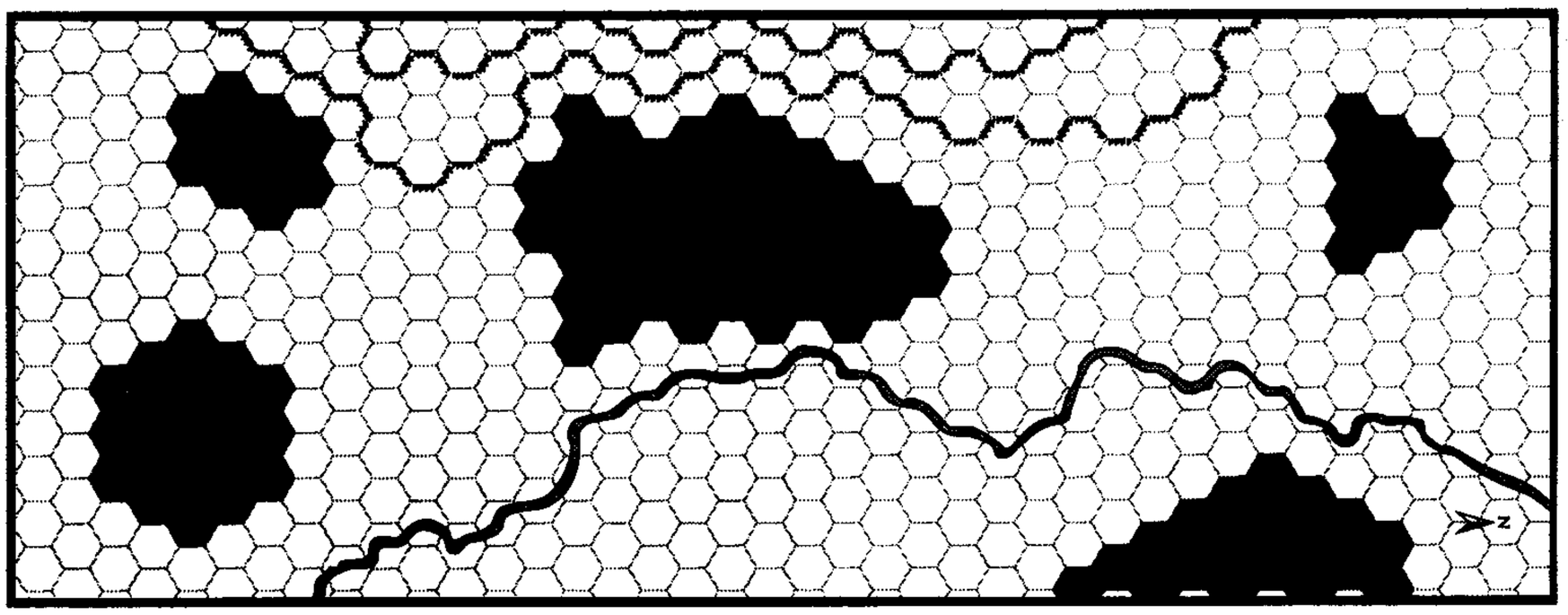
Terrain: [8½" (E–W) by 22" (N–S)] A Stream snakes from north to east, slopes rise to the west, and Medium Woods are scattered throughout the battlefield.

Special Rules: 1) This scenario ends after 40 complete Turns (20 for each side). 2) Lugroki units may not assume Battle Order Formation or Column Formation.

Victory Conditions: To win, the Lugroki player must exit eighty Lugroki combatants off the South edge of the playing surface. Otherwise, the Tenryki player wins. The number of combatants that each unit starts with is given in the unit statistics. Each casualty is 2.5 combatants lost to the unit.

Side-A — *Lugroki Warband:* Enter on the north edge of the playing surface. All units starts in Prepared Morale States. Move first. The north edge is friendly.

Side-B — *Tenryki Border Guards:* Set up first within 18 hexes of the south edge of map. Move last. The south edge is friendly.



LUGROKI WARBAND *(hs1, hs2, and ls1 are Veteran units):*

#	Unit Name (# combatants)	UT	Melee OB	Missile OB	DB	SB	AT	MPT	Lvl	MR	Prep.	Parry State
hs1	1st Lugroki Heavy Warmob (100)	hs	80ms	—	15	25	17	4	4	6	❑	❑0% – ❑50% – ❑100%
	Casualty State: ❑❑❑❑❑ ❑❑❑❑❑ ¼ ❑❑❑❑❑ ❑❑❑❑❑ ½ ❑❑❑❑❑ ❑❑❑❑❑ ¾ ❑❑❑❑❑ ❑❑❑❑❑											
hs2	2nd Lugroki Heavy Warmob (100)	hs	40wh	—	5	25	8	4	2	4	❑	❑0% – ❑50% – ❑100%
	Casualty State: ❑❑❑❑❑ ❑❑❑❑❑ ¼ ❑❑❑❑❑ ❑❑❑❑❑ ½ ❑❑❑❑❑ ❑❑❑❑❑ ¾ ❑❑❑❑❑ ❑❑❑❑❑											
ls1	1st Lugroki Light Warmob (100)	ls	60bs	—	10	25	13	6	3	5	❑	❑0% – ❑50% – ❑100%
	Casualty State: ❑❑❑❑❑ ❑❑❑❑❑ ¼ ❑❑❑❑❑ ❑❑❑❑❑ ½ ❑❑❑❑❑ ❑❑❑❑❑ ¾ ❑❑❑❑❑ ❑❑❑❑❑											
ls2	2nd Lugroki Light Warmob (100)	ls	40ma	—	10	20	7	6	2	3	❑	❑0% – ❑50% – ❑100%
	Casualty State: ❑❑❑❑❑ ❑❑❑❑❑ ¼ ❑❑❑❑❑ ❑❑❑❑❑ ½ ❑❑❑❑❑ ❑❑❑❑❑ ¾ ❑❑❑❑❑ ❑❑❑❑❑											
ls3	3rd Lugroki Light Warmob (100)	ls	40ha	—	5	20	6	6	2	2	❑	❑0% – ❑50% – ❑100%
	Casualty State: ❑❑❑❑❑ ❑❑❑❑❑ ¼ ❑❑❑❑❑ ❑❑❑❑❑ ½ ❑❑❑❑❑ ❑❑❑❑❑ ¾ ❑❑❑❑❑ ❑❑❑❑❑											
m1	1st Lugroki Archers (100)	m	10da	40sb	10	0	5	6	3	3	❑	❑0% – ❑50% – ❑100%
	Casualty State: ❑❑❑❑❑ ❑❑❑❑❑ ¼ ❑❑❑❑❑ ❑❑❑❑❑ ½ ❑❑❑❑❑ ❑❑❑❑❑ ¾ ❑❑❑❑❑ ❑❑❑❑❑											

Leader: Argul (**L1**, 10th level) — **MPT:** 6 — **Melee Bonus:** +29 — **Morale Bonus:** +20

TENRYKI BORDER GUARDS *(hp15 is an Elite unit, ls15 is a Veteran unit, ls17 is a Green unit):*

hp15	1st Tenryki Elite Footmen (80)	hp	80pa	—	0	0	8	4	5	8	❑	❑0% – ❑50% – ❑100%
	Casualty State: ❑❑❑❑❑ ❑❑❑❑❑ ¼ ❑❑❑❑❑ ❑❑❑❑❑ ½ ❑❑❑❑❑ ❑❑❑❑❑ ¾ ❑❑❑❑❑ ❑❑❑❑❑											
ls15	1st Veteran Footmen (80)	ls	60ss	—	5	25	5	6	3	5	❑	❑0% – ❑50% – ❑100%
	Casualty State: ❑❑❑❑❑ ❑❑❑❑❑ ¼ ❑❑❑❑❑ ❑❑❑❑❑ ½ ❑❑❑❑❑ ❑❑❑❑❑ ¾ ❑❑❑❑❑ ❑❑❑❑❑											
ls16	2nd Footmen (80)	ls	45ss	—	0	25	1	6	2	3	❑	❑0% – ❑50% – ❑100%
	Casualty State: ❑❑❑❑❑ ❑❑❑❑❑ ¼ ❑❑❑❑❑ ❑❑❑❑❑ ½ ❑❑❑❑❑ ❑❑❑❑❑ ¾ ❑❑❑❑❑ ❑❑❑❑❑											
ls17	3rd Footmen (80)	ls	35ss	—	0	25	1	6	1	2	❑	❑0% – ❑50% – ❑100%
	Casualty State: ❑❑❑❑❑ ❑❑❑❑❑ ¼ ❑❑❑❑❑ ❑❑❑❑❑ ½ ❑❑❑❑❑ ❑❑❑❑❑ ¾ ❑❑❑❑❑ ❑❑❑❑❑											
m15	1st Light Crossbowmen (80)	m	10da	60lcb	5	0	1	6	3	4	❑	❑0% – ❑50% – ❑100%
	Casualty State: ❑❑❑❑❑ ❑❑❑❑❑ ¼ ❑❑❑❑❑ ❑❑❑❑❑ ½ ❑❑❑❑❑ ❑❑❑❑❑ ¾ ❑❑❑❑❑ ❑❑❑❑❑											
hc15	1st Cavalry (40)	hc	80ml	—	0	25	8	12	5	6	❑	❑0% – ❑50% – ❑100%
	Casualty State: ❑❑❑❑❑ ❑❑❑❑❑ ¼ ❑❑❑❑❑ ❑❑❑❑❑ ½ ❑❑❑❑❑ ❑❑❑❑❑ ¾ ❑❑❑❑❑ ❑❑❑❑❑											

Leader: Captain Arlen Marshwood (**L15**, 15th level) — **MPT:** 14 — **Melee Bonus:** +68 — **Morale Bonus:** +37 — **Range:** 1

Leader: Sir Kendrak of Cly (**L16**, 7th level) — **MPT:** 10 — **Melee Bonus:** +31 — **Morale Bonus:** +21

Leader: Sergeant Brent Thorgald (**L17**, 5th level) — **MPT:** 6 — **Melee Bonus:** +18 — **Morale Bonus:** +15

SG SCENARIO #3 — "Nightmare Forces"

Setting: Underneath the Morbek Highlands, Central Emer, 6050 TE. (*Shadow World* product – Emer, the Great Continent).

The Tale: Beneath the honey-combed mountains of central Emer many foul creatures range. These denizens of the underworld continually vie for the choicest caverns. In this scenario, monstrous Kaeden (huge ant-like creatures) suddenly invade a major Murlogi (i.e., Goblins) warren, home of the High-king (a disguised Earth Demon).

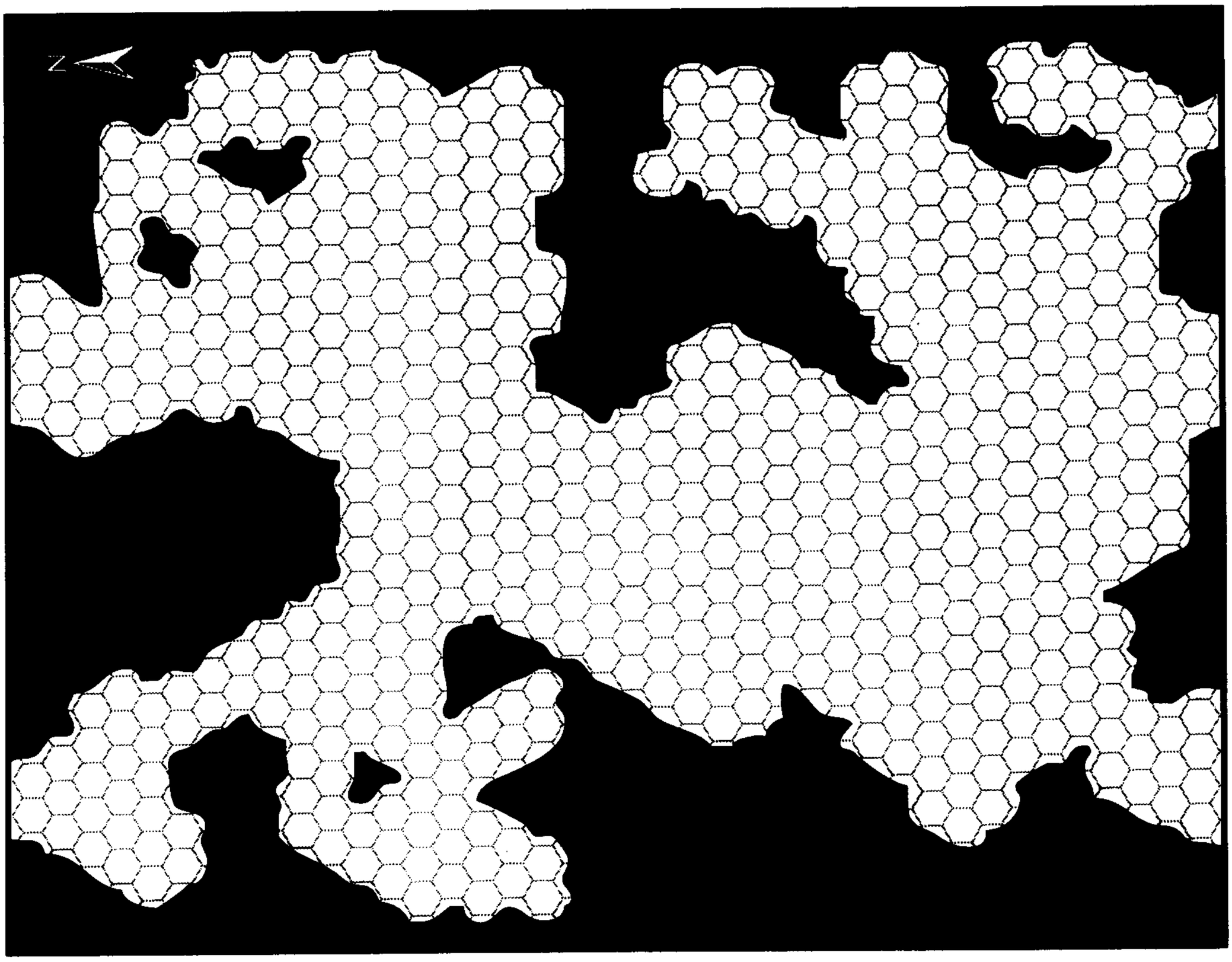
Terrain: [17" (E–W) by 22" (N–S)] A convoluted cavern system — the black lines are impassable (i.e., rock walls).

Special Rules: 1) This scenario ends after 60 complete Turns (30 for each side). 2) Murlogi units may not assume Battle Order Formation or Column formation. 3) Kaeden forces have just tunnelled into the Murlogi warren at the start of play. After the Murlogi player has set up his units, the Kaeden player places all his forces on one of the four hex-sheet. No Kaeden unit may be positioned adjacent to a Murlogi unit.

Victory Conditions: The Kaeden player must eliminate 600 Murlogi combatants to win (i.e., half). Otherwise the Murlogi player wins. The number of combatants that each unit starts with is given in the unit statistics. Each casualty is 2.5 combatants eliminated to the unit. Half of the remaining combatants in a Routed unit that exits the playing surface are considered to be eliminated.

Side-A — *The Kaeden:* Set up second, see Special Rule #3. Move first. The north edge is Friendly.

Side-B — *The Murlogi:* Set up anywhere First. Move last. The south edge is Friendly.



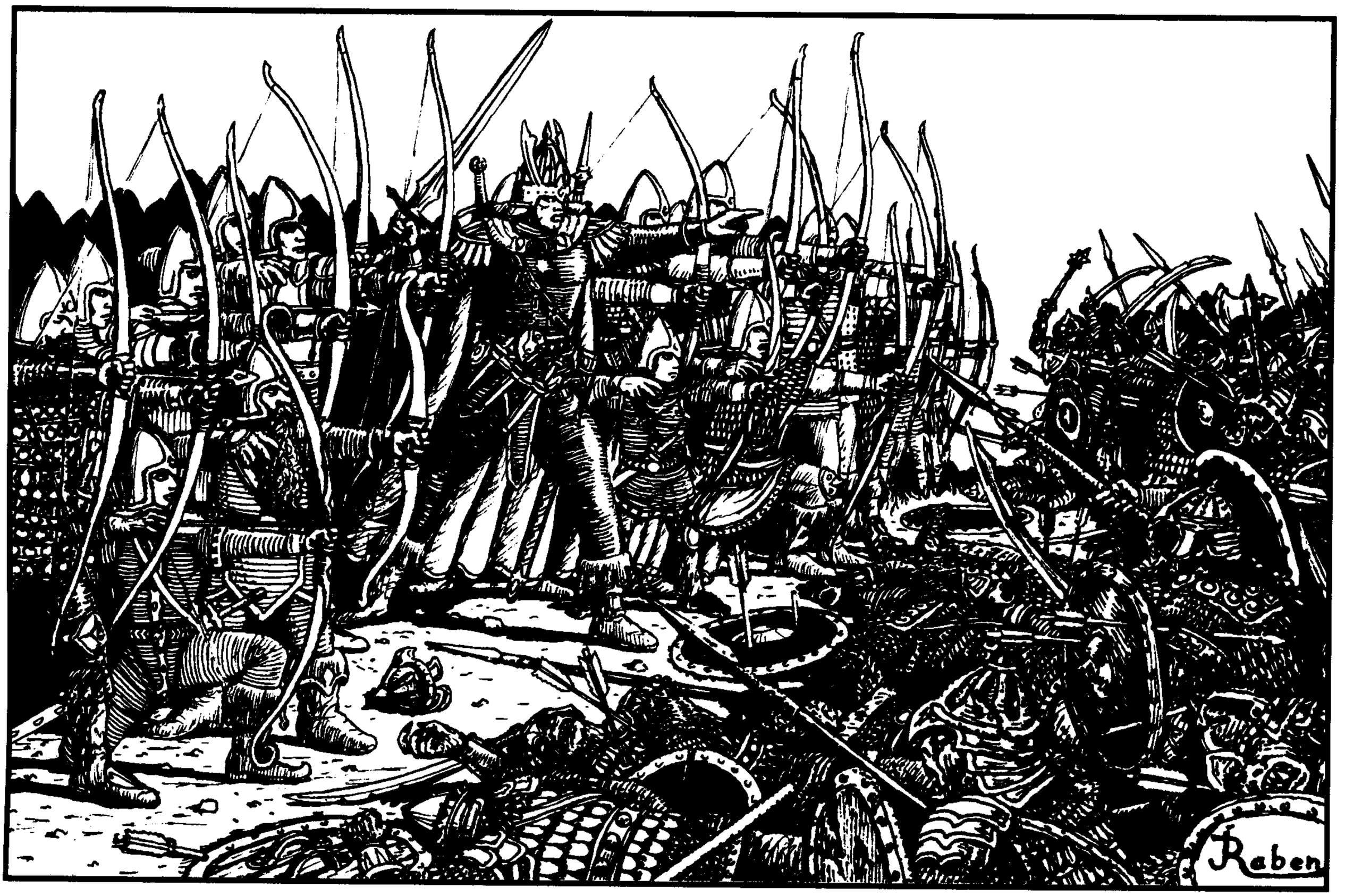
KAEDEN WARRIORS:

#	Unit Name (# combatants)	UT	Melee OB	Missile OB	DB	SB	AT	MPT	Lvl	MR	Prep.	Parry State
hs1	1st Kaeden Warriors (60)	hs	70LPi	60SSt	40	0	11	6	8	9	❑	❑0% – ❑50% – ❑100%
	Casualty State: ❑❑❑❑❑ ❑❑❑❑❑ ¼ ❑❑❑❑❑ ❑❑❑❑❑ ½ ❑❑❑❑❑ ❑❑❑❑❑ ¾ ❑❑❑❑❑ ❑❑❑❑❑											
hs2	2nd Kaeden Warriors (60)	hs	70LPi	60SSt	40	0	11	6	8	9	❑	❑0% – ❑50% – ❑100%
	Casualty State: ❑❑❑❑❑ ❑❑❑❑❑ ¼ ❑❑❑❑❑ ❑❑❑❑❑ ½ ❑❑❑❑❑ ❑❑❑❑❑ ¾ ❑❑❑❑❑ ❑❑❑❑❑											
hs3	3rd Kaeden Warriors (60)	hs	70LPi	60SSt	40	0	11	6	8	9	❑	❑0% – ❑50% – ❑100%
	Casualty State: ❑❑❑❑❑ ❑❑❑❑❑ ¼ ❑❑❑❑❑ ❑❑❑❑❑ ½ ❑❑❑❑❑ ❑❑❑❑❑ ¾ ❑❑❑❑❑ ❑❑❑❑❑											
hs4	4th Kaeden Warriors (60)	hs	70LPi	60SSt	40	0	11	6	8	9	❑	❑0% – ❑50% – ❑100%
	Casualty State: ❑❑❑❑❑ ❑❑❑❑❑ ¼ ❑❑❑❑❑ ❑❑❑❑❑ ½ ❑❑❑❑❑ ❑❑❑❑❑ ¾ ❑❑❑❑❑ ❑❑❑❑❑											
hs5	5th Kaeden Warriors (60)	hs	70LPi	60SSt	40	0	11	6	8	9	❑	❑0% – ❑50% – ❑100%
	Casualty State: ❑❑❑❑❑ ❑❑❑❑❑ ¼ ❑❑❑❑❑ ❑❑❑❑❑ ½ ❑❑❑❑❑ ❑❑❑❑❑ ¾ ❑❑❑❑❑ ❑❑❑❑❑											

MURLOGI FORCES *(hs15 is an Elite unit; hs16, ls15, m15 are Veteran units; ls18, ls19, m17, m18, m19 are Green units):*

#	Unit Name (# combatants)	UT	Melee OB	Missile OB	DB	SB	AT	MPT	Lvl	MR	Prep.	Parry State
hs15	1st Murlogi Heavy Warmob (100)	hs	40ms	—	10	25	15	4	2	4	❑	❑0% – ❑50% – ❑100%
	Casualty State: ❑❑❑❑❑ ❑❑❑❑❑ ¼ ❑❑❑❑❑ ❑❑❑❑❑ ½ ❑❑❑❑❑ ❑❑❑❑❑ ¾ ❑❑❑❑❑ ❑❑❑❑❑											
hs16	2nd Murlogi Heavy Warmob (100)	hs	40sc	—	10	25	8	4	2	3	❑	❑0% – ❑50% – ❑100%
	Casualty State: ❑❑❑❑❑ ❑❑❑❑❑ ¼ ❑❑❑❑❑ ❑❑❑❑❑ ½ ❑❑❑❑❑ ❑❑❑❑❑ ¾ ❑❑❑❑❑ ❑❑❑❑❑											
ls15	1st Murlogi Light Warmob (100)	ls	40bs	—	10	20	9	6	2	3	❑	❑0% – ❑50% – ❑100%
	Casualty State: ❑❑❑❑❑ ❑❑❑❑❑ ¼ ❑❑❑❑❑ ❑❑❑❑❑ ½ ❑❑❑❑❑ ❑❑❑❑❑ ¾ ❑❑❑❑❑ ❑❑❑❑❑											
ls16	2nd Murlogi Light Warmob (100)	ls	40ss	—	10	20	9	6	2	2	❑	❑0% – ❑50% – ❑100%
	Casualty State: ❑❑❑❑❑ ❑❑❑❑❑ ¼ ❑❑❑❑❑ ❑❑❑❑❑ ½ ❑❑❑❑❑ ❑❑❑❑❑ ¾ ❑❑❑❑❑ ❑❑❑❑❑											
ls17	3rd Murlogi Light Warmob (100)	ls	40ha	—	10	20	9	6	2	2	❑	❑0% – ❑50% – ❑100%
	Casualty State: ❑❑❑❑❑ ❑❑❑❑❑ ¼ ❑❑❑❑❑ ❑❑❑❑❑ ½ ❑❑❑❑❑ ❑❑❑❑❑ ¾ ❑❑❑❑❑ ❑❑❑❑❑											
ls18	4th Murlogi Light Warmob (100)	ls	40da	—	10	20	5	6	2	1	❑	❑0% – ❑50% – ❑100%
	Casualty State: ❑❑❑❑❑ ❑❑❑❑❑ ¼ ❑❑❑❑❑ ❑❑❑❑❑ ½ ❑❑❑❑❑ ❑❑❑❑❑ ¾ ❑❑❑❑❑ ❑❑❑❑❑											
ls19	5th Murlogi Light Warmob (100)	ls	40ma	—	10	20	5	6	2	1	❑	❑0% – ❑50% – ❑100%
	Casualty State: ❑❑❑❑❑ ❑❑❑❑❑ ¼ ❑❑❑❑❑ ❑❑❑❑❑ ½ ❑❑❑❑❑ ❑❑❑❑❑ ¾ ❑❑❑❑❑ ❑❑❑❑❑											
m15	1st Murlogi Archers (100)	m	10da	40sb	10	0	9	6	2	3	❑	❑0% – ❑50% – ❑100%
	Casualty State: ❑❑❑❑❑ ❑❑❑❑❑ ¼ ❑❑❑❑❑ ❑❑❑❑❑ ½ ❑❑❑❑❑ ❑❑❑❑❑ ¾ ❑❑❑❑❑ ❑❑❑❑❑											
m16	2nd Murlogi Archers (100)	m	10da	40sb	10	0	5	6	2	2	❑	❑0% – ❑50% – ❑100%
	Casualty State: ❑❑❑❑❑ ❑❑❑❑❑ ¼ ❑❑❑❑❑ ❑❑❑❑❑ ½ ❑❑❑❑❑ ❑❑❑❑❑ ¾ ❑❑❑❑❑ ❑❑❑❑❑											
m17	3rd Murlogi Archers (100)	m	10da	40sb	10	0	1	6	2	1	❑	❑0% – ❑50% – ❑100%
	Casualty State: ❑❑❑❑❑ ❑❑❑❑❑ ¼ ❑❑❑❑❑ ❑❑❑❑❑ ½ ❑❑❑❑❑ ❑❑❑❑❑ ¾ ❑❑❑❑❑ ❑❑❑❑❑											
m18	1st Murlogi Non-combatants (100)	m	20cl	—	10	0	1	6	1	1	❑	❑0% – ❑50% – ❑100%
	Casualty State: ❑❑❑❑❑ ❑❑❑❑❑ ¼ ❑❑❑❑❑ ❑❑❑❑❑ ½ ❑❑❑❑❑ ❑❑❑❑❑ ¾ ❑❑❑❑❑ ❑❑❑❑❑											
m19	5th Murlogi Non-combatants (100)	m	20cl	—	10	0	1	6	1	1	❑	❑0% – ❑50% – ❑100%
	Casualty State: ❑❑❑❑❑ ❑❑❑❑❑ ¼ ❑❑❑❑❑ ❑❑❑❑❑ ½ ❑❑❑❑❑ ❑❑❑❑❑ ¾ ❑❑❑❑❑ ❑❑❑❑❑											

Leader: High-king of the Underearth (**L25**, 15th level) — **MPT:** 8 — **Melee Bonus:** +74 — **Morale Bonus:** +38 — **Range:** 1



STANDARD GAME UNIT STATUS SHEET

#	Unit Name (# comb.)	UT	Melee OB/wp	Missile OB/wp	DB	SB	AT	MPT	Lvl	MR	Prepared	Parry State
___	_____	___	___	___	___	___	___	___	___	___	❑	❑0% – ❑50% – ❑100%
Casualty State: ❑❑❑❑❑		❑❑❑❑❑	¼ ❑❑❑❑❑		❑❑❑❑❑	½ ❑❑❑❑❑		❑❑❑❑❑	¾ ❑❑❑❑❑		❑❑❑❑❑	

REFEREED GAME UNIT STATUS SHEET

Unit Designation (Race)	Melee OB/wp	Missile OB/wp	DB	SB	AT	UBMR	MR	LR	EL	Dis	Sur	Fer	End	Sz	Casualties	HPT	Hits Taken

UNIT RECORD SHEET

Player: _____
Unit Name: _____
Campaign: _____

Unit Type: _____
Leadership Rating (LR): _____
Morale Rating (MR): _____
Level: _____
Experience: _____
Race: _____
Nationality: _____
Place of Origin: _____
Uniform: _____
Special: _____

Defensive Characteristics

Armor Type (AT): _____
Defensive Bonus (DB): _____
Shield vs Melee: _____
Shield vs Missile: _____

Movement Characteristics

UBMR:	_____	EhPs
March (x1)	_____	1 / 30 min
Forced March (x1.3)	_____	1 / 18 rnds
Double Time (x1.5)	_____	1 / 6 rnds
Charge (x2)	_____	1 / 2 rnd
Fast Run (x3)	_____	5 / rnd

Size: _____
Casualties Taken:

Hit Point Total: _____
Hits Taken:

Exhaustion Points: _____
EPs used:

Equipment and Baggage

Stat	Temp	Pot	Dev. Pts	Stat Bonus	Racial Bonus	Misc Bonus	Total Bonus
Discipline							
Survivability							
Ferocity							
Endurance							

Weapon/Attack	Rank	Stat	Misc	Misc	Total	Ranges

Subordinate Leaders	Lvl	LR	RP	CP	Leader-Ship	SKILL BONUSES Milt. Org.	Re-cruit.	Tac-tics	# of Troops

Skill	Rank	Stat	Misc	Total

ls1 6 ls2 6 ls3 6 ls4 6 ls5 6 ls6 6 ls7 6

ls8 6 ls9 6 ls10 6 ls11 6 ls12 6 ls13 6 ls14 6

hs1 4 hs2 4 hs3 4 hs4 4 hs5 4 hs6 4 hs7 4

hs8 4 hs9 4 hs10 4 hs11 4 hs12 4 hs13 4 hs14 4

ls15 6 ls16 6 ls17 6 ls18 6 ls19 6 ls20 6 ls21 6

ls22 6 ls23 6 ls24 6 ls25 6 ls26 6 ls27 6 ls28 6

hs15 4 hs16 4 hs17 4 hs18 4 hs19 4 hs20 4 hs21 4

hs22 4 hs23 4 hs24 4 hs25 4 hs26 4 hs27 4 hs28 4

lp1 6 lp2 6 lp3 6 lp4 6 lp5 6 lp6 6 lp7 6

lp8 6 lp9 6 lp10 6 lp11 6 lp12 6 lp13 6 lp14 6

hp1 4 hp2 4 hp3 4 hp4 4 hp5 4 hp6 4 hp7 4

hp8 4 hp9 4 hp10 4 hp11 4 hp12 4 hp13 4 hp14 4

lp15 6 lp16 6 lp17 6 lp18 6 lp19 6 lp20 6 lp21 6

lp22 6 lp23 6 lp24 6 lp25 6 lp26 6 lp27 6 lp28 6

hp15 4 hp16 4 hp17 4 hp18 4 hp19 4 hp20 4 hp21 4

hp22 4 hp23 4 hp24 4 hp25 4 hp26 4 hp27 4 hp28 4

lc1 14 lc2 14 lc3 14 lc4 14 lc5 14 lc6 14 lc7 14

lc8 14 lc9 14 lc10 14 lc11 14 lc12 14 lc13 14 lc14 14

hc1 10 hc2 10 hc3 10 hc4 10 hc5 10 hc6 10 hc7 10

hc8 10 hc9 10 hc10 10 hc11 10 hc12 10 hc13 10 hc14 10

lc15 14 lc16 14 lc17 14 lc18 14 lc19 14 lc20 14 lc21 14

lc22 14 lc23 14 lc24 14 lc25 14 lc26 14 lc27 14 lc28 14

hc15 10 hc16 10 hc17 10 hc18 10 hc19 10 hc20 10 hc21 10

hc22 10 hc23 10 hc24 10 hc25 10 hc26 10 hc27 10 hc28 10

m1 6 m2 6 m3 6 m4 6 m5 6 m6 6 m7 6

m8 6 m9 6 m10 6 m11 6 m12 6 m13 6 m14 6

m15 6 m16 6 m17 6 m18 6 m19 6 m20 6 m21 6

m22 6 m23 6 m24 6 m25 6 m26 6 m27 6 m28 6

L1 12 L2 12 L3 12 L4 12 L5 12 L6 12 L7 12

L8 12 L9 12 L10 12 L11 12 L12 12 L13 12 L14 12

L15 12 L16 12 L17 12 L18 12 L19 12 L20 12 L21 12

L22 12 L23 12 L24 12 L25 12 L26 12 L27 12 L28 12

N-GO N-GO N-GO N-GO N-GO N-GO N-GO

N-Co N-Co N-Co N-Co N-Co N-Co N-Co

D-GO D-GO D-GO D-GO D-GO D-GO D-GO

D-Co D-Co D-Co D-Co D-Co D-Co D-Co

Routed Routed Routed Routed Routed Routed Routed

Routed Routed Routed Routed Routed Routed Routed

D-BO D-BO D-BO D-BO D-BO D-BO D-BO

D-BO D-BO D-BO D-BO D-BO D-BO D-BO

Fired -10 Thrown

Fired -30 Bows

Fired -30 Bows

AMP -5

AMP -5

AMP -10

AMP -5

AMP -10

AMP -15

AMP -20

AMP -25

AMP -30

War Law

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ICE
PO Box 1605
Charlottesville, VA
22901 USA