Arms Law & Claw Law™

Arms & Animal & Martial Arts combat adaptable to any FRP system.

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arms law & claw law®

Guidelines for Combat in a Fantasy Role-Playing Environment **Fourth Edition**

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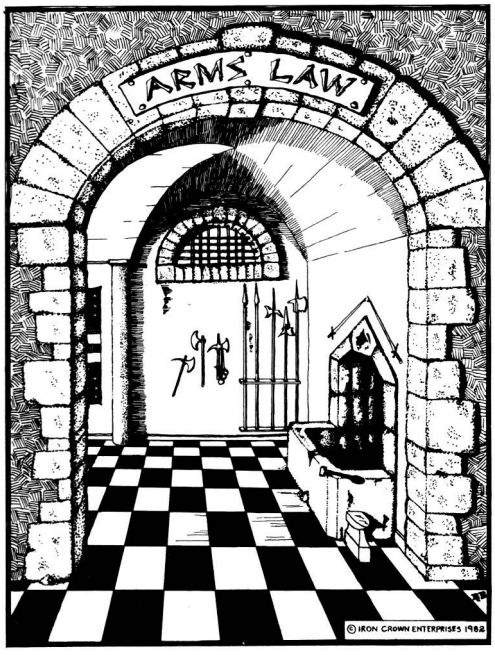


(1.0) INTRODUCTION

ARMS LAW is the first of the *Rolemaster Systems* for role-playing games to be published by Iron Crown Enterprises. It has been designed to provide a logical, detailed, manageable procedure for resolving combat between individuals and small groups. Future *Rolemaster Systems* will encompass a new world of fantastic adventure by covering magic, character development, and other aspects of fantasy role-playing.

ARMS LAW provides a tactical sequence to be followed in resolving melees involving from 2 to 50+ combatants. It integrates spell casting, missile fire, unusual maneuvers, and opportunity action. This system may become unwieldy for more than 50 combatants, but can be easily simplified for such situations.

The system itself, like those to follow, is self-contained and can be integrated into any role-playing game. There are 20 types of armor and 30 different weapons, each with its own strengths and weaknesses. A player can kill or be killed with a single swing. Provisions are made for specific damages, such as the loss of an eye or limb, and for the results of such damage to the player, ranging from stunned inactivity to instant death.

This system is meant to provide "guidelines" for combat in a role-playing game; the referee is the final authority in applying this system to an actual game.

NOTE: ***The specific damage mentioned above may necessitate some innovation on the part of a referee in regards to healing. Suggested solutions include healing herbs and detailed healing spells, both of which should require varying degrees of recuperation time.***

(2.0) DEFINITIONS

Combat Roll: A *roll* representing a combat swing or missile attack.

Concussion Hits: Accumulated damage to the body, possibly leading to shock and unconsciousness.
NOTE: ***The term "hits" will sometimes be used instead of "concussion hits."***

Critical Strike: An especially effective swing resulting in more than just concussion hits to the target.

Defensive Bonus: The total subtraction from the combat roll due to the defender's advantages, including bonuses for defender dexterity, shield, superiority of armor, position, and magic items.

Fumble: An especially ineffective swing or a mishandling of the weapon which may put the attacker in a disadvantageous position and/or damage him.

Initiative: The sum of all factors affecting the speed of a swing.

Maneuver: An action performed by a combatant that requires unusual concentration, concentration under pressure, or risk (i.e., climbing a rope, balancing on a ledge, leaping a chasm).

Maneuver Roll: A *roll* representing an attempted maneuver.

Net Combat Roll: The combat roll, plus the offensive bonus, minus the defensive bonus.

Net Maneuver Roll: The maneuver roll modified by bonuses and penalties.

Offensive Bonus: The total addition to the combat roll due to the attacker's advantages—including the attacker's physical prowess, superiority of weapon, expertise, magic items, etc.

Orientation Roll: A *roll* representing a combatant's degree of control following unusual action or surprise.

Parry: The use of some or all of a combatant's offensive bonus to increase his defensive points.

Roll: Normally a percentile *roll* giving random results from 01 to 00 (100).
NOTE: ***In certain circumstances, this roll must be adjusted through the use of an open-ended system, yielding results above 100 or below 01.***

(3.0) TACTICAL COMBAT SEQUENCE

COMMENTARY

This Tactical Combat Sequence is based on the probable experience of hand-to-hand combat within a time frame of 10-second **battle rounds** and 1-minute **turns** (i.e., 6 rounds always equals 1 turn). In a typical battle round, adversaries could expect to swing their weapons from 2 to 5 times, depending upon weapon type. The assumption critical to the Tactical Combat Sequence is that two opposing combatants would normally get no more than one opportunity to land a potentially lethal swing during any given 10-second round of combat, regardless of the number of swings a combatant can make in a single round. This connecting blow would be a swing at the opponent's body that at least partially clears any shield or weapon that the defender is using to nullify blows. Such a swing would normally hit home, and only armor or luck would aid the defender. Thus, for purposes of the Tactical Combat Sequence, a "swing" is actually that one blow of the several probably delivered which can be expected to land cleanly. All other blows delivered in the same battle round are assumed to be fully nullified by a shield, movement, a weapon, and/or fate. Only the one unnullified blow per round counts as a swing. The same reasoning applies to missile attacks, where only one shot or throw is allowed per round.

(3.1) BATTLE ROUND SEQUENCE

During each battle round, play proceeds through each phase of the Battle Round Sequence in the following order:

1. SPELL PHASE
2. SPELL RESULTS PHASE
3. SPELL ORIENTATION PHASE
4. MISSILE PHASE
5. MISSILE RESULTS PHASE
6. MOVEMENT AND MANEUVER PHASE
7. MELEE PHASE
8. MELEE RESULT PHASE
9. FINAL ORIENTATION PHASE

This sequence is reproduced for easy reference in Table 8.23.

(3.11) Spell Phase:

All combatants who will cast spells during the current round must specify any pertinent information (e.g., spell type, target area, opportunity fire, etc.).

(3.12) Spell Results Phase:

All spells specified in the previous phase are resolved simultaneously, unless an exception is indicated by a magic system and/or by the referee. Results are applied immediately, except for opportunity spells (see 3.2). Movement for all spell casters is reduced to a maximum of 25% of their normal allowance for the current round.

(3.13) Spell Orientation Phase:

All combatants who performed unusual activities during the previous phase (for example, magical transportation) must make an orientation roll. What constitutes unusual activity must be determined by the referee.

(3.14) Missile Phase:

All combatants who will fire or throw missiles during this round (cannot have thrown a spell) must specify missile type, target/target area, and any other pertinent information.

(3.15) Missile Result Phase:

All missile attacks specified in the previous phase are resolved simultaneously, unless an exception is indicated by the referee due to circumstance or spells. All results are applied immediately, except opportunity missile attacks. Movement for all combatants performing missile attacks is reduced to 25% of normal.

(3.16) Movement-Maneuver Phase:

All combatants in play may move up to the maximum of their movement allowance (depending on the movement system being used by the referee and subject to restrictions due to actions in any of the previous five phases—including opportunity action). Any conflicts in the movement of two or more combatants must be resolved by a comparison of maneuver rolls (see 7.3) or by common sense. The success or failure of an extraordinary maneuver attempted by a combatant is determined by a maneuver roll (i.e., leaping a ten-foot chasm).

(3.17) Melee Phase:

All combatants may attempt to conduct melee attacks except those that have done the following:

1. Cast a spell in the current round;
2. Fired or thrown a missile in the current round;
3. Moved more than 50% of their normal movement allowance in the current round;
4. Failed an orientation roll or maneuver roll during the current round;
5. Announced opportunity action that has not been executed;
6. Been previously incapacitated.

(3.18) Melee Result Phase

Within each group of combatants attempting to melee attack each other, attacks are conducted according to the following sequence:

1. Determine order in which involved combatants will swing by comparing initiative (see 6.1).
2. First combatant attacks and results are implemented immediately.
3. Second combatant, third combatant, etc., attack and implement results in order.
4. First combatant attacks again with any additional usable weapon (see 5.2).
5. Second combatant, third combatant, etc., attack in order with any additional usable weapon.

(3.19) Final Orientation Phase

In the judgment of the referee, any combatant who has been under significant pressure (e.g., surprise), or has made an unusual maneuver may be required to make an orientation roll, which may affect his ability to act in the next round.

(3.2) OPPORTUNITY ACTION

Combatants may plot opportunity action if they wish to perform a combat activity in a following phase of the current round or a following round. For example, a combatant may wish to withhold his missile attack until he sees who is moving where, and then fire. Opportunity action is announced during the correct phase for the desired action. Movement restrictions apply as if the combatant had actually performed the action during the correct phase (see 3.11 and 3.15). A combatant who has planned opportunity action can take no other action (except reduced movement) until the action is performed or canceled. Opportunity fire occurs first in a phase, unless otherwise indicated by magic system or referee.

EXAMPLE: ***During the missile phase, a combatant with a bow announces opportunity bow fire. He may then fire in any of the following phases of this and the following rounds. However, until he fires, he may neither melee attack nor actively melee defend, and he can only move 25% of his normal movement. His movement is still reduced even if he cancels his opportunity fire. During the spell phase of the following battle round, a magic user attempts to cast a spell. The bowman who has planned opportunity fire now may fire, resolving his missile attack before the spell is thrown, unless otherwise indicated by the referee.***

(4.0) DEFENSIVE CAPABILITIES IN COMBAT

COMMENTARY

In combat there are many factors affecting the efficiency and severity of a "swing." The defender has several capabilities which work to his advantage. These include armor, shield, quickness, magic items, and the ability to parry. A parry is defined as an extraordinary defensive action by the defender to the detriment of his offensive capabilities. Armor is the basic classification of protection. All other defensive capabilities are expressed in terms of a defensive bonus which will modify the combat roll in the defender's favor.

(4.1) ARMOR

Armor is the basic protective capability assigned to the material covering the body. Armor is divided into five categories of four types each (i.e., 20 types). The column numbers listed with each armor type refer to the column corresponding to that armor on the weapon tables.

(4.11) Cloth-Skin Base:

Normal cloth attire, robes, and normal animal hides.

(4.111) Skin (Column 1):

Normal clothing, assumed worn if other covering is not specified.

(4.112) Robes (Column 2):

Full-length robes normally worn professionally by magic-users and certain other combatants.

(4.113) Light Hide (Column 3):

The natural hide of certain classes of animals, both normal and unusual (e.g., deer, dog, wolf).

(4.114) Heavy Hide (Column 4):

The natural hide of certain classes of animals, both normal and unusual (e.g., buffalo, elephant, bear).

NOTE: ***The referee will have to decide on the armor class of the creatures that populate his game.***

(4.12) Pliable Leather Base:

The heavy outer garments normally worn as weather protection by civilians and as combat protection by some militia and irregulars.

(4.121) Leather Jerkin (Column 5):

A leather vest-like covering without arms and reaching only to the waist or mid-thigh.

(4.122) Leather Coat (Column 6):

A leather coat covering the arms and to mid-thigh.

(4.123) Reinforced Leather Coat (Column 7):

A leather coat covering the arms and to mid-thigh, but with either rigid-leather sections or metal sections sewn in for reinforcement.

(4.124) Reinforced Full-Length Leather Coat (Column 8):

A coat as in 4.123 except that it covers to the lower leg.

(4.13) Rigid-leather Base:

Rigid-leather armor and the rigid hide covering of creatures like certain reptiles and of fantastic creatures such as dragons.

(4.131) Leather Breastplate (Column 9):

A rigid-leather breastplate covering the torso to mid-thigh and part of the upper arms.

(4.132) Leather Breastplate And Greaves (Column 10):

As in 4.131 above, but with leather greaves covering the forearms and lower legs.

(4.133) Half-Hide Plate (Column 11):

Rigid-leather armor which covers the body completely, and the hide of certain creatures that contain at least a few rigid plates (e.g., rhinoceros, alligator).

(4.134) Full-Hide Plate (Column 12):

As in 4.133 above, except that the rigid-leather or plates are harder and/or more plentiful (e.g., turtles, certain dragons, crabs).

(4.14) Chain Mail Base:

Metal chain-link armor, metal scale armor, and the hides of certain fantastic creatures.

(4.141) Chain Shirt (Column 13):

A chain mail shirt covering the torso to mid-thigh and half of the upper arms.

(4.142) Chain Shirt And Greaves (Column 14):

As in 4.141 above, but with greaves on the forearms and lower legs.

(4.143) Full Chain (Column 15):

Chain mail covering most of the body in the form of a shirt and leggings.

(4.144) Chain Hauberk (Column 16):

A full-length chain mail coat split from the waist in the front and back to facilitate movement; certain dragons may be of this type.

(4.15) Plate Base:

Rigid armor of metal plates and the heaviest animal hides.

(4.151) Metal Breastplate (Column 17):

A metal breastplate plus smaller plates covering the torso to mid-thigh and part of the upper arms.

(4.152) Metal Breastplate And Greaves (Column 18):

As in 4.151 above, but with greaves on the forearms and lower legs.

(4.153) Half Plate (Column 19):

Rigid plate armor covering the body, but with chain mail between the plates at the joints and covering the legs.

(4.154) Full Plate (Column 20):

Rigid plate armor as in 4.153 above, but with the plates overlapping at joints, and plate armor covering the legs.

(4.16) Armor Bonuses:

Especially good armor in terms of material, construction, or enchantment, does not change in basic type. Instead it adds a percentage to the defensive bonus (see 4.3).

(4.17) Armor Penalties:

Due to its weight and constrictive nature, there are penalties associated with wearing armor while attempting to maneuver, attack, defend, and throw/fire missiles. These penalties are summarized in the Armor Table, Table 8.24 (back cover).

NOTE: ***The armor types, bonuses, and penalties mentioned above cannot, of course, include all possible types of armor. The referee will have to fit any unusual armor into the above system of types, bonuses, and penalties. For example:***

Mithril Chain Shirt:

Armor Type:	*17*
Defensive Bonus:	*– 20*
Armor Penalties:	*As Armor Type 5*

Mithril Full Plate:

Armor Type:	*20*
Defensive Bonus:	*– 30*
Armor Penalties:	*As Armor Type 11*

(4.2) SHIELDS

Shields are represented in combat by an addition to the defensive bonus. In addition, when fighting with one or two weapons, one weapon may be used as a shield, but may not be used for an attack in the same round. The additions to the defensive bonus for a shield, or using a weapon as a shield, are detailed in the Shield-Parry Table (see Back Cover, Table 8.25). Other limitations due to using a shield are also noted on that table. Obviously, a shield may only be used against one opponent's attack per round, and only if it can be positioned properly (e.g., a shield does not affect a rear attack).

(4.3) DEFENSIVE BONUS

The sum of all bonuses and penalties that affect the defender's capability in combat is the **defensive bonus.** This number will be subtracted from the combat roll. The defender can possibly receive bonuses and/or penalties for superior armor, a shield, his quickness, his position, and for magic items.

(4.31) Superior Armor:

Especially good armor may result in an addition to the combat bonus.

(4.32) **Shield:**

See 4.2.

(4.33) **Defender's Quickness:**

An addition to the defensive bonus can be given to a combatant judged to be especially quick. This bonus will depend on the system being used to determine the physical characteristics of the combatants.

(4.34) **Defender's Position:**

A variable bonus can be awarded to the defender if his position in the melee, relevant to the attacker, is judged sufficiently advantageous (e.g., behind a wall could be −40). Penalties due to a defender's disadvantageous position (e.g., defender prone) are reflected in an attacker's offensive bonus (see 5.25 and Table 8.27).

(4.35) **Magic Items:**

Certain enchanted items such as magic gauntlets, a magic cloak, etc., may give an addition to the defensive bonus.

EXAMPLE: ***A defender wearing Mithril chain (−20), using a non-magic shield (−20), possessing excellent quickness (−25), standing above his attacker and behind a stone wall (−40), and wearing magic gauntlets (−10), would have a defensive bonus of (120). This bonus of (120) would be subtracted from the attacker's combat roll (obviously an unusual situation).***

(4.4) **PARRYING OPTIONS**

The defender may decide to place more emphasis on his personal defense in combat than is implicit in this tactical system. A combatant may sacrifice some or all of his offensive bonus and movement capability in order to increase his melee and/or missile defense. In order to parry, a defender must use a weapon, shield, or similar item or terrain feature as summarized in Table 8.25.

(4.41) **Melee Parry:**

During the Melee Phase, a combatant may elect to commit some or all of his offensive bonus to parrying. This part of offensive bonus is then added to his normal defensive bonus to give a new total defensive bonus. His offensive bonus is reduced by the amount that was added to defense.

(4.42) **Missile Parry:**

During the Missile Phase, a combatant may elect to parry a missile attack as in 4.41 above. However, that part of his offensive bonus used to parry is no longer available for the current round (i.e., the following Melee Phase). In addition, movement is reduced to 50 of normal in the following movement phase. Common sense should be used here in determining what part of an offensive bonus can be used to missile parry (e.g., not bonuses due to weapons).

(4.43) **Parrying Limitations:**

Certain weapons have parry restrictions, summarized in Table 8.25. Parry can only be used versus one opponent per Melee Phase. A combatant may use part of his offensive bonus for a missile parry, another part for a melee parry, and the remainder for a melee attack, but the sum of these may not exceed his total offensive bonus.

EXAMPLE: ***A defender has a defensive bonus of (−50) and an offensive bonus of (+85). He uses a missile parry of (25) during the Missile Phase resulting in a total subtraction of (75) from one missile attack directed at him (his choice if several missile attacks are incoming). Then, during the Melee Phase, he parries with (10), resulting in a subtraction of (60) from one melee attack [his choice—his normal defensive bonus of (50) will be subtracted from any other incoming attacks]. This leaves him (50) to add to his own melee attack.***

(5.0) OFFENSIVE CAPABILITIES IN COMBAT

COMMENTARY

The success of an attack will partially depend on the weapon or weapon combination used, and any offensive capabilities possessed by the attacker which can alter the combat roll in his favor. The factors which can affect the combat roll include a superior weapon, physical prowess, experience, position, magic items, etc.

(5.1) **WEAPON/WEAPON COMBINATIONS**

(5.11) **One-Handed Weapon With/Without Shield:**

Any weapon not designated as two-handed is considered to be one-handed and may be used with or without a shield. When using this combination, parrying may be performed with either the weapon or the shield (within the restrictions of Table 8.25).

(5.12) **Two-Handed Weapon:**

These types of weapons require both hands to wield and are very restricted in parrying (see Table 8.25).

(5.13) **One-Handed Weapon Combination:**

The use of a weapon in each hand is to be considered very difficult to learn and use. Considerable agility, physical strength, and training should be required, depending upon the relative difficulty of the combination being attempted. For example, the difficulty would range from sword/dagger, rapier/main gauche, etc., up to morning star/morning star (and beyond for some quick and large creatures).

(5.2) **OFFENSIVE BONUS**

The **offensive bonus** is the sum of the bonuses and penalties that affect an attacker's capability in combat. This number is added to the combat roll. The attacker can possibly receive bonuses and/or penalties for a superior weapon, physical prowess, expertise, experience, position, magic items, etc.

(5.21) **Superior Weapon:**

An especially good weapon in terms of material, construction, or enchantment can result in additions to the offensive bonus. The extent of the addition will be decided by the referee.

(5.22) **Physical Prowess:**

A combatant with extraordinary physical strength and/or quickness may receive an offensive bonus. This will depend on the system used for character development and the referee's judgment.

(5.23) **Expertise:**

A combatant judged to be particularly expert in the handling of a certain weapon may be given a bonus by the referee, when using that weapon.

(5.24) **Experience:**

A combatant judged to be at a certain level of experience may be given an offensive bonus by the referee.

(5.25) **Position:**

A combatant judged to be in a particular favorable/unfavorable position *vis-à-vis* his opponent may be given an offensive bonus/penalty by the referee. Some of these bonuses and penalties are suggested in Table 8.27.

(5.26) **Magic Items:**

Certain magic items may be judged by the referee to be effective in improving the accuracy and power of an attack, and can therefore be given an offensive bonus. For example, a Helm of Quickness could improve the attacker's quickness by adding (+20) to his swing.

(5.27) **Offensive Penalties:**

Certain variable occurrences can decrease an attacker's offensive bonus (e.g., wounds, armor, movement, etc.). Some of these penalties are shown in Table 8.27.

EXAMPLE: ***An attacker using a Mithril sword (+15), possessing an unusual strength (+10) and quickness (+5), expert in the use of swords (+5), being of intermediate experience (+20), behind his opponent (+30), and wounded 25 (−10), would have an offensive bonus of (+75). This bonus (75) would be added to his combat roll.***

(6.0) RESOLUTION OF COMBAT

COMMENTARY

An attack swing or missile attack is resolved by cross-indexing of the net combat roll with the target's armor type on the correct combat table for the weapon being used. The effects of **fumbles** and **critical strikes** are found on the correct Fumble Table or Critical Strike Table. First determine the order in which the combatants will swing, and then resolve each attack in sequence, implementing the results immediately. Missile attacks conducted during the Missile Results Phase are resolved simultaneously.

(6.1) FIRST SWING DETERMINATION

Each combatant in a melee sums up the **first swing points** that apply to him. First swing points are detailed in Table 8.28. The combatant with the largest total swings first, the second largest total swings second, and so on. After all combatants have attacked once, those capable of swinging a second weapon recompute their order of attack and resolve their second weapon attacks.

(6.2) SWING (AND MISSILE ATTACK) RESOLUTION

The net combat roll representing the swing is the combat roll plus the attacker's offensive bonus minus the defender's defensive bonus. This number is cross-indexed with the target's armor type on the combat table corresponding to the attacker's weapon to arrive at the result of the swing. In certain cases where a swing is especially bad or good, another roll may be required to determine the results of a fumble or critical strike.

(6.21) The Combat Roll:

A swing is represented by rolling percentile dice. The number result is the combat roll for the attack.

(6.211) Fumble:

Each weapon type has a fumble range. An **unmodified** combat roll within this range results in the attack having no effect. Instead, another percentile dice roll is made and this number is referenced to the Fumble Table (see Table 8.21) to determine the result of the fumble.

(6.212) Over-Hundred Roll:

The combat roll is open-ended, providing the possibility for any combatant to hit any given opponent—no matter what the respective offensive and defensive bonuses are. If the combat roll is between 96 and 100 inclusive, the dice are rolled again and the second roll is added to the first. The dice rolls can continue to be made and summed *ad infinitum,* until a roll is made that is less than 96. This stops the process and the total at this point is the relevant combat roll.

(6.22) Result Determination:

The net combat roll is determined by adding the offensive bonus to, and subtracting the defensive bonus from, the (non-fumble) combat roll. The net combat roll is then cross-indexed with the defender's armor type on the table corresponding to the weapon used by the attacker. This will give a result such as the one that follows:

17 B K

A typical result will have up to three components. The first component will be a number from 0 up, which is the number of concussion hits given to the target. The second and third components, if present in the result, indicate that a critical strike has been achieved, and describe, respectively, the severity and type of critical strike delivered. In the above example, the target has taken **17** concussion hits and a **K**rush type critical strike of **B** level severity. *(***NOTE:** *Crush is spelled as "Krush" and denoted by a "K" in order to distinguish between a Krush type critical strike and* **C** *level severity.)*

(6.23) Concussion Hits:

Each combatant is limited in the number of concussion hits that he can take. When this limit is passed, the combatant is unconscious and can take no further action until he is once again under the limit. Death may be caused if this limit is exceeded by a certain amount. The point at which death occurs is proportional to the combatant's physical constitution, and depends on the system used in the game for deriving physical characteristics. The referee will have to decide on the point at which death results (e.g., a doubling of the number of concussion hits causing unconsciousness could result in the victim's death or, alternatively, the number of concussion hits causing unconsciousness added to a multiple of the constitution).

(6.24) Critical Strike Types:

A critical strike can be one of three types: Slash, Krush, or Puncture. They are denoted on the combat tables by an **S, K,** or **P,** respectively. Each of these 3 types is described on a separate table (see Tables 8.11, 8.12, and 8.13).

(6.25) Critical Strike Severity:

The severity of critical strikes ranges from **A** (least severe) to **E** (most severe). When a critical strike is indicated by the net combat roll, then the table to be consulted is determined by the type of critical strike (either **K, S,** or **P**). A second roll (always 01-100) is then made and the resulting number is cross-indexed with the severity of the strike (either **A, B, C, D,** or **E**). The new result is added to the number of concussion hits and immediately applied to the target.

(6.26) Unusual Creature Strike Tables:

Certain unusual creatures are so large that the normal critical strike tables are not used to determine critical strikes against them Unusual creatures are separated into two categories: large creatures and super-large creatures. Each category has its own critical strike table that is consulted if a sufficiently severe critical strike is obtained against them. The roll on these tables is open-ended as described in 6.212. What constitutes a large creature or super-large creature must be decided by the referee (e.g., giants, trolls, lesser demons, etc., might be large creatures, and dragons and powerful demons might be super-large creatures).

(6.261) Large Creatures Critical Strike Table (Table 8.14):

Only critical strikes of severity **B, C, D,** or **E** affect large creatures, **A** severity strikes being ignored. A roll is made in the same manner as a combat roll (i.e., open-ended). This roll is cross-indexed with the proper weapon make to obtain a result which is applied immediately. Note that the severity of the critical strike is irrelevant, except that it must be a **B** or higher. This reflects the fact that creatures present such a large target.

(6.262) Super-Large Creatures Critical Strike Table (Table 8.15):

The Super-Large Creatures Critical Strike Table is used exactly as in 6.261 above, except that only critical strikes of severity **D** or **E** affect these creatures and **A, B,** or **C** severity strikes are ignored. This table should be consulted *only* for creatures such as dragons and very powerful demons.

(6.27) Critical Strike Interpretations:

Most of the critical strike results are self-explanatory. However, certain results may have to be modified due to circumstances (i.e., a defender behind a low stone wall hit by an arrow receiving a critical strike calling for damage to his ankle should, instead, be hit in the wrist). Similarly, if a critical strike calling for an unspecified limb to be broken or cut off is rolled, which limb is to be affected should be determined randomly. A stunned combatant may parry to his front at 50% of normal (unless **no parry** is indicated), but may not move or attack or change facing.

NOTE 1: *All damages (including hits), unless otherwise noted, are only applicable to the target combatant.*

NOTE 2: *Bleeding indicated on the critical strike tables is reflected in the form of additional concussion hits. This is meant to show the gradual weakening brought about by bleeding.*

NOTE 3: *Next swing can refer to a missile attack as well as to a normal melee attack.*

(7.0) MANEUVERING, ORIENTATION, AND MOVING

COMMENTARY

Problems can arise during combat situations when combatants attempt unusual or difficult maneuvers, and when two or more combatants come into conflict while moving. The guidelines for maneuvering, orientation, and moving provide one method for resolving these conflicts.

(7.1) MANEUVER RESOLUTION

When a combatant indicates an attempted maneuver, the referee should assign a **degree of difficulty** to the maneuver. The degree of difficulty is chosen from those listed across the top of the Maneuver Table (see Table 8.22). The combatant then makes a maneuver roll. After the maneuver roll is modified by maneuver bonuses and penalties, the net maneuver roll is cross-indexed with the degree of difficulty on the Maneuver Table to obtain the result of the maneuver.

NOTE: *Certain maneuvers may be deemed impossible by the referee; such maneuvers always fail.*

(7.11) Maneuver Roll:

The outcome of an attempted maneuver is resolved by rolling percentile dice. The number result is the maneuver roll, which is open-ended both upwards and downwards.

(7.111) 01–05 Roll:

A dice roll between 01 and 05 inclusive indicates exceptional clumsiness. The dice are rolled again and subtracted from the first roll. If the second roll is between 96 and 100 inclusive, then a third roll is made and also subtracted, and so on. The sum of these rolls is the maneuver roll.

(7.112) 96–100 Roll:

A dice roll between 96 and 100 inclusive indicates exceptional agility. The dice are rolled again, and the result is added to the first roll. If the second roll is between 96 and 100 inclusive, then a third roll is made and also added, and so on. The sum of these rolls is the maneuver roll.

(7.113) Maneuver Bonuses And Penalties:

Attempted maneuvers can be affected by various factors such as armor or magic items. Bonuses and penalties for these factors are outlined in Table 8.29. The sum of these bonuses and penalties is added to the maneuver roll to determine the net maneuver roll.

(7.12) Maneuver Results:

Most results are self-explanatory, but a percentage result can be interpreted in several ways by the referee. 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.

EXAMPLE: *Suppose a combatant attempts to leap 15 feet over a chasm 11 feet wide. The referee assigns the leap a degree of difficulty of "complex." The combatant wearing a chain shirt (−10), possessing excellent quickness (+30), wounded 30 (−10), rolls 75, resulting in a net maneuver of 85. Cross-indexing 85 and "complex" on the Maneuver Table reads* **80** *. This means that the combatant has leaped 12 feet and therefore crossed the chasm. If this maneuver had been to throw a rope around a rock on the opposite side of the 11-foot chasm, and the same result as above had been obtained, then a second dice roll would have to be made. If the second roll (unmodified) was equal to or less than 80, then the rope throw would be successful.*

(7.2) ORIENTATION ROLL

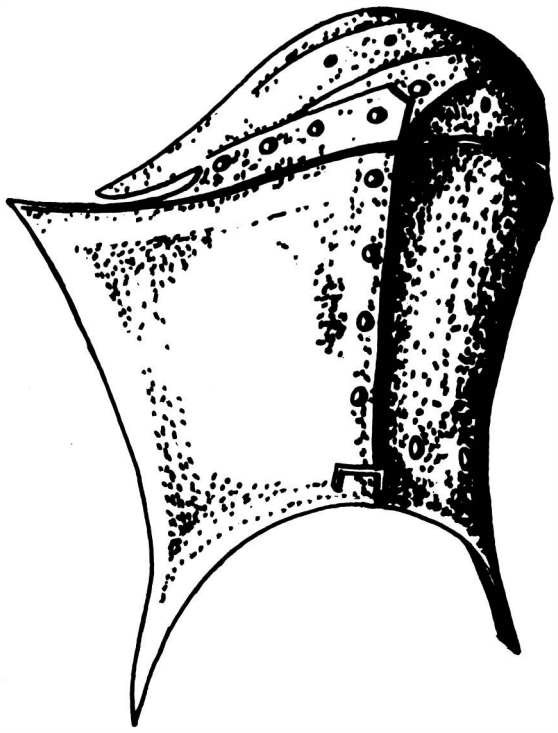
When required by the referee, combatants must make an orientation roll to determine their degree of self-control and awareness. The referee must determine the degree of difficulty of the orientation attempt. The combatant then makes the orientation roll in the same manner as a maneuver roll. Failure means disorientation and no further action is allowed for that round. Success means that the combatant is under control and aware of the situation, and may take further action that he would normally be allowed.

EXAMPLE: *The combatant described in the example under 7.12 above kills an opponent during the Melee Phase. However, while he was engaged, another opponent has been sneaking up behind him. During the Final Orientation Phase, the referee directs him to make an orientation roll to see if he has successfully become aware of the threat to his rear. The combatant possessing the same bonuses and penalties as described above rolls 38, resulting in a net orientation roll of 48. Cross-indexing it with a degree of difficulty of "very hard" assigned by the referee reads of as* **60** *. A second roll of 73, larger than 60 , indicates that he has failed his orientation roll and is not aware of the opponent coming up behind him, and that he can take no action regarding this threat. Of course, how to keep the combatant from taking action against this threat is up to the referee.*

NOTE: *During this phase, gamesmaster may allow certain extraordinarily trained unarmed combatants (e.g., expert warrior monks) to make a recovery roll versus stunning or unbalancing effects incurred in previous melee result phases.*

(7.3) MOVEMENT CONFLICTS

When two or more combatants attempt to perform conflicting movements, the referee may choose to resolve the conflict by having the combatants in question make maneuver rolls. If all the maneuvers are successful, then the conflict is considered a draw, and movement for the involved parties terminates at the point of conflict. In these cases of conflicting movement, the referee will have to ultimately decide himself the outcome of the conflict. The maneuver rolls of the involved parties are intended to aid him in his decision.



DAMAGE RECORD

COMBATANT	Hits Taken	# Hits Being Taken per Round	Cumulative % Penalty	# Rounds of Lost Initiative	# Rounds of Must Parry	# Rounds of Stun	# Rounds of Stun-No Parry	# Rounds of Down or Out	# Rounds Until Death	SPECIAL

TABLE 8.23 BATTLE ROUND SEQUENCE

1. SPELL PHASE
2. SPELL RESULTS PHASE
3. SPELL ORIENTATION PHASE
4. MISSILE PHASE
5. MISSILE RESULTS PHASE
6. MOVEMENT AND MANEUVER PHASE
7. MELEE PHASE
8. MELEE RESULT PHASE
9. FINAL ORIENTATION PHASE

TABLE 8.27 OFFENSIVE BONUSES AND PENALTIES TABLE

(+ is beneficial to the attacker, effects cumulative)

CATEGORY	EFFECT
Each unit added due to attacker's physical prowess, magic items, combat expertise, level, etc.	+5
Flank attack	+15
Rear attack	+20
Surprise	+20
Stunned foe[1]	+20
Downed foe[1]	+30
Prone foe[1]	+50
Wounded more than 25% (Concussion hits)	−10
Wounded more than 50% (Concussion hits)	−10
Wounded more than 75% (Concussion hits)	−10
Armor (See Missile Attack Penalty on Armor Table)	− (Variable)
Moving (% of possible movement equals subtraction)	− (Variable)
Drawing weapon (also applies to movement)	−20
Changing weapon (also applies to movement)	−50
On horse or any analogous animal)	−50
On horse (or any analogous animal) and using missile	−20
Miscellaneous (to be determined by the referee)	± (Variable)

[1]Only one of these penalties can apply at any given time.

TABLE 8.24 ARMOR TABLE

ARMOR TYPE	MINIMUM[1] MANEUVER PENALTY	MAXIMUM[2] MANEUVER PENALTY	MISSILE[3] ATTACK PENALTY	QUICKNESS[4] PENALTY
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	-20	-5	0
7	-10	-40	-15	10
8	-15	-50	-15	15
9	-5	-50	0	0
10	-10	-70	-10	5
11	-15	-90	-20	15
12	-15	-110	-30	15
13	-10	-70	0	5
14	-15	-90	-10	10
15	-25	-120	-20	20
16	-25	-130	-20	20
17	-15	-90	0	10
18	-20	-110	-10	20
19	-35	-150	-30	30
20	-45	-165	-40	40

[1]Minimum maneuver penalties apply to persons fully trained in maneuvering while wearing the given armor type.

[2]Maximum maneuver penalties apply to persons fully untrained in maneuvering while wearing the given armor type.

[3]Missile attack penalties act as subtractions from the offensive bonus used for missile attacks. This is meant to reflect the disadvantageous effect of armor worn on the arms of a combatant.

[4]Quickness penalties act to reduce or cancel the given percentage points of a combatant's defensive bonus (i.e., those points based on the defender's quickness). Unlike those above, this penalty can only apply against the armor-user's quickness, and will not reduce a combatant's defensive bonus below the level it would be had there been no quickness bonus whatsoever.

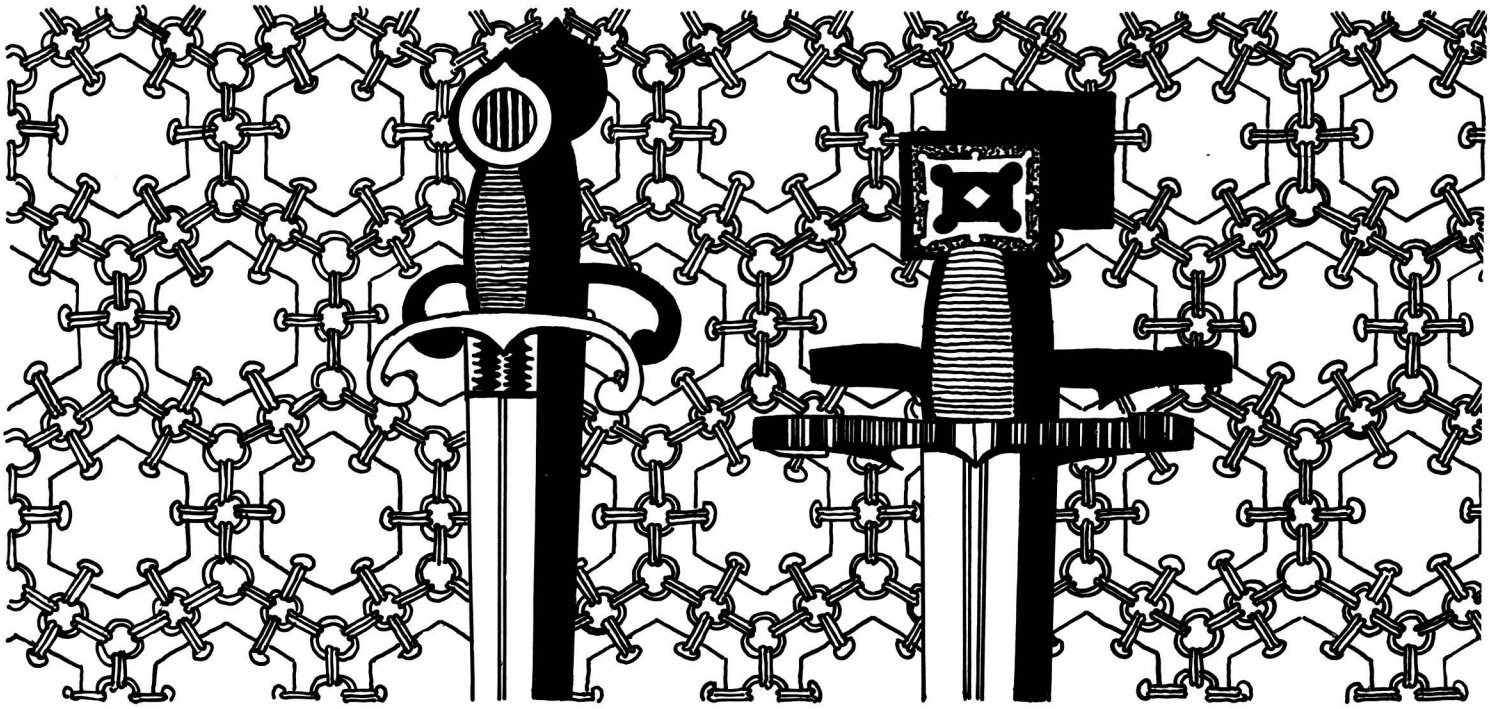


TABLE 8.25 SHIELD-PARRY TABLE

SHIELD TYPE	BONUS VERSUS MELEE	BONUS VERSUS MISSILE	WEIGHT IN POUNDS	PARRY LIMITATIONS
Wall Shield	30	40	45–50	NONE
Full Shield	25	25	25–30	NONE
Normal Shield	20	20	15–20	NONE
Target Shield	20	10	5–10	NONE
Main Gauche	15*	0	1–3	Cannot parry missiles.
One-Handed Arms	5*	0	—	Cannot parry missiles.
Two-Handed Arms	5*	0	—	Cannot parry missiles/ parries one-handed arms at 50% (maximum).
Pole Arms	5*	0	—	Parries non-pole arms at 50% (maximum).
Terrain	(Variable)		—	To be determined by the referee (i.e., a stone wall could be used to parry a missile attack).

*Can only be used if weapon not used to attack with.

TABLE 8.26 DEFENSIVE BONUSES AND PENALTIES TABLE

(– is beneficial to the defender, effects cumulative)

CATEGORY	EFFECT
Each unit add due to physical quickness, defensive items, superior armor and/or shield, etc.	– 5
Quickness penalty (See Armor Table)	+ (Variable)
Shield bonus (See Shield-Parry Table)	– (Variable)
Miscellaneous (Determined by referee)	± (Variable)

TABLE 8.28 FIRST SWING DETERMINATION TABLE

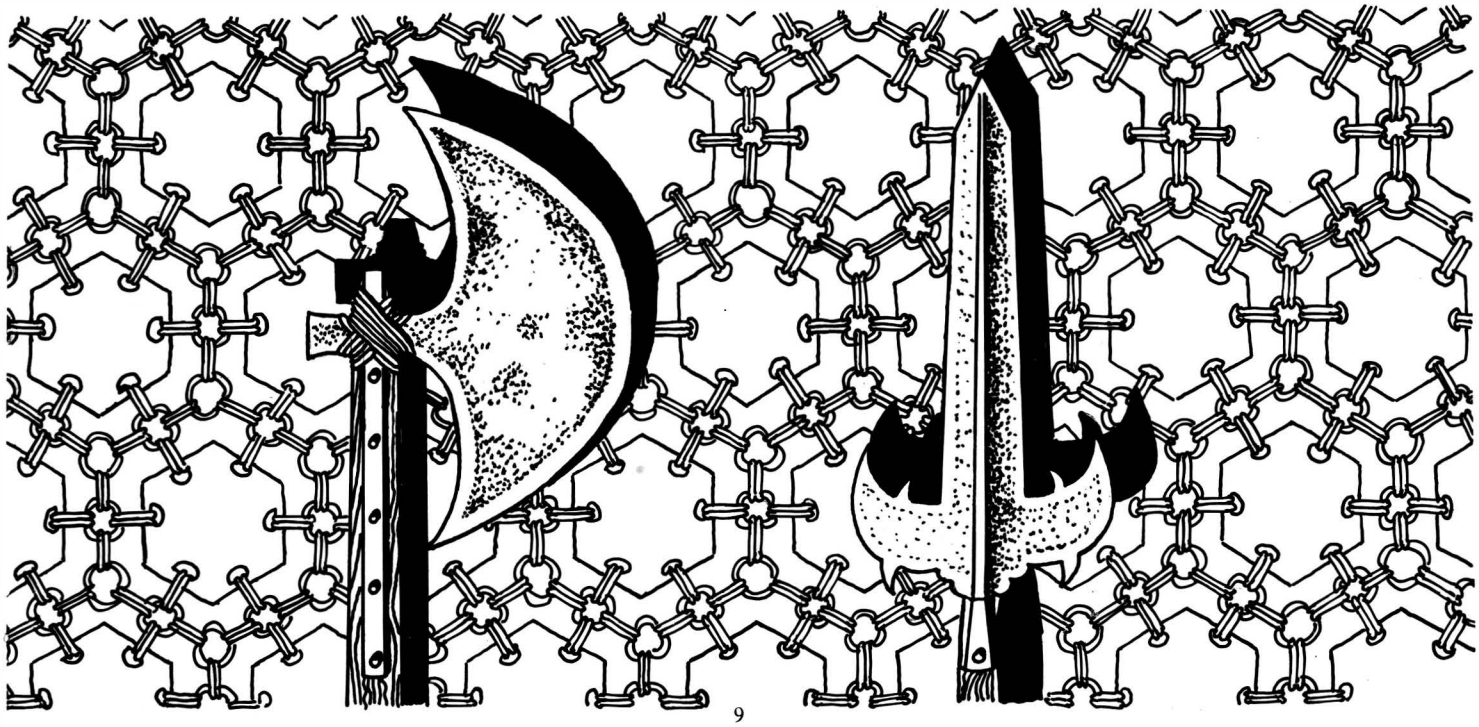
(Highest total swings first, effects cumulative)

CATEGORY	EFFECT	NOTE
Strength	+ 10	Applies only to stronger combatant.
Weapon ready	+ 30	
Quickness	+ (1–100)	Based on a 1–100 quickness range. This may vary according to the game system employed.
One-handed weapon	0	
Two-handed weapon	– 10	
Pole Arm	+ 40	First round of combat between two given opponents. (OR)
Pole Arm	– 20	All subsequent rounds between same opponents.
Shield	– 10	
Surprised	– 40	
Encumbered	– 40	
Wounded more than 50%	– 40	Concussion hits.
Moving	– (Variable)	Subtraction equal to percentage of movement allowance expended.
Longer weapon	+ 10	
Longer weapon	+ 30	Where one or both combatants are charging.
Two weapon combination	– 5	

TABLE 8.29 MANEUVER BONUSES AND PENALTIES TABLE

(+ is beneficial to the maneuvering combatant, effects cumulative)

CATEGORY	EFFECT	NOTE
Agility and quickness	– 35 to + 35	Range based on humanoid agility and quickness.
Wounded more than 25%	– 10	Concussion hits.
Wounded more than 50%	– 10	Concussion hits.
Wounded more than 75%	– 10	Concussion hits.
Armor	– (Variable)	See Armor Table for Maneuver Penalty.
Experience level, training,	± (Variable)	To be determined according to game system.
Bonuses due to spells	± (Variable)	To be determined according to game system.
Unusual absurdities	± (Variable)	To be determined by the referee.
Miscellaneous	± (Variable)	To be determined according to game system.



Fumbles 8.21	Hand Arms (1-hand)	Hand Arms (2-hand)	Spear + Pole Arms	Mounted Arms	Thrown Arms	Bows
01-25	Lose your grip and the opportunity to get in an open blow. Maybe you will improve.	Lose your grip. You lose the opportunity to take an open swing.	Lose your grip. You lose the opportunity to take an open swing.	Lose your grip. You lose the opportunity to take an open strike.	Lose your grip. You elect not to attack because of lost control.	Lose your grip. You elect not to attack. Good choice.
26-30	Drop your weapon. It will take 1 round to draw a new one, or 2 rds. to recover old one.	Drop your weapon. It will take 2 rds. to draw new one or 4 rounds to recover old one.	Fumble your delivery. You lose the option to attack but can still parry.	Fumble your delivery. You lose 2 rounds but can still parry.	You fumble your delivery and hang onto your weapon. Subtract 10% from your next attack.	One's ten thumbs just cannot handling loading. You lose the round.
31-40	You slip with grace and lose the opportunity to get in the vital blow.	You slip into fog of mind. You lose 1 round in order in collect your thoughts.	You slip and are stunned for 1 round. Alright, you just look clumsy. Try again.	You slip and lose your saddle position. You lose 2 rounds but can still parry.	You slip and lose 2 rounds to fully recover. You hold onto weapon and can still parry.	You fumble your ammunition. You lose 2 rounds trying to recover. Real weak, kid.
41-50	Bad followthrough. You lose your opportunity and give yourself 1 hit. Real weak.	Stumble over an unseen imaginary deceased turtle. You lose 2 rounds of offensive action but can still parry.	Lose your grip and juggle weapon for 2 rounds. You can still parry. Your next swing is at -10%.	Your mount rears and you are quite stunned for 2 rounds during the recovery.	You fumble your weapon after losing your grip. You are stunned for 3 rounds.	Break arrow and lose your cool. You find yourself out of 2 rounds of action.
51-60	You slip without grace and lose 2 rounds worth of opportunities. Good luck pal.	Bad move. You lose 2 rounds of open swings. Fortunately, you can still parry.	You slip and almost fall. You are stunned and unable to parry for 2 rounds.	You lose your grip and fumble your weapon. You are stunned for 3 rounds.	Poor release. Weapon lands harmlessly 20 feet to the left of target.	Drop your arrow. You lose 2 rounds reloading. Try hand arms next time.
61-70	Lose your grip and juggle your weapon for 2 rounds. You can still parry.	Lose your grip and juggle your weapon for 2 rounds. You can still parry.	Lose your grip and juggle weapon for 3 rounds. Your next swing is at -10%.	Your poor mount stumbles and you are stunned and unable to parry for 2 rounds.	Very poor release sends weapon off directly to the right. Reroll if someone lies in the new path.	Drop your bow you lose 2 rounds while retrieving it and reloading.
71-80	Lose your grip and juggle your weapon for 2 rounds. Unfortunately, you cannot parry.	Very bad move. You are stunned and unable to parry for 2 rds. Not good.	Fumble your followthrough. You lose 3 rounds. You are stunned for 2 rounds.	You break your weapon and lose 2 rounds while drawing a new one.	You slip and lose 3 rounds to fully recover. You hold onto weapon, but cannot parry.	Bowstring breaks. You lose 2 rounds drawing a new weapon or 6 rounds while restringing bow.
81-85	You lose your "wind" and realise that you should relax and not swing for 2 rds.	Lose your grip and juggle your weapon for 3 rounds. You can still parry.	Clumsy move. You are stunned and unable to parry for 3 rounds.	You drop your weapon in one of your lighter moments. Lose 2 rounds drawing a new one.	You drop your weapon. It will take 2 rounds to draw new one or 4 rounds to recover old one.	You fumble your weapon. You are stunned and quite unable to parry for the next 3 rounds.
86-90	Foe's smooth moves leave you stunned for 2 rounds. Hopefully, you will learn.	Incredibly bad move. You are stunned and unable to parry for 3 rounds.	Drop your weapon. It will take 2 rounds to draw new one or 6 rds to recover old one.	You break your weapon and lose 2 rounds drawing a new one. You take 10 hits.	You fumble your weapon badly but hang onto it. You are stunned and unable to parry for 6 rounds.	You let your arrow fly much too soon. You strike 20 feet short of target. You are out 2 rds.
91-95	You stumble. The classless display leaves you stunned for 3 rounds. You might still survive.	You stumble and nearly fall down in an apparent attempt to commit suicide. You are stunned 4 rounds.	You trip and fall. It will take 4 rounds to recover you are unable to parry for 3 rounds.	Your seating is improper and you find yourself stunned and unable to parry for 3 rounds.	You let go of weapon too early and send it off 30 feet behind you.	Slip and fall down. Your shot goes astray. You are stunned for 6 rounds, and unable to parry 2 rounds.
96-99	Swallow tongue in the excitement. You are stunned and unable to parry for 3 rounds.	You trip and fall. It will take 4 rounds to recover. You are unable to parry for 3 rounds.	You injure your shoulder. You are stunned and unable to parry for 3 rounds and fight at -25%	Your body absorbs the impact. You take 20 hits and are stunned and unable to parry for 6 rounds.	You fall down. Your shot goes astray. You are stunned for 12 rounds.	Break your bow. You are stunned and unable to parry for 4 rds of action. Good luck, pal.
100	Bad taste and poor execution. You attempt to maim yourself. Roll on the "D" critical table (slashes).	Worst move anyone has seen in ages. 50% chance you are out 2 days with a pulled groin. 50% chance opponent out 3 rounds laughing.	You break your weapon and are stunned and not able to parry for 6 rounds.	You fall off of your mount. Role on the "D" crush critical strike table.	You hit yourself during delivery. Roll on the "D" critical strike table (crushes).	Poor judgement. You let arrow fly and lose an ear. +5 hits. You take 2 hits per round.

8.22 MANEUVER / MOVEMENT TABLE

MODIFIED, OPEN-ENDED ROLL	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 are 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 rounds, stunned 3 rounds.	Fall. Break leg. +15 Hits. You are out for 6 rounds.	Fall. +30 Hits. You are out 6 rounds. Shatter knee. You are at -80%.	Fall. Break both arms and neck. +30 Hits. You are out 60 rounds.	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. You break your wrist. You are out 2 rounds. Not very smooth.	Fall. +12 Hits. Break arm. You are out for 6 rounds.	Fall. +30 Hits. You are out 9 rounds. 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. You are out for 18 rounds. 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. You break your wrist. You are out 2 rounds. Not very smooth.	Fall. +10 Hits. You break your leg. You are at -75%. You are out 6 rounds.
01 — 20	80	60	50	10	5	Fail to act.	Fall down. +5 Hits. You are out for 3 rounds.	Fall. +5 Hits. You pull a leg muscle. You are at -25%. You are out 2 rounds.	Fall. +15 Hits. Break 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. You are out for 2 rounds.	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. You are out for 3 rounds.	Fall. Sprain ankle and tear ligament. You are at -30%. +15 Hits.
56 — 65	100	90	80	40	30	20	10	Fail to act.	Fall down. +7 Hits. You take 3 hits per round. You are 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	Supermove. You feel great. Subtract 4 hits from your current total.	Excellent move. You are unstunned. Add 10 to allies' rolls for 2 rounds.	120	110	90	80
186 — 225	150	140	Great move. You feel better. Subtract 4 hits from current total.	Brilliant. Move inspires all. You are unstunned. Your allies are at +10% for 2 rounds.	Move inspires your allies. Add 20 to friendly rolls for 3 rounds.	Move inspires your allies. Add 30 to friendly rolls for 2 rounds.	120	100	90
226 — 275	150	Incredible move. You feel great. Subtract 3 from your current hit total.	Brilliant. Move inspires all. You are unstunned. Your allies are at +10% for 2 rounds.	Move inspires your allies. Add 20 to friendly rolls for 3 rounds.	Move inspires your allies. Add 25 to friendly rolls for 3 rounds.	Move inspires your allies. Add 30 to friendly rolls for 3 rounds.	You have half the round to act.	100	100
276+	Incredible move. You feel great. Subtract 3 from your current hit total.	Brilliant. Move inspires all. Your allies are at +10% for 2 rounds.	Move inspires your allies. Add 20 to friendly rolls for 3 rounds.	Move inspires your allies. Add 25 to friendly rolls for 3 rounds.	Move inspires your allies. Add 30 to friendly rolls for 3 rounds.	Move inspires your allies. Add 30 to friendly rolls for 4 rounds.	Move inspires your allies. Add 30 to friendly rolls for 6 rounds.	Move stuns all foes within 30 feet. You still have half the round to act.	Move stuns all foes within 50 feet.

Critical Strikes Slashes 8.11	A	B	C	D	E
01-05	ZIP	WEAK STRIKE YIELDS NO EXTRA DAMAGE. +0	+1 HIT	+2 HITS	+3 HITS
06-10	+1 HIT	+2 HITS	+3 HITS	+4 HITS	UNBALANCE FOE. +5 HITS. YOU RECEIVE INITIATIVE NEXT ROUND.
11-15	YOU RECEIVE INITIATIVE NEXT ROUND. +1 HIT	GLANCING BLOW TO FOE'S SIDE. +3 HITS. YOU RECEIVE INITIATIVE NEXT ROUND.	BLOW TO FOE'S SIDE YIELDS +6 HITS. YOU RECEIVE INITIATIVE NEXT ROUND.	+3 HITS FOE MUST PARRY FOR NEXT ROUND OF ACTION.	+4 HITS FOE MUST PARRY NEXT ROUND OF ACTION.
16-20	FOE MUST PARRY NEXT ROUND. +1 HIT	BLOW TO SIDE. +2 HITS. FOE MUST PARRY NEXT ROUND AT -10%.	BLOW TO SIDE. +4 HITS. FOE MUST PARRY NEXT ROUND -20%.	MINOR SIDE WOUND. FOE FIGHTS AT -10%. +2 HITS. YOU RECEIVE INITIATIVE NEXT ROUND.	STUN FOE FOR 1 ROUND. FOE MAY NOT PARRY. ADD +10% TO YOUR NEXT SWING.
21-35	FOE MUST PARRY NEXT ROUND. +2 HITS. ADD +10% TO NEXT SWING.	FOE MUST PARRY NEXT ROUND AT -20%. +2 HITS.	YOU BREAK FOE'S RIB. 3 EXTRA HITS. FOE IS STUNNED NEXT ROUND.	STRIKE TO SIDE. FOE IS STUNNED FOR NEXT ROUND AND CANNOT PARRY. +3 HITS	FOE RECEIVES MINOR SIDE WOUND, FIGHTS AT -10% AND TAKES 1 HIT PER ROUND. +3 HITS.
36-45	MINOR CALF WOUND. FOE RECEIVES 1 HIT PER ROUND.	MINOR CALF WOUND. FOE TAKES 1 HIT PER ROUND. +2 HITS.	YOU SLASH FOE'S LEG. FOE TAKES 2 HITS PER ROUND. +2 HITS.	YOU SLASH FOE'S UPPER LEG AND DELIVER 3 EXTRA HITS. FOE TAKES 2 HITS A ROUND.	BLOW TO FOE'S UPPER LEG. IF FOE HAS LEG ARMOR +5 HITS. IF FOE HAS NO ARMOR, +3 HITS AND +3 HITS PER ROUND.
46-50	BLOW TO FOE'S BACK. +2 HITS. FOE MUST PARRY NEXT ROUND -30%.	BLOW TO FOE'S BACK. FOE MUST PARRY NEXT ROUND AT -30%. +4 HITS	BLOW TO FOE'S BACK STUNS FOE 1 ROUND. FOE MAY NOT PARRY. +3 HITS AND FOE TAKES 1 HIT PER ROUND.	STRIKE TO FOE'S LOWER BACK. FOE MAY NOT PARRY AND IS OUT NEXT ROUND. +3 HITS. FOE TAKES 2 HITS PER ROUND.	STRIKE TO FOE'S LOWER BACK. FOE MAY NOT PARRY AND IS OUT NEXT ROUND. +4 HITS. FOE TAKES 3 HITS PER ROUND.
51-55	BLOW TO FOE'S CHEST. +2 HITS. FOE MUST PARRY NEXT ROUND -25%. FOE'S WOUND GIVES 1 HIT PER ROUND.	MINOR CHEST WOUND. FOE TAKES 1 HIT PER ROUND AND MUST PARRY NEXT 2 ROUNDS. +3 HITS. FOE FIGHTS -5%.	MINOR CHEST WOUND. +4 HITS. FOE TAKES 2 HITS PER ROUND AND FIGHTS AT -10%. FOE MUST PARRY NEXT ROUND.	MEDIUM CHEST WOUND. +5 HITS. FOE TAKES 3 HITS PER ROUND, FIGHTS -15%, AND MUST PARRY NEXT ROUND.	CHEST WOUND. FOE TAKES 4 HITS PER ROUND, IS AT -10%, AND IS STUNNED 2 ROUNDS. +6 HITS.
56-60	MINOR THIGH WOUND. FOE TAKES 2 HITS PER ROUND AND MUST PARRY NEXT ROUND. +3 HITS.	MINOR THIGH WOUND. FOE TAKES 2 HITS PER ROUND. +4 HITS. FOE MUST PARRY NEXT 2 RDS.	MINOR THIGH WOUND. FOE TAKES 2 HITS PER ROUND. +5 HITS. FOE IS STUNNED NEXT ROUND.	MEDIUM THIGH WOUND. +6 HITS. FOE TAKES 2 HITS PER ROUND AND IS STUNNED 2 ROUNDS.	THIGH WOUND. FOE IS STUNNED FOR 2 ROUNDS. +8 HITS. FOE TAKES 5 HITS A ROUND.
61-65	MINOR FOREARM WOUND. +3 HITS. FOE TAKES 2 HITS PER ROUND AND IS AT -10%.	MINOR FOREARM WOUND. FOE IS STUNNED NEXT ROUND. +4 HITS. FOE TAKES 2 HITS PER ROUND AND IS AT -10%.	MEDIUM FOREARM WOUND. +4 HITS. FOE TAKES 3 HITS PER ROUND, IS AT -10%, AND IS STUNNED NEXT ROUND.	MEDIUM FOREARM WOUND. +4 HITS. FOE TAKES 3 HITS PER ROUND, IS AT -10%, AND IS STUNNED NEXT 2 ROUNDS.	FOREARM WOUND. FOE IS STUNNED FOR 2 ROUNDS. +6 HITS. FOE TAKES 3 HITS PER ROUND AND IS AT -15%.
66	YOU SHATTER SHOULDER IN FOE'S SHIELD ARM. ARM IS USELESS. +10% NEXT SWING. FOE IS STUNNED 3 ROUNDS. +9 HITS. YOUR INITIATIVE.	SHATTER ELBOW IN FOE'S WEAPON ARM. +8 HITS. FOE IS STUNNED 4 ROUNDS AND CANNOT PARRY DURING FIRST 2 ROUNDS.	YOU SHATTER FOE'S KNEE. FOE IS KNOCKED DOWN. +6 HITS. FOE AT -90% AND IS DOWN FOR 3 ROUNDS (AND CANNOT PARRY).	YOU KNOCK FOE OUT FOR 6 HOURS WITH A STRIKE TO SIDE OF HEAD. +15 HITS. IF FOE HAS NO HELM, YOU KILL HIM INSTANTLY.	SEVER FOE'S WEAPON ARM. +12 HITS. FOE EXPIRES IN 12 ROUNDS, DROPS IMMEDIATELY, ADD +10% TO YOUR NEXT SWING.
67-70	SLASH FOE'S NECK. +6 HITS. FOE IS STUNNED FOR 3 ROUNDS AND CANNOT PARRY DURING NEXT ROUND.	BLOW TO FOE'S NECK AREA. FOE TAKES 3 HITS PER ROUND AND FIGHTS AT -5%. STUN FOE 2 ROUNDS. +7 HITS.	SLASH FOE'S NECK. FOE IS STUNNED 4 ROUNDS AND CANNOT PARRY DURING NEXT 2 ROUNDS. +8 HITS. ADD +10% NEXT ROUND.	SLASH MUSCLE IN FOE'S SHOULDER AREA. +5 HITS. FOE IS STUNNED 3 ROUNDS, AND IS AT -20%. ADD +10% TO YOUR NEXT SWING.	SLASH TENDONS AND CRUSH THE BONE IN FOE'S SHIELD SHOULDER. ARM USELESS AND FOE TAKES 2 HITS PER ROUND. STUN FOE 4 ROUNDS.
71-75	SLASH TENDONS IN FOE'S LOWER LEG. FOE AT -30% AND TAKES 2 HITS PER ROUND. +4 HITS. STUN FOE 2 ROUNDS. POOR SUCKER.	SLASH MUSCLE IN FOE'S CALF. FOE IS STUNNED FOR 3 ROUNDS AND CANNOT PARRY DURING NEXT ROUND. +6 HITS. FOE AT -40%.	SLASH MUSCLE AND TENDONS IN FOE'S LOWER LEG. FOE IS STUNNED FOR 2 ROUNDS AND CANNOT PARRY. +7 HITS. FOE AT -45%.	SLASH MUSCLE AND SEVER TENDONS IN FOE'S LOWER LEG. FOE IS STUNNED FOR 3 ROUNDS AND CANNOT PARRY FOR NEXT 2. FOE AT -50%.	SLASH FOE'S LOWER LEG AND SEVER MUSCLE AND TENDONS. FOE AT -70% AND TAKES 3 HITS PER ROUND. +8 HITS. STUN FOE 6 ROUNDS.
76-80	SLASH FOE'S UPPER ARM. +5 HITS. FOE TAKES 3 HITS PER ROUND AND IS AT -25%. FOE IS STUNNED AND UNABLE TO PARRY 2 RDS.	SLASH MUSCLE IN FOE'S SHIELD ARM. FOE IS AT -30% AND TAKES 3 HITS PER ROUND. FOE IS STUNNED AND UNABLE TO PARRY FOR 2 RDS. +6 HITS.	SLASH MUSCLE AND TENDONS IN FOE'S SHIELD ARM. +9 HITS. FOE TAKES 4 HITS PER ROUND AND ARM IS USELESS. FOE IS STUNNED 6 ROUNDS.	SLASH MUSCLE AND TENDONS IN FOE'S WEAPON ARM. ARM IS USELESS AND FOE IS STUNNED 4 ROUNDS. FOE CANNOT PARRY NEXT 2 ROUNDS. +10 HITS.	SLASH TENDONS AND BREAK BONE IN FOE'S SHIELD ARM. ARM IS USELESS. +12 HITS. FOE IS STUNNED AND CANNOT PARRY FOR NEXT 3 ROUNDS.
81-85	SLASH FOE IN SIDE. +6 HITS AND A MAJOR WOUND. FOE TAKES 6 HITS A ROUND AND IS STUNNED 5 ROUNDS. ADD +20% TO YOUR NEXT SWING.	SLASH FOE IN SIDE. +7 HITS AND A MAJOR WOUND. FOE TAKES 6 HITS PER ROUND. FOE IS STUNNED AND CANNOT PARRY FOR NEXT 2 ROUNDS.	STRIKE TO FOE'S SIDE. +8 HITS. FOE TAKES 4 HITS PER ROUND AND IS AT -20%. FOE IS STUNNED AND CANNOT PARRY FOR NEXT 2 ROUNDS.	MAJOR ABDOMENAL WOUND. +10 HITS. FOE TAKES 8 HITS PER ROUND, IS STUNNED FOR 4 ROUNDS, AND IS UNABLE TO PARRY NEXT 2 RDS. FOE AT -10%.	SEVER OPPONENT'S HAND. +5 HITS. FOE IS STUNNED AND UNABLE TO PARRY FOR NEXT 12 ROUNDS. FOE THEN DIES.
86-90	SLASH FOE IN BACK. +8 HITS. FOE IS STUNNED AND CANNOT PARRY FOR 2 ROUNDS. WOUND YIELDS 2 HITS A ROUND. FOE AT -10%.	STRIKE TO BACK KNOCKS FOE DOWN. FOE IS STUNNED AND UNABLE TO PARRY FOR 3 ROUNDS. +10 HITS. FOE TAKES 3 HITS A ROUND.	BLAST TO BACK BREAKS BONE AND KNOCKS FOE DOWN. +9 HITS AND FOE AT -10%. FOE IS STUNNED AND UNABLE TO PARRY FOR 4 ROUNDS.	SEVER OPPONENT'S HAND. +6 HITS. FOE IS STUNNED FOR 6 ROUNDS, UNABLE TO PARRY. FOE THEN DROPS AND DIES 6 ROUNDS LATER.	SEVER FOE'S LEG. +15 HITS. FOE DROPS AND LAPSES INTO UNCONSCIOUSNESS. FOE DIES IN 9 ROUNDS. ADD +10% TO YOUR NEXT SWING.
91-95	CUT OFF FOE'S EAR. +3 HITS. FOE TAKES 3 HITS PER ROUND AND HEARS AT -50%. FOE IS STUNNED 3 ROUNDS AND UNABLE TO PARRY NEXT ROUND.	STRIKE TO FOE'S HIP. +7 HITS AND FOE IS STUNNED 3 RDS. FOE CANNOT PARRY NEXT ROUND AND FIGHTS -20%. ADD +10% TO YOUR NEXT SWING.	SEVER FOE'S LEG. FOE DROPS IMMEDIATELY AND DIES IN 6 ROUNDS DUE TO SHOCK AND BLOOD LOSS. +20 HITS.	SEVER FOE'S WEAPON ARM. FOE IS STUNNED AND UNABLE TO PARRY FOR NEXT 9 ROUNDS. FOE THEN DIES. +15 HITS.	SEVER FOE'S SPINE. +20 HITS. FOE COLLAPSES IN A SECOND, AND IS PARALYZED FROM THE NECK DOWN PERMANENTLY.
96-99	SLASH FOE'S NOSE. MINOR WOUND. +2 HITS AND A PERMANENT SCAR. FOE TAKES 2 HITS A ROUND AND IS AT -30%. FOE STUNNED 6 ROUNDS.	STRIKE TO FOE'S HEAD AND NECK BREAKS SKULL AND CAUSES MASSIVE BRAIN DAMAGE. FOE DROPS AND DIES IN 6 ROUNDS. +20 HITS.	SEVER FOES SHIELD ARM. FOE IS STUNNED UNABLE TO PARRY FOR NEXT 12 ROUNDS. FOE THEN DIES. +18 HITS	SLASH FOE'S SIDE. +20 HITS. FOE DIES IN 3 ROUNDS DUE TO MASSIVE INTERNAL ORGAN DAMAGE. FOE IS DOWN AND UNCONSCIOUS IMMEDIATELY.	STRIKE TO FOE'S HEAD DESTROYS BRAIN AND MAKES LIFE DIFFICULT FOR THE POOR FOOL. FOE EXPIRES IN A HEAP — IMMEDIATELY.
100	NECK STRIKE SEVERS CAROTID ARTERY AND JUGULAR VEIN. FOE'S NECK IS BROKEN. FOE DIES IN 1 ROUND OF INTENSE AGONY.	DISEMBOWEL FOE, KILLING HIM INSTANTLY. 25% CHANCE YOUR WEAPON IS STUCK IN OPPONENT DURING NEXT ROUND.	DESTROY FOE'S EYES. +5 HITS AND FOE IS STUNNED AND UNABLE TO PARRY FOR NEXT 30 ROUNDS.	IMPALE ADVERSARY IN HEART. +12 HITS. FOE DIES INSTANTLY. HEART IS DESTROYED. 25% CHANCE YOUR WEAPON IS STUCK IN FOE 2 ROUNDS.	STRIKE TO FOE'S GROIN AREA. +10 HITS. ALL VITALS ARE DESTROYED IMMEDIATELY. FOE IS STUNNED AND UNABLE TO PARRY FOR 12 ROUNDS.

Critical Strike/Puncture 8.12	A	B	C	D	E
01-05	ZIP	GLANCING BLOW. NO EXTRA DAMAGE. +0	+1 HIT	+2 HITS	+3 HITS
06-10	+1 HIT	+2 HITS	+3 HITS	+4 HITS	UNBALANCE FOE WITH A NICE GRAZING STRIKE. YOU GAIN INITIATIVE. +5 HITS
11-15	YOU RECEIVE INITIATIVE FOR NEXT ROUND. +1 HIT	GLANCING BLOW TO FOE'S SIDE. +3 HITS. YOU RECEIVE INITIATIVE NEXT ROUND.	BLOW TO FOE'S SIDE. +5 HITS. YOU RECEIVE INITIATIVE NEXT ROUND.	+2 HITS FOE MUST PARRY FOR NEXT ROUND.	+3 HITS FOE MUST PARRY FOR NEXT ROUND.
16-20	FOE MUST PARRY NEXT ROUND. +1 HIT	BLOW TO SIDE. +2 HITS. FOE MUST PARRY NEXT ROUND AT -10%.	BLOW ACROSS SIDE. FOE MUST PARRY NEXT RD. AT -20%. +3 HITS	MINOR SIDE WOUND. FOE FIGHTS AT -10%. YOU HAVE THE INITIATIVE NEXT ROUND.	STUN FOE FOR 1 ROUND. ADD 20% TO YOUR NEXT ATTACK.
21-35	FOE MUST PARRY NEXT ROUND. +2 HITS. ADD +10% TO NEXT ATTACK.	FOE MUST PARRY NEXT ROUND AT -20%. +2 HITS	YOU WOUND FOE ALONG SIDE OF CHEST. FOE IS STUNNED 1 ROUND AND TAKES 1 HIT PER ROUND.	YOU WOUND FOE ALONG SIDE OF HIP. FOE IS STUNNED 1 ROUND AND TAKES 2 HITS PER ROUND.	FOE RECEIVES MINOR SIDE WOUND. +2 HITS. FOE IS AT -10%. FOE TAKES 2 HITS PER ROUND.
36-45	MINOR CALF WOUND. FOE RECEIVES 1 HIT PER ROUND.	MINOR CALF WOUND. FOE TAKES 1 HIT PER ROUND. +2 HITS	MINOR CALF WOUND. FOE TAKES 2 HITS PER ROUND.	MINOR THIGH WOUND. FOE TAKES 3 HITS PER ROUND.	THIGH STRIKE. IF FOE HAS LEG ARMOR, +3 HITS. IF FOE HAS NO ARMOR, +2 HITS AND 3 HITS PER ROUND.
46-50	STRIKE ALONG FOE'S BACK. +2 HITS. FOE MUST NOW PARRY NEXT ROUND AT -30%.	STRIKE ALONG FOE'S BACK. FOE IS STUNNED FOR 1 ROUND AND TAKES 1 HIT PER ROUND.	STRIKE ACROSS FOE'S BACK STUNS FOE FOR 2 ROUNDS. FOE TAKES 1 HIT PER ROUND.	STRIKE TO FOE'S LOWER BACK. FOE IS STUNNED AND UNABLE TO PARRY NEXT ROUND. +6 HITS.	STRIKE TO FOE'S LOWER BACK. FOE TAKES 3 HITS PER RD. +5 HITS. FOE IS STUNNED AND UNABLE TO PARRY DURING NEXT ROUND.
51-55	STRIKE TO FOE'S CHEST. FOE MUST PARRY NEXT ROUND AT -25%. FOE TAKES 2 HITS PER ROUND.	MINOR CHEST WOUND. FOE TAKES 2 HITS PER ROUND. +3 HITS. FOE MUST PARRY FOR NEXT 2 ROUNDS.	MINOR CHEST WOUND. FOE TAKES 2 HITS PER ROUND. +3 HITS. FOE IS STUNNED FOR 2 ROUNDS.	STRIKE TO CHEST. +5 HITS. FOE TAKES 3 HITS PER ROUND AND FIGHTS AT -15%. FOE MUST PARRY NEXT ROUND.	CHEST WOUND. FOE TAKES 4 HITS PER ROUND. +5 HITS. FOE FIGHTS AT -10%. FOE IS STUNNED AND UNABLE TO PARRY NEXT ROUND.
56-60	MINOR THIGH WOUND. FOE TAKES 2 HITS PER ROUND. +2 HITS. FOE IS STUNNED NEXT ROUND.	MINOR THIGH WOUND. FOE TAKES 2 HITS PER ROUND. +3 HITS. FOE IS STUNNED AND UNABLE TO PARRY NEXT ROUND.	MINOR THIGH WOUND. +5 HITS. FOE TAKES 2 HITS PER ROUND AND IS AT -10%. FOE IS STUNNED FOR 2 ROUNDS.	STRIKE TO THIGH. FOE TAKES 3 HITS PER ROUND. FOE IS STUNNED AND UNABLE TO PARRY FOR THE NEXT ROUND. +3 HITS.	THIGH WOUND. FOE TAKES 5 HITS PER ROUND. +6 HITS. FOE IS STUNNED AND UNABLE TO PARRY NEXT ROUND.
61-65	MINOR FOREARM WOUND. +2 HITS. FOE TAKES 2 HITS PER ROUND. FOE IS AT -10%.	MINOR FOREARM WOUND. FOE IS STUNNED DURING NEXT ROUND. +2 HITS. FOE IS AT -10% AND TAKES 2 HITS PER ROUND.	FOREARM WOUND. FOE TAKES 2 HITS PER ROUND AND IS AT -10%. +3 HITS. FOE IS STUNNED FOR 2 ROUNDS.	FOREARM WOUND. FOE TAKES 3 HITS PER ROUND AND IS AT -10%. +3 HITS. FOE IS STUNNED FOR 2 ROUNDS.	FOREARM WOUND. FOE TAKES 3 HITS PER ROUND AND IS AT -15%. +5 HITS. FOE IS STUNNED FOR 2 ROUNDS.
66	STRIKE THROUGH FOE'S SHIELD SHOULDER. ARM IS USELESS. ADD +10% TO YOUR NEXT ATTACK. FOE IS STUNNED FOR 3 ROUNDS.	STRIKE SHATTERS ELBOW IN FOE'S WEAPON ARM. +3 HITS. ARM IS USELESS. FOE IS STUNNED 4 ROUNDS AND CANNOT PARRY FOR 2 RDS.	STRIKE SHATTERS FOE'S KNEE. FOE IS KNOCKED DOWN, IS AT -90%, AND STAYS DOWN FOR 3 ROUNDS. FOE IS UNABLE TO PARRY 2 RDS.	STRIKE TO SIDE OF HEAD. FOE IS KNOCKED OUT FOR 6 HOURS. +10 HITS. IF FOE HAS NO HELM, YOU KILL HIM.	STRIKE THROUGH BOTH OF FOE'S LUNGS. FOE DROPS AND PASSES OUT. FOE DIES IN 6 ROUNDS. ADD +10% TO YOUR NEXT ATTACK.
67-70	STRIKE ALONG FOE'S NECK. +5 HITS. FOE IS STUNNED FOR 3 ROUNDS AND CANNOT PARRY NEXT ROUND.	STRIKE TO FOE'S NECK AREA. FOE TAKES 3 HITS PER ROUND AND IS AT -5%. FOE IS STUNNED FOR 2 ROUNDS.	STRIKE ALONG FOE'S NECK. FOE IS STUNNED FOR 4 RDS. AND CANNOT PARRY FOR 2 ROUNDS. ADD +15% TO YOUR NEXT ATTACK.	STRIKE FOE IN SHOULDER. +3 HITS. FOE IS STUNNED AND UNABLE TO PARRY FOR 2 ROUNDS. FOE IS AT -20%.	STRIKE FOE IN SHOULDER. SEVER MUSCLE AND TENDONS. ARM IS USELESS. FOE TAKES 3 HITS PER ROUND. FOE IS STUNNED FOR 6 ROUNDS.
71-75	STRIKE LOWER LEG. TEAR TENDONS. FOE IS AT -25%. +3 HITS. FOE IS STUNNED AND UNABLE TO PARRY NEXT ROUND.	STRIKE TO FOE'S CALF. SLASH MUSCLE. FOE IS AT -40%. +3 HITS. FOE IS STUNNED AND UNABLE TO PARRY FOR 2 ROUNDS.	STRIKE TO LOWER LEG. FOE IS STUNNED AND UNABLE TO PARRY FOR 2 ROUNDS. +5 HITS. FOE IS AT -50%. SLASH MUSCLE AND TENDONS.	STRIKE TO LOWER LEG. FOE IS AT -50%. SLASH MUSCLE AND CARTILAGE. +6 HITS. FOE IS STUNNED AND UNABLE TO PARRY 2 ROUNDS.	STRIKE THROUGH LOWER LEG. FOE IS STUNNED AND UNABLE TO PARRY FOR 3 ROUNDS. SEVER MUSCLE. FOE IS AT -75%.
76-80	STRIKE TO FOE'S UPPER ARM. +3 HITS. FOE TAKES 3 HITS PER ROUND AND IS AT -25%. FOE IS STUNNED FOR 2 ROUNDS.	STRIKE THROUGH MUSCLE IN FOE'S SHIELD ARM. FOE IS AT -30% AND TAKES 3 HITS PER ROUND. FOE IS STUNNED FOR 3 ROUNDS.	STRIKE FOE IN SHIELD ARM. TEAR MUSCLE AND TENDONS. FOE TAKES 3 HITS PER ROUND, FIGHTS AT -25%. FOE IS STUNNED 6 ROUNDS.	STRIKE FOE IN SHIELD ARM. ARM IS USELESS. FOE IS STUNNED FOR 6 ROUNDS. FOE TAKES 3 HITS PER RD. +12 HITS.	STRIKE FOE IN WEAPON ARM, BONE IS BROKEN. FOE IS STUNNED AND UNABLE TO PARRY FOR 3 ROUNDS. +10 HITS.
81-85	SIDE WOUND. FOE TAKES 5 HITS PER ROUND AND IS STUNNED FOR 6 ROUNDS. ADD +20% TO YOUR NEXT ATTACK.	SIDE WOUND. +6 HITS. FOE TAKES 5 HITS PER ROUND. FOE IS AT -25%. FOE IS STUNNED AND UNABLE TO PARRY FOR 3 ROUNDS.	SIDE WOUND. +7 HITS. FOE TAKES 5 HITS PER RD. FOE IS AT -30%. FOE IS STUNNED AND UNABLE TO PARRY FOR 3 ROUNDS.	MAJOR ABDOMENAL WOUND. FOE TAKES 6 HITS PER ROUND. +10 HITS. FOE IS STUNNED AND UNABLE TO PARRY FOR 3 RDS. FOE IS AT -20%.	STRIKE THROUGH FOE'S BACK SEVERS A VEIN. FOE IS STUNNED AND UNABLE TO PARRY FOR 12 ROUNDS - THEN DIES.
86-90	STRIKE FOE IN BACK. FOE IS AT -20% AND TAKES 3 HITS PER ROUND. FOE IS STUNNED AND UNABLE TO PARRY 2 RDS.	STRIKE TO BACK OF HEAD. IF FOE HAS NO HELM, HE DIES. IF FOE HAS A HELM, +6 HITS AND FOE IS DOWN FOR 2 ROUNDS.	STRIKE TO BACK OF HEAD. IF FOE HAS NO HELM, HE DIES. IF FOE HAS A HELM, HE IS KNOCKED DOWN AND STUNNED FOR 6 ROUNDS.	STRIKE THROUGH FOE'S KIDNEYS. FOE DROPS. +9 HITS. FOE DIES AFTER 6 ROUNDS OF VERY INTENSE AGONY. SAD.	STRIKE THROUGH LEG SEVERS AN ARTERY. FOE DROPS, LAPSES INTO UNCONSCIOUSNESS, AND DIES AFTER 12 ROUNDS.
91-95	RIP OFF FOE'S EAR. +3 HITS. FOE TAKES 2 HITS PER ROUND, HEARS AT -50%. FOE IS STUNNED AND NOT ABLE TO PARRY 2 ROUNDS.	STRIKE THROUGH FOE'S HIP. FOE TAKES 3 HITS PER RD. +5 HITS. FOE IS STUNNED NEXT ROUND. FOE IS AT -25%.	STRIKE THROUGH FOE'S CHEST SEVERS A VEIN. FOE DROPS IMMEDIATELY AND DIES IN 9 ROUNDS DUE TO SHOCK AND BLOOD LOSS.	STRIKE THROUGH FOE'S SIDE DESTROYS A VARIETY OF ORGANS. FOE DROPS. FOE FIGHTS NORMALLY FOR 6 ROUNDS THEN DIES.	SEVER ARTERY IN FOE'S ARM. FOE IS STUNNED FOR 12 ROUNDS AND THEN DIES.
96-99	STRIKE FOE'S NOSE. THERE IS A PERMANENT SCAR. FOE TAKES 3 HITS PER RD. FOE IS STUNNED AND NOT ABLE TO PARRY 3 ROUNDS.	STRIKE THROUGH FOE'S CHEEK. FOE DROPS AND DIES AFTER 9 ROUNDS OF INCAPACITY. ADD +20% TO YOUR NEXT ATTACK.	STRIKE THROUGH FOE'S NECK BREAKS BACKBONE AND SEVERS SPINE. FOE IS PARALYZED FROM THE NECK DOWN...PERMANENTLY.	NAIL SUCKER IN LOWER BACK. INTERNAL BLEEDING AND SHOCK KILL FOE IN 6 ROUNDS. FOE IS DOWN AND OUT.	SHOT THROUGH HEART SENDS FOE REELING 10 FEET TO A SPOT SUITABLE FOR DYING. WEAPON IS STUCK IN REELING FOE.
100	STRIKE THROUGH NECK. SEVER VEIN AND ARTERY. FOE CANNOT BREATH. FOE DROPS AND DIES OF A MASSIVE HEART FAILURE.	STRIKE THROUGH FOE'S EYE. FOE DIES INSTANTLY. ADD +10% TO ALL FRIENDLY ATTACKS WITHIN 30 FEET NEXT ROUND.	SHOT THROUGH BOTH EARS PROVES EFFECTIVE. FOE DIES INSTANTLY. ADD +20% TO YOUR NEXT 6 ROUNDS. PRETTY SHOT.	STRIKE THROUGH BRAIN MAKES LIFE DIFFICULT FOR FOE. YOU HAVE 1/2 ROUND LEFT TO ACT. ADD +20% TO YOUR NEXT ATTACK.	STRIKE THROUGH FOE'S EYE. FOE DIES INSTANTLY. ADD +25% TO YOUR NEXT ATTACK. CARRY ON.

Critical Strikes & Crushes 8.13	A	B	C	D	E
01-05	ZIP	WEAK GRIP. NO EXTRA DAMAGE. +0	+1 HIT	+2 HITS	+3 HITS
06-10	+1 HIT	+2 HITS	+3 HITS	+4 HITS	GLANCING BLOW. +6 HITS. FOE IS SLIGHTLY UNBALANCED. YOU HAVE INITIATIVE NEXT ROUND.
11-15	GLANCING BLOW. FOE TAKES +3 HITS. YOU HAVE THE INITIATIVE NEXT ROUND.	GLANCING BLOW. +3 HITS. YOU HAVE THE INITIATIVE NEXT ROUND.	BLOW TO FOE'S SIDE. +7 HITS. YOU RECEIVE INITIATIVE NEXT ROUND.	+5 HITS FOE MUST PARRY NEXT ROUND AT -10%.	+6 HITS FOE IS STUNNED FOR 1 ROUND. ADD +5% TO YOUR NEXT SWING.
16-20	+2 HITS FOE MUST PARRY NEXT ROUND OF ACTION.	BLOW TO FOE'S SIDE. +4 HITS. FOE MUST PARRY NEXT ROUND AT -10%.	BLOW TO FOE'S SIDE. +6 HITS. FOE MUST PARRY NEXT ROUND AT -20%.	MINOR FRACTURE OF RIBS. +5 HITS. FOE FIGHTS AT -5%. YOU HAVE INITIATIVE NEXT RD.	STRONG BLOW. FOE IS STUNNED AND UNABLE TO PARRY NEXT. ADD +10% TO YOUR NEXT SWING.
21-35	FOE MUST PARRY NEXT ROUND. +3 HITS. ADD +5% TO YOUR NEXT SWING.	FOE MUST PARRY NEXT ROUND AT -20%. +4 HITS	YOU BREAK FOE'S RIB. +5 HITS. FOE IS STUNNED DURING NEXT ROUND. HARD BLOW TO FOE'S SIDE.	STRIKE TO FOE'S SIDE. +4 HITS. FOE IS STUNNED AND UNABLE TO PARRY DURING NEXT ROUND.	STRIKE CRACKS FOE'S RIBS. +6 HITS. FOE IS AT -10%. YOU HAVE INITIATIVE NEXT ROUND.
36-45	BRUISE FOE'S CALF. +6 HITS. YOU GAIN THE INITIATIVE. FOE FIGHTS -5% FOR NEXT ROUND.	BRUISE FOE'S CALF. +6 HITS. YOU GAIN THE INITIATIVE. FOE FIGHTS -20% FOR NEXT 2 ROUNDS.	BRUISE FOE'S CALF. +9 HITS. YOU GAIN THE INITIATIVE. FOE FIGHTS -25% FOR NEXT 2 ROUNDS.	MAJOR CALF BRUISE. +10 HITS. FOE FIGHTS -10%. YOU HAVE THE INITIATIVE NEXT ROUND.	STRIKE TO UPPER LEG. MINOR FRACTURE. +12 HITS. FOE FIGHTS -10%. YOU HAVE THE INITIATIVE NEXT ROUND.
46-50	BLOW TO FOE'S BACK. +4 HITS. FOE MUST PARRY NEXT ROUND AT -25%. HARD, GLANCING STRIKE.	BLOW TO FOE'S BACK. +6 HITS. FOE MUST PARRY NEXT ROUND AT -25%.	HARD BLOW TO BACK. +5 HITS. FOE IS STUNNED AND UNABLE TO PARRY NEXT ROUND. YOU HAVE THE INITIATIVE FOR 2 ROUNDS.	HARD BLOW TO BACK. +10 HITS. FOE IS STUNNED AND UNABLE TO PARRY DURING NEXT ROUND.	STRIKE TO FOE'S LOWER BACK. +15 HITS. FOE IS STUNNED AND UNABLE TO PARRY DURING NEXT ROUND.
51-55	BLOW TO FOE'S CHEST. +5 HITS. FOE MUST PARRY NEXT ROUND AT -25%. FOE HAS A BRUISED RIB.	BLOW TO FOE'S CHEST. +6 HITS. FOE MUST PARRY FOR NEXT 2 ROUNDS.	HARD BLOW TO CHEST. +5 HITS. FOE FIGHTS -10%. FOE IS STUNNED DURING NEXT ROUND.	BLOW TO CHEST. +10 HITS. FOE HAS A PAIR OF BROKEN RIBS AND MUST FIGHT AT -15%.	BLOW TO CHEST. +15 HITS. FOE IS STUNNED FOR 2 ROUNDS. FOE FIGHTS -15%.
56-60	STRIKE FOE'S THIGH. +5 HITS. FOE IS FORCED TO PARRY NEXT ROUND AT -25%. GLANCING BLOW.	STRIKE FOE'S THIGH. +6 HITS. FOE HAS A BRUISE AND IS FORCED TO PARRY 1 RD. FOE IS AT -5%.	STRIKE FOE'S THIGH. +6 HITS. FOE IS AT -5%. ADD 10% TO YOUR NEXT SWING. FOE MUST PARRY NEXT ROUND.	BLOW TO THIGH. FOE IS STUNNED NEXT ROUND. +6 HITS. FOE IS AT -10% AND IS UPSET.	BLOW TO THIGH. FOE IS STUNNED AND UABLE TO PARRY NEXT ROUND. +10 HITS. FOE IS AT -10%.
61-65	BLOW TO FOE'S FOREARM. +5 HITS. FOE IS STUNNED DURING NEXT ROUND. ADD +20% TO YOUR NEXT SWING.	BLOW TO FOE'S FOREARM. FOE IS AT -10%. +9 HITS. FOE IS STUNNED DURING NEXT ROUND.	DISARM FOE WITH A BLOW TO FOREARM. +8 HITS. FOE IS STUNNED DURING NEXT ROUND.	BLOW TO FOREARM. FOE IS STUNNED AND UNABLE TO PARRY NEXT ROUND. +10 HITS. FOE AT -10%.	BLOW TO FOREARM. FOE DROPS WEAPON. FOE IS AT -15%. +10 HITS. FOE IS STUNNED FOR NEXT ROUND.
66	SHATTER SHOULDER IN FOE'S SHIELD ARM. ARM IS QUITE USELESS. FOE IS STUNNED AND UNABLE TO PARRY FOR NEXT 2 ROUNDS. +8 HITS.	SHATTER ELBOW IN FOE'S WEAPON ARM. ARM IS USELESS. FOE DROPS WEAPON, AND IS STUNNED AND UNABLE TO PARRY FOR 3 ROUNDS.	SHATTER FOE'S KNEE. +9 HITS. FOE IS KNOCKED DOWN AND IS STUNNED AND UNABLE TO PARRY FOR 3 ROUNDS. FOE AT -90%.	BLOW TO SIDE OF FOE'S HEAD. IF FOE HAS NO HELM, YOU CRUSH HIS SKULL. IF FOE HAS HELM, YOU KNOCK HIM OUT FOR 4 HOURS. +20 HITS.	BLOW TO BACK OF NECK CRUSHES BACKBONE AND SEVERS SPINE. +15 HITS. FOE DIES INSTANTLY. ADD +10% TO YOUR NEXT SWING.
67-70	STRIKE UPPER CHEST AREA. +8 HITS. FOE IS STUNNED FOR 3 ROUNDS AND UNABLE TO PARRY DURING NEXT ROUND.	STRIKE UPPER CHEST AREA. FOE IS STUNNED AND UNABLE TO PARRY FOR 2 ROUNDS. +10 HITS. FOE IS AT -10%.	STRIKE UPPER CHEST AREA. FOE IS STUNNED FOR 3 ROUNDS AND UNABLE TO PARRY DURING NEXT 2 ROUNDS. +10 HITS. FOE -10%.	BLOW TO FOE'S SHOULDER AREA. MINOR FRACTURE. FOE IS AT -20%. FOE IS STUNNED AND UNABLE TO PARRY FOR 2 ROUNDS.	BLOW TO FOE'S SHIELD SHOULDER. IF HAS A SHIELD, IT IS BROKEN. IF FOE HAS NO SHIELD, THE SHOULDER IS SHATTERED, ARM USELESS.
71-75	BLOW TO FOE'S LOWER LEG. BAD BRUISE. +5 HITS. FOE IS STUNNED FOR 2 ROUNDS AND UNABLE TO PARRY NEXT RD. FOE AT -20%.	BLOW BRUISES FOE'S CALF. FOE IS AT -35%. +10 HITS. FOE IS STUNNED FOR 2 ROUNDS AND UNABLE TO PARRY NEXT ROUND.	BLOW BRUISES FOE'S KNEE. FOE IS AT -40%. +10 HITS. FOE IS STUNNED AND UNABLE TO PARRY FOR 2 ROUNDS.	BLOW BREAKS BONE IN LEG. FOE IS AT -50%. +12 HITS. FOE IS STUNNED AND UNABLE TO PARRY FOR 2 ROUNDS. MAJOR CARTILAGE DAMAGE.	BLOW BREAKS FOE'S HIP. FOE IS AT -75% AND IS KNOCKED DOWN. +15 HITS. FOE IS STUNNED 3 ROUNDS.
76-80	BLOW TO FOE'S SHIELD ARM. IF FOE HAS A SHIELD, IT IS BROKEN. IF FOE HAS NO SHIELD, THE ARM IS BADLY BROKEN AND USELESS.	BLOW TO FOE'S SHIELD ARM SHATTER'S WRIST. ARM IS USELESS. FOE IS STUNNED FOR NEXT ROUND. +6 HITS.	BLOW TO FOE'S WEAPON ARM. BAD BRUISE. +9 HITS. FOE IS STUNNED AND UNABLE TO PARRY FOR NEXT RD. FOE IS AT -50%.	BLOW BREAKS FOE'S WEAPON ARM. FOE IS STUNNED AND UNABLE TO PARRY FOR 1 ROUND. ARM IS USELESS. +8 HITS. TENDON DAMAGE.	BLOW TO FOE'S ELBOW. +9 HITS. JOINT IS SHATTERED. ARM IS USELESS. FOE IS STUNNED AND UNABLE TO PARRY FOR 2 ROUNDS.
81-85	BLOW TO FOE'S SIDE. +10 HITS. FOE IS STUNNED AND UNABLE TO PARRY FOR 2 ROUNDS. FOE IS AT -20%.	BLOW TO FOE'S SIDE. +12 HITS. FOE HAS BROKEN RIBS. FOE IS STUNNED AND UNABLE TO PARRY FOR 2 ROUNDS. FOE IS AT -25%.	STRIKE TO FOE'S SIDE BREAKS 3 RIBS. FOE IS AT -40%. +12 HITS. FOE IS STUNNED AND UNABLE TO PARRY 3 ROUNDS.	STRIKE TO FOE'S SIDE. +15 HITS. FOE IS KNOCKED DOWN. ADD 10% TO YOUR NEXT SWING. FOE IS STUNNED AND UNABLE TO PARRY 3 ROUNDS.	CATCH FOE IN ARMPIT. +30 HITS. CRUSH FOE'S RIBS AND DESTROY SIDE. FOE DROPS AND DIES OF NERVE AND ORGAN DAMAGE IN 3 ROUNDS.
86-90	STRIKE FOE IN BACK. +12 HITS. MUSCLE AND CARTILAGE. FOE IS STUNNED AND UNABLE TO PARRY FOR 3 ROUNDS. FOE IS AT -25%.	STRIKE TO BACK KNOCKS FOE DOWN AND SMASHES TENDONS. FOE IS STUNNED AND UNABLE TO PARRY FOR 4 ROUNDS. FOE IS AT -30%.	BLOW TO BACK SMASHES MUSCLE AND BREAKS BONE. +20 HITS. FOE IS AT -50%. FOE IS KNOCKED DOWN AND STUNNED FOR 6 ROUNDS.	BLOW TO FOE'S NECK AREA BREAKS BACKBONE AND DESTROYS SPINE. +25 HITS. FOE FALLS AND DIES IN 2 ROUNDS.	NECK STRIKE SHATTERS BONE AND SEVERS AN ARTERY. FOE CANNOT BREATH AND IS INACTIVE FOR 12 ROUNDS. THE POOR FOOL THEN EXPIRES.
91-95	BREAK FOE'S NOSE. FOE IS STUNNED AND UNABLE TO PARRY FOR 3 ROUNDS. +15 HITS. FOE FIGHTS AT -30% FOR 2 DAYS. CLOSE.	UPPER HEAD HIT. IF FOE HAS NO HELM, HE IS IN A COMA FOR 3 WEEKS. IF FOE HAS A HELM, +20 HITS AND FOE IS STUNNED 12 ROUNDS.	BLOW SHATTERS THIGH. +9 HITS AND A COMPOUND FRACTURE. BONE SEVERS AN ARTERY. FOE DIES AFTER 12 ROUNDS OF INACTIVITY.	BLOW SHATTER'S SHIELD ARM. BONE SEVERS VEIN AND AN ARTERY. FOE DIES OF SHOCK AND BLOOD LOSS AFTER 9 INACTIVE ROUNDS.	BLAST TO FOE'S BACK. +25 HITS. BONE IS DRIVEN INTO VITAL ORGANS AND FOE IS DOWN FOR 6 ROUNDS... THEN DIES. SAD.
96-99	BLOW TO FOE'S HEAD. IF FOE HAS NO HELM HE IS DEAD. IF FOE HAS A HELM, HE IS KNOCKED DOWN, TAKES +20 HITS, AND IS STUNNED 6 RDS.	BLAST FOE'S CHEST. SEND RIBCAGE THROUGH HEART. FOE DROPS AND DIES. ADD 20% TO YOUR NEXT SWING. VISCIOUS.	BLOW TO FOE'S ABDOMEN DESTROYS A VARIETY OF ORGANS. THE POOR FOOL EXPIRES AFTER 6 ROUNDS OF INACTIVITY.	BLOW TO FOE'S SIDE CRUSHES CHEST CAVITY. FOE DROPS AND DIES IN 3 ROUNDS. ADD 25% TO YOUR NEXT SWING.	CRUSH FOE'S SKULL. +30 HITS. OPPONENT DIES IMMEDIATELY. ADD +20% TO YOUR NEXT SWING. YOU HAVE 1/2 ROUND LEFT TO ACT.
100	BLOW TO FOE'S JAW DRIVES BONE THROUGH BRAIN. FOE DIES INSTANTLY. +50 HITS. ADD 20% TO YOUR NEXT SWING.	BLOW TO BACK OF NECK PARALYZES FOE FROM THE SHOULDERS DOWN. +25 HITS. FOE IS QUITE STUNNED.	STRIKE TO FOREHEAD. +30 HITS. YOU SQUASH FOE'S EYES AND DESTROY THEM. FOE IS STUNNED AND IS UNABLE TO PARRY 24 RDS.	BLAST TO FOE'S CHEST AREA. DESTROY FOE'S HEART. FOE DIES IMMEDIATELY. +25 HITS. FINE WORK.	CRUSH FOE'S HIP. +35 HITS. OPPONENT IS STUNNED FOR 2 ROUNDS, ACTIVE THE FOLLOWING 4 ROUNDS AT -30%, THEN DIES OF NERVE FAILURE.

Critical Strikes for Large Creatures 8.14	Normal	Magic	Mithril	Holy Arms	Slaying
01-05	+12 HITS Your weapon breaks in half. You are upset.	+15 HITS You fumble your weapon and must parry next round. Good luck pal.	+18 HITS You move poorly and yield the initiative next round.	+20 HITS Flat blow. Subtract 10% from your next swing.	+5 HITS
06-10	+3 HITS	+4 HITS	+5 HITS	+9 HITS	+10 HITS
11-20	+6 HITS	+8 HITS	+9 HITS	+12 HITS	+15 HITS
21-30	+9 HITS	+10 HITS	+12 HITS	+15 HITS	+20 HITS
31-40	+12 HITS	+15 HITS	+20 HITS	+25 HITS	+30 HITS
41-50	+15 HITS	+18 HITS	+25 HITS	+30 HITS	Light wound. +12 hits. Foe takes 5 hits per round and is forced to parry next round. Add +10% to your next swing.
51-65	+20 HITS	+25 HITS	+30 HITS	Light wound. +10 hits. Foe takes 3 hits per round and is forced to parry next round. You have initiative for 3 rds.	Hard flat swing. +15 hits and foe is staggered. Foe is stunned and unable to parry for the next round.
66	Well placed strike to foe's neck severs the jugular vein. +15 hits. Foe dies in 6 rounds, and is inactive until then.	Viscious strike to foe's abdomenal region destroys a variety of important organs. Foe drops and dies in 3 rounds. +30 hits.	Strike to foe's heart, +12 hits and foe dies instantly. Add +10% to your next swing. Very clean kill.	Inspired strike that catches foe between the eyes. +20 hits. Foe dies instantly. You have 1/2 a round left to act.	Strike through foe's ear destroys brain. Foe dies immediately. Add +10% to all friends' swings next round.
67-70	+25 HITS	+30 HITS	Light wound. +15 hits. Foe is stunned for 2 rounds and fights at -20%. Add +10% to your next swing.	Hard strike. +20 hits. Foe is stunned and unable to parry for 2 rounds. Add +10% to your next swing.	Brutal strike through foe's heart. +20 hits. Foe dies immediately. Add +10% to your next swing.
71-80	+30 HITS	Light wound. +13 hits. Foe is stunned for 3 rounds and is unable to parry for the next round.	Hard blow. +20 hits. Foe is stunned and unable to parry for 2 rounds. Foe takes 3 hits per round due to light wound.	Strike to foe's leg. +9 hits. Foe is stunned and unable to parry for 1 round. Foe is at -10%, takes 3 hits per round.	Shatter shoulder in foe's weapon arm. +15 hits. Foe is stunned for 3 rounds. Arm is quite useless.
81-90	Strong blast staggers foe. +20 hits. Foe is stunned and unable to parry for 2 rounds. Add 5% to next swing.	Hard blow stuns foe for 3 rounds. Foe is unable to parry next round. +22 hits. Add +10% to your next swing.	Strike to foe's leg. +15 hits. Foe is stunned for 2 rounds and fights at -20%. Foe takes 2 hits per round.	Strike to foe's forehead. If foe has no helm, you kill him. If foe has a helm, you knock him out. +30 hits.	Strike to foe's chest destroys the heart. +25 hits. Foe dies immediately. Add +15% to your next swing.
91-95	Fine strike to foe's leg yields +18 hits. Foe takes 5 hits per round and is at -10%. Foe is stunned for 3 rounds.	Strike foe in face. +5 hits. Foe takes 3 hits per round and fights at -25%. Add 20% to your next swing.	Strike foe in head. +30 hits and foe is knocked out. Add +10% to all friendly swings next round. Fine shot.	Cruel strike to foe's chest severs a vein. Foe is stunned for 2 rounds, falls into unconsciousness, then dies after 6 rounds.	Sever an artery in foe's leg. +10 hits. Foe dies after 12 sad rounds of inactivity.
96-98	Strike foe in heart. Foe dies instantly and falls upon you. You then take 20 hits and are pinned for 6 rds.	Strike foe through both lungs. Foe dies in 3 rounds. Your weapon is stuck in foe for 12 rounds. +25 hits.	Strike foe in nose and drive bone into brain. Foe dies instantly and you have 1/2 round to act. Clean kill.	Strike through foe's ear drops sucker. +15 hits. Foe dies next round. Add +25% to your next swing.	Shatter foe's skull. +30 hits. Foe dies instantly. A piece of foe's skull sails straight back 10 feet. Not pretty.
99-100	Strike through foe's lungs. Foe falls down and dies after 6 rounds. +24 hits. Add +20% to all friendly swings next rd.	Hard but flat strike. Foe takes +35 hits, is stunned for 1 round, and is unable to parry. Your weapon breaks in half.	Strike foe in neck. +20 hits. Foe is stunned and unable to parry for 6 rounds - then dies. Your weapon is stuck 2 rounds.	Blind foe cleanly. Foe is stunned and unable to parry for 2 rounds. +5 hits. Foe is at -100%. Precision surgery.	Strike foe through cheek. Foe dies immediately. +15 hits. Unfortunately, your weapon is stuck in the bone for 2 rounds.
101-150	Awesome strike. +50 hits. Foe is stunned for 3 rounds and is unable to parry. Foe fights -25%.	Strike to side of foe's head knocks foe out. +20 hits. Foe is out for at least 3 hours. Add +10% to your next swing.	Strike to foe's chin shatters jaw and knocks foe out. +60 hits and foe is in a coma for 30 days.	Shatter foe's knee. Foe takes 2 hits per round, fights at -30%, and is stunned for 3 rounds.	Sever a vein in foe's forelimb. Foe is stunned and unable to parry for 6 rounds. Foe then falls dead. +20 hits.
151-175	Strike drives bone into kidneys and liver. Foe falls, taking 40 hits. Foe then dies... pity.	Strike drives shattered remnants of foe's jaw into the brain. Foe dies instantly. You have 1/2 round left to act.	Strike to foe's abdomen destroys a variety of important organs. Foe drops and dies after 6 rounds. +30 hits.	Smooth strike through foe's cheek. +10 hits. Foe dies immediately. You have 1/2 round left in which to act.	Strike through foe's neck. Foe dies instantly. +25 hits. Add 10% to your next swing. Fine piece of work.
176-200	Strike to bowels destroys foe's abdomenal area. Foe falls and dies after 12 rounds. +35 hits. Add 15% to your next swing.	Strike through foe's ear kills foe with clean ease. +10 hits. Add +20% to the swings of all nearby allies next round.	Strike severs an artery in foe's leg. Foe fights at -20% for 2 rounds, then drops. Foe is then inactive and dies after 6 rds.	Strike severs foe's spine. +20 hits. Foe drops immediately and is paralyzed from the waist down.	Strike foe through the eye. Foe dies immediately. +15 hits. Add 20% to your next swing. You have 1/2 round to act.
201-250	Blow to foe's forelimb severs a vein and stuns foe for 6 rounds. Foe drops on round 7, passes out, then dies. +15 hits.	Strike severs foe's spine. +15 hits. Foe is paralyzed from the neck down. Sadly, your weapon breaks in half.	Strike to foe's heart, +20 hits. Foe dies instantly. Add +15% to all friendly swings for the next 2 rounds of action.	Strike to foe's heart. +25 hits. Foe dies. Add +20% to all friendly swings for the next 3 rounds of action.	Strike carries all the way through foe's head. Foe dies instantly. The action carries onto any nearby opponent (this round).
251+	Extremely hard but flat swing. +35 hits. Foe is stunned and unable to parry for 3 rounds. Unfortunately, you knock yourself out.	Strike through foe's eye proves fatal. Foe dies immediately. +20 hits. Add +25% to your next swing.	Blind foe with viscious crossing strike. Foe is at -100% and is upset. +10 hits and foe is quite stunned for 6 rounds.	Strike through foe's ribs punctures a lung. +30 hits. Foe is knocked out. Your weapon is stuck for 6 rounds. Good luck.	Blind foe with precision strike across eyes. +6 hits. Foe is stunned and unable to parry for 24 rounds.

8.15 Critical Strikes for Dragons, Super Large Creatures

	Normal	Magic	Mithril	Holy Arms	Slaying
01-05	+10 HITS YOUR WEAPON BREAKS IN HALF. SHODDY WORKMANSHIP.	+10 HITS YOU DROP WEAPON AND WILL TAKE 2 ROUNDS TO GET IT BACK. BUM LUCK BUDDY.	+10 HITS YOU FUMBLE WEAPON FOR REMAINDER OF ROUND. YOU ARE STUNNED NEXT ROUND.	+10 HITS YOU FUMBLE WEAPON FOR REMAINDER OF ROUND. YOU MUST PARRY NEXT ROUND... AT -5%.	+10 HITS YOU MUST PARRY NEXT ROUND.
06-10	+2 HITS	+3 HITS	+4 HITS	+6 HITS	+8 HITS
11-20	+3 HITS	+4 HITS	+5 HITS	+8 HITS	+10 HITS
21-30	+4 HITS	+5 HITS	+6 HITS	+10 HITS	+12 HITS
31-40	+5 HITS	+6 HITS	+7 HITS	+12 HITS	+15 HITS
41-50	+6 HITS	+7 HITS	+8 HITS	+15 HITS	+18 HITS
51-65	+7 HITS	+8 HITS	+9 HITS	+18 HITS	+20 HITS
66	+20 HITS	BLOW GIVES FOE LIGHT WOUND. +12 HITS. FOE TAKES 3 HITS PER ROUND AND FIGHTS -10%. YOUR WEAPON BREAKS.	BLOW GIVES FOE LIGHT WOUND. +15 HITS. FOE TAKES 5 HITS PER ROUND, FIGHTS -10%, AND YIELDS INITIATIVE NEXT ROUND.	HEAVY WOUND. +20 HITS. FOE IS STUNNED AND UNABLE TO PARRY NEXT ROUND. FOE FIGHTS -15% AND TAKES 10 HITS PER ROUND.	STRIKE TO FOE'S HEART AND KILL SUCKER. ADD +20% TO YOUR NEXT SWING. YOU ARE, HOWEVER, COVERED WITH FOE'S BLOOD. +50 HITS.
67-70	+8 HITS	+9 HITS	+10 HITS	+20 HITS	HEAVY BLOW BREAKS BONES IN FOE'S UPPER BODY. +30 HITS. FOE IS STUNNED AND UNABLE TO PARRY FOR 2 ROUNDS. FLAT STRIKE.
71-80	+9 HITS	+10 HITS	+15 HITS	LIGHT WOUND. +13 HITS. FOE TAKES 5 HITS PER ROUND, FIGHTS -10%, AND YIELDS THE INITIATIVE. ADD +10% TO YOUR NEXT SWING.	HARD BLOW. +24 HITS AND FOE FIGHTS AT -20%. FOE IS STUNNED FOR 3 ROUNDS AND UNABLE TO PARRY. FOE TAKES 5 HITS PER ROUND.
81-90	+10 HITS	+15 HITS	+20 HITS	LIGHT WOUND. +12 HITS. FOE TAKES 4 HITS PER ROUND AND MUST PARRY NEXT ROUND. ADD +20% TO YOUR NEXT ROUND.	HEAVY WOUND. +25 HITS. FOE TAKES 20 HITS PER ROUND AND FIGHTS AT -25%. FOE IS STUNNED AND UNABLE TO PARRY FOR 3 ROUNDS.
91-95	+15 HITS	+20 HITS	LIGHT WOUND. +12 HITS. FOE TAKES 4 HITS PER ROUND AND YOU HAVE THE INITIATIVE NEXT 2 ROUNDS. ADD +10% NEXT SWING.	HARD BLOW. +25 HITS. FOE IS STUNNED FOR 2 ROUNDS AND IS UNABLE TO PARRY NEXT ROUND. FOE TAKES 3 HITS PER ROUND.	STRIKE TO FOE'S NECK SEVERS A VARIETY OF BLOOD VESSELS AND KNOCKS FOE DOWN. FOE EXPIRES IN 3 ROUNDS DUE TO SHOCK. +35 HITS. NICE...
96-98	BLOW SEVERS VEIN AND ARTERY. FOE IS STUNNED FOR 12 ROUNDS, DROPS, THEN DIES. AWESOME.	MASSIVE BLOW TO NECK CRUSHES BONE AND BREAKS SPINE. FOE DIES IN 1 ROUND, BUT DROPS INSTANTLY. ADD +25% TO NEXT SWING.	BLOW TO LOWER SKULL AREA KILLS FOE INSTANTLY. FOE STAGGERS FOR 1 ROUNDS BEFORE DROPPING. ADD +20% TO YOUR NEXT SWING.	YOU CUT FOE'S SKULL IN HALF. WEAPON IS STUCK IN CARNAGE FOR 6 ROUNDS. ADD +10% TO ALL FRIENDLY SWINGS FOR 6 ROUNDS.	STRIKE DRIVES BONE THROUGH FOE'S HEART. FOE DIES INSTANTLY, BUT YOUR WEAPON IS STUCK IN FOE FOR 12 ROUNDS. +40 HITS.
99-100	BLOW SHATTERS BONE. +30 HITS AND 10 HITS PER ROUND DUE TO COMPOUND FRACTURE. FOE IS AT -25%.	STRIKE FOE IN LEG AND SEVER VEIN. +25 HITS. FOE DROPS IN 2 ROUNDS AND DIES. FOE CAN FIGHT IN THE INTERIM.	CRUSH BONES IN FOE'S NECK. 50% CHANCE FOE IS PARALYZED FROM NECK DOWN. 50% CHANCE THAT FOE IS KILLED. YOU HAVE 1/2 ROUND LEFT TO ACT.	STRIKE THROUGH HEART KILLS FOE. +20 HITS. 25% CHANCE FOE FALLS ON YOU OUT OF SPITE.	CATCH FOE BETWEEN THE EYES AND SHATTER THE SKULL. FOE DIES INSTANTLY. YOU HAVE 1/2 ROUND TO ACT. ADD 25% TO YOUR NEXT SWING.
101-150	LIGHT WOUND. +12 HITS. FOE BLEEDS AT 1 HIT PER ROUND. ADD +10% TO YOUR NEXT SWING.	LIGHT WOUND. +13 HITS AND FOE MUST PARRY NEXT ROUND. FOE TAKES 2 HITS PER ROUND. ADD +20% TO YOUR NEXT SWING.	HARD BLOW. +30 HITS. FOE IS STUNNED FOR 3 ROUNDS AND IS UNABLE TO PARRY DURING NEXT ROUND. ADD +10% TO YOUR NEXT SWING.	SERIOUS COMPOUND FRACTURE. +30 HITS AND FOE IS STUNNED, UNABLE TO PARRY, FOR 2 ROUNDS.	STRIKE FOE THROUGH LEG AND SEVER VEIN. FOE IS STUNNED AND UNABLE TO PARRY FOR 6 ROUNDS. FOE THEN DIES. +20 HITS.
151-175	BLOW CUTS MUSCLE AND CAUSES LIGHT WOUND. +20 HITS. FOE IS AT -20% AND TAKES 5 HITS PER ROUND.	BLOW STUNS FOE FOR 1 ROUND AND FOE IS UNABLE TO PARRY. +25 HITS. FOE IS AT -20% AND IS QUITE UPSET.	KNOCK FOE DOWN. +25 HITS. FOE IS DOWN AND UNABLE TO PARRY FOR NEXT 2 ROUNDS. ADD +10% TO YOUR NEXT SWING.	KNOCK FOE DOWN WITH A VISCIOUS BLOW. +40 HITS HITS. 50% CHANCE OF COMA - 50% CHANCE FOE IS DOWN AND UNABLE TO PARRY 6 ROUNDS.	AWESOME BLOW KNOCKS FOE DOWN. FOE BREAKS BACK AND NECK AND SUFFOCATES IN 12 ROUNDS. +25 HITS. ADD 20% TO YOUR NEXT SWING.
176-200	BLOW CUTS TENDONS. +15 HITS AND FOE FIGHTS -25%. ADD 20% TO YOUR NEXT SWING.	KNOCK FOE DOWN. +20 HITS. FOE IS DOWN FOR 2 ROUNDS AND UNABLE TO PARRY. ADD +25% TO YOUR NEXT SWING.	HEAVY WOUND. +28 HITS AND FOE IS AT -40%. FOE IS UNABLE TO PARRY AND STUNNED FOR NEXT 3 ROUNDS. FOE TAKES 10 HITS PER ROUND.	STRIKE SEVERS VAST NUMBER OF BLOOD VESSELS. +25 HITS AND FOE IS STUNNED, UNABLE TO PARRY, FOR 9 RDS. FOE IS AT -25%.	STRIKE THROUGH FOE'S EYE HITS HOME AND RIPS THROUGH BRAIN. +24 HITS. FOE DROPS IMMEDIATELY AND DIES. FINE BLAST.
201-250	BLOW SHATTERS BONE. +35 HITS. FOE TAKES 10 HITS PER ROUND, IS STUNNED 2 ROUNDS, AND FIGHTS -30%.	HEAVY WOUND. +35 HITS AND FOE IS STUNNED FOR 3 ROUNDS - UNABLE TO PARRY. FOE FIGHTS -40% AND TAKES 10 HITS PER ROUND.	VISCIOUS BLOW TO FOE'S LEG. +30 HITS. FOE TAKES 12 HITS A ROUND AND FIGHTS -50%. FOE IS STUNNED AND UNABLE TO PARRY 6 ROUNDS.	STRIKE THROUGH FOE'S EAR. +15 HITS. FOE DIES OF MASSIVE BRAIN DAMAGE IN 3 ROUNDS. ADD +20% TO YOUR NEXT SWING.	MAGNIFICENT ABDOMENAL STRIKE DROPS FOE IN A HEAP. +35 HITS AND FOE DIES OF SHOCK IN 4 ROUNDS. YOU ARE STUNNED NEXT ROUND.
251+	FOE IS BLINDED. +20 HITS AND FOE FIGHTS -100%. FOE IS STUNNED AND UNABLE TO PARRY FOR 6 ROUNDS.	STRIKE THROUGH FOE'S EYE. YOU KILL FOE INSTANTLY. ADD +20% TO YOUR NEXT SWING. 20% CHANCE YOUR WEAPON IS STUCK IN FOE FOR 3 ROUNDS.	AWE INSPIRING STRIKE DRIVES BONE THROUGH BOTH LUNGS. FOE TAKES 100 HITS, FALLS IN A COMA, AND DIES IN 18 ROUNDS.	INCREDIBLE STRIKE SEVERS AN ARTERY AND VEIN AND BREAKS FOE'S SPINE. +50 HITS, FALLS, AND DIES AFTER 2 ROUNDS OF AGONY.	STRIKE THROUGH SIDE KILLS FOE AFTER A CHAIN REACTION OF BROKEN BONES SPLINTER. YOU ARE COVERED WITH FOE'S BLOOD. +100 HITS.

	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
150	3CP	4CP	4EP	6EP	7EP	7EP	10EP	10EP	6EP	8EP	12EP	12EP	8EP	8EP	13EP	16EP	10EP	13EP	16EP	18ES	150
149	3BP	4CP	4DP	6EP	7DP	7DP	10DP	10EP	6EP	8EP	12EP	12EP	8EP	8EP	13EP	16EP	10EP	13EP	16EP	18EP	149
148	3AP	4BP	4CP	6DP	7DP	7DP	10DP	10EP	6EP	8EP	12EP	12EP	8EP	8EP	13EP	16EP	10EP	13EP	16EP	18ES	148
147	3AP	4BP	4CP	6DP	7CP	7CP	10DP	10DP	6DP	8EP	12EP	12EP	8EP	8EP	13EP	16EP	10EP	13EP	16EP	18EP	147
146	3AP	4BP	4CP	6DP	7CP	7CP	10CP	10DP	6DP	8DP	12DP	12EP	8EP	8EP	13EP	16EP	10EP	13EP	16EP	18ES	146
145	3AK	4AP	4CP	6CP	7CP	7CP	10CP	10DP	6DP	8DP	12DP	12EP	8EP	8EP	13EP	16EP	10EP	13EP	16EP	18EP	145
144	3	4AP	4BP	6CP	7CP	7CP	10CP	10DP	6CP	8DP	12DP	11EP	8EP	8EP	13EP	15EP	10EP	13EP	16EP	17ES	144
143	3	4AP	4BP	6CP	7BP	7CP	10CP	10DP	6CP	8DP	11DP	11DP	8DP	8EP	13EP	15EP	10EP	12EP	16EP	17EP	143
142	3	4AP	4BP	6CP	7BP	7CP	10CP	10CP	6CP	8CP	11DP	11DP	8DP	8DP	12EP	15ES	9DP	12EP	15EP	17ES	142
141	3	4AP	4BP	6CP	7BP	7BP	9CP	9CP	6CP	7CP	11DP	11DP	8DP	8DP	12DP	15DP	9DP	12EP	15EP	17EP	141
140	3	4AK	4BP	6CP	7BP	7BP	9CP	9CP	6CP	7CP	11CP	11DP	8DP	8DP	12DP	15ES	9DP	12EP	15EP	17ES	140
139	3	4	4AP	6BP	7BP	7BP	9CP	9CP	6CP	7CP	11CP	11DP	8DP	8DP	12DP	14DP	9DP	12DP	15EP	16EP	139
138	3	4	4AS	6BS	7AP	7BP	9BP	9CP	6CP	7CP	11CP	10DP	8DP	8DP	12DP	14DS	9DP	12DP	15EP	16ES	138
137	3	4	4AP	6BP	7AP	6BP	9BP	9CP	6CP	7CP	10CP	10DP	8DP	8DP	12DP	14DP	9DP	12DP	15ES	16EP	137
136	3	4	4AS	6BS	6AP	6BP	9BP	9CP	5CP	7CP	10CP	10DP	8CP	8DP	12DP	14DS	9DP	11DP	15EP	16ES	136
135	3	4	4AP	5BP	6AP	6BP	9BP	9CP	5BP	7CP	10CP	10CP	8CP	7DP	11DP	14DP	8DP	11DP	14ES	16EP	135
134	3	4	4AS	5BS	6AP	6AP	9BP	9CS	5BP	7CP	10CP	10CP	7CP	7DP	11DP	14DS	8CP	11DP	14EP	15DS	134
133	3	4	4AP	5BP	6AP	6AP	9BP	8BP	5BP	7CP	10CP	10CP	7CP	7DP	11DP	13DP	8CP	11DP	14ES	15DP	133
132	3	4	4AS	5AS	6AS	6AP	8BS	8BS	5BP	6BP	10CP	9CP	7CP	7CP	11DP	13CS	8CP	11DB	14DP	15DS	132
131	3	4	4AP	5AP	6AP	6AP	8AP	8BP	5BP	6BP	9CP	9CP	7CP	7CP	11CS	13DP	8CP	11DP	14DS	15DP	131
130	3	4	4AK	5AS	6AK	6AP	8AS	8BS	5BP	6BP	9CP	9CP	7CP	7CP	11CP	13DS	8CP	11CS	14DP	15DS	130
129	3	4	4	5AP	6	6AP	8AP	8BP	5BP	6BP	9CP	9CP	7CP	7CP	11CS	13DP	8CP	10CP	14DS	14DP	129
128	3	4	4	5AS	6	6AP	8AS	8BS	5BP	6BP	9BP	9CP	7CP	7CP	11CP	12DS	7CP	10CS	13DP	14DS	128
127	3	4	3	5AP	6	6AS	8AP	8BP	5BP	6BP	9BP	9CS	7CP	7CP	10CS	12CP	7CP	10CP	13DS	14DP	127
126	3	4	3	5AS	6	6AP	8AS	8BS	5AP	6BP	9BP	8CP	7CP	7CS	10CP	12CS	7CP	10CS	13DP	14DS	126
125	3	4	3	5AP	6	6AK	8AP	7BP	5AP	6BP	9BP	8CS	7CP	7CP	10CS	12CP	7CP	10CP	13DS	14DP	125
124	3	3	3	5AS	6	5	7AS	7BS	5AP	6BP	8BP	8CP	7CP	7CS	10CP	12CS	7BP	10CS	13DP	13CS	124
123	3	3	3	5AP	6	5	7AP	7AP	4AP	5BP	8BS	8CS	7CP	7CP	10CS	12CP	7BS	10CP	13DS	13CP	123
122	3	3	3	5AS	5	5	7AS	7AS	4AP	5BP	8BP	8CP	7BS	7CS	10CP	11CS	7BP	9CS	13DP	13CS	122
121	3	3	3	4AP	5	5	7AP	7AP	4AP	5AP	8BS	8BS	7BP	6CP	10CS	11CP	7BS	9CP	12DS	13CP	121
120	3	3	3	4AK	5	5	7AK	7AS	4AP	5AP	8BP	7BP	7BS	6CS	9CP	11CS	6BP	9BS	12CP	13CS	120
119	3	3	3	4	5	5	7	7AP	4AP	5AP	8BS	7BS	6BP	6CP	9CS	11CP	6BS	9BP	12CS	12CP	119
118	3	3	3	4	5	5	7	7AS	4AP	5AS	7BP	7BP	6BS	6CS	9CP	11CS	6BP	9BS	12CP	12CS	118
117	3	3	3	4	5	5	7	6AP	4AS	5AP	7AS	7BS	6BP	6BP	9BS	10CP	6BS	9BP	12CS	12CP	117
116	3	3	3	4	5	5	7	6AS	4AP	5AS	7AP	7BP	6BS	6BS	9BP	10CS	6AP	8BS	12CP	12CS	116
115	3	3	3	4	5	5	6	6AP	4AK	5AP	7AS	7BS	6BP	6BP	9BS	10CP	6AS	8BP	12CS	12CP	115
114	3	3	3	4	5	5	6	6AS	4	4AS	7AP	6BP	6BS	6BS	9BP	10BS	6AP	8BS	11CP	11BS	114
113	2	3	3	4	5	5	6	6AP	4	4AP	7AS	6BS	6BP	6BP	8BS	10BP	5AS	8BP	11CS	11BP	113
112	2	3	3	4	5	5	6	6AS	4	4AS	6AP	6BP	6BS	6BS	8BP	9BS	5AP	8BS	11CP	11BS	112
111	2	3	3	4	5	4	6	6AP	4	4AP	6AS	6BS	6BP	6BP	8BS	9BP	5AS	8AP	11CS	11BP	111
110	2	3	3	4	5	4	6	6AK	4	4AK	6AP	6BP	6BS	6BS	8BP	9BS	5AP	8AS	11CP	11BS	110
109	2	3	3	4	5	4	6	5	3	4	6AS	6BS	6BP	6BP	8BS	9BP	5AS	7AP	11CS	10BP	109
108	2	3	3	4	4	4	6	5	3	4	6AP	5AP	6AS	6BS	8BP	9BS	5AP	7AS	11CP	10BS	108
107	2	3	3	3	4	4	5	5	3	4	6AS	5AS	6AP	5BP	8BS	9BP	5AS	7AP	10BS	10BP	107
106	2	3	3	3	4	4	5	5	3	4	6AP	5AP	6AS	5BS	8BP	8BS	4AP	7AS	10BP	10BS	106
105	2	3	3	3	4	4	5	5	3	3	5AK	5AS	6AP	5BP	7BS	8BP	4AK	7AP	10BS	10AP	105
104	2	3	2	3	4	4	5	5	3	3	5	5AP	5AS	5BS	7BP	8BS	4	7AS	10BP	9AS	104
103	2	3	2	3	4	4	5	5	3	3	5	5AS	5AP	5AP	7BS	8BP	4	7AP	10BS	9AP	103
102	2	3	2	3	4	4	5	5	3	3	5	4AP	5AS	5AS	7BP	8BS	4	6AS	10BP	9AS	102
101	2	3	2	3	4	4	5	4	3	3	5	4AS	5AP	5AP	7AS	7BP	4	6AP	10BS	9AP	101
100	2	3	2	3	4	4	5	4	3	3	5	4AP	5AS	5AS	7AP	7BS	4	6AK	9BP	9AS	100
99	2	2	2	3	4	4	5	4	3	3	4	4AS	5AP	5AP	7AS	7BP	4	6	9BS	8AP	99
98	2	2	2	3	4	3	4	4	3	3	4	4AP	5AS	5AS	6AP	7BS	3	6	9BP	8AS	98
97	2	2	2	3	4	3	4	4	3	3	4	4AS	5AP	5AP	6AS	7AP	3	6	9BS	8AP	97
96	2	2	2	3	4	3	4	4	2	2	4	3AP	5AK	5AS	6AP	7AS	3	6	9AP	8AK	96
95	2	2	2	3	3	3	4	4	2	2	4	3AK	5AS	5AP	6AS	6AP	3	5	9AS	8AS	95
94	2	2	2	3	3	3	4	4	2	2	4	3	5	5AS	6AP	6AS	3	5	9AP	7	94
93	2	2	2	3	3	3	4	3	2	2	3	3	5	5AP	6AS	6AP	3	5	8AS	7	93
92	2	2	2	2	3	3	4	3	2	2	3	3	5	4AS	6AP	6AS	3	5	8AP	7	92
91	2	2	2	2	3	3	4	3	2	2	3	3	5	4AP	5AS	6AP	2	5	8AS	7	91
90	2	2	2	2	3	3	4	3	2	2	3	2	5	4AK	5AP	5AS	2	5	8AP	7	90
89	2	2	2	2	3	3	3	3	2	2	3	2	4	4	5AS	5AP	2	0	8AS	0	89
88	2	2	2	2	3	3	3	3	2	2	3	2	4	4	5AP	5AS	2	0	8AP	0	88
87	2	2	2	2	3	3	3	3	2	1	3	2	4	4	5AS	5AP	2	0	8AS	0	87
86	2	2	2	2	3	3	3	2	2	1	2	2	4	4	5AP	5AS	2	0	7AP	0	86
85	2	2	2	2	3	2	3	2	2	1	2	2	4	4	5AK	5AP	2	0	7AK	0	85
84	2	2	2	2	3	2	3	2	2	1	2	1	4	4	5	4AS	0	0	7	0	84
83	2	2	2	2	3	2	3	2	2	1	2	1	4	4	4	4AP	0	0	7	0	83
82	2	2	2	2	3	2	3	2	1	1	2	1	4	4	4	4AS	0	0	7	0	82
81	2	2	1	2	2	2	2	2	1	1	2	1	4	4	4	4AP	0	0	7	0	81
80	2	2	1	2	2	2	2	2	1	1	1	1	4	4	4	4AK	0	0	7	0	80
79	2	2	1	2	2	2	2	2	1	0	1	0	4	4	4	3	0	0	0	0	79
78	2	2	1	1	2	2	2	2	1	0	1	0	4	3	4	3	0	0	0	0	78
77	2	2	1	1	2	2	2	1	1	0	1	0	4	3	4	3	0	0	0	0	77
76	1	2	1	1	2	2	2	1	1	0	1	0	4	3	3	3	0	0	0	0	76
75	1	2	1	1	2	2	2	1	1	0	1	0	4	3	3	3	0	0	0	0	75
74	1	1	1	1	2	2	2	1	1	0	0	0	3	3	3	0	0	0	0	0	74
73	1	1	1	1	2	2	2	1	1	0	0	0	3	3	3	0	0	0	0	0	73
72	1	1	1	1	2	1	1	1	1	0	0	0	3	3	3	0	0	0	0	0	72
71	1	1	1	1	2	1	1	1	1	0	0	0	3	3	3	0	0	0	0	0	71
70	1	1	1	1	2	1	1	1	1	0	0	0	3	3	3	0	0	0	0	0	70
69	1	1	1	1	2	1	1	0	0	0	0	0	3	3	0	0	0	0	0	0	69
68	1	1	1	1	2	1	1	0	0	0	0	0	3	3	0	0	0	0	0	0	68
67	1	1	1	1	1	1	1	0	0	0	0	0	3	3	0	0	0	0	0	0	67
66	1	1	1	1	1	1	1	0	0	0	0	0	3	3	0	0	0	0	0	0	66
65	1	1	1	1	1	1	1	0	0	0	0	0	3	3	0	0	0	0	0	0	65
64	1	1	1	0	1	1	0	0	0	0	0	0	3	0	0	0	0	0	0	0	64
63	1	1	1	0	1	1	0	0	0	0	0	0	3	0	0	0	0	0	0	0	63
62	1	1	1	0	1	1	0	0	0	0	0	0	3	0	0	0	0	0	0	0	62
61	1	1	1	0	1	1	0	0	0	0	0	0	3	0	0	0	0	0	0	0	61
60	1	1	1	0	1	1	0	0	0	0	0	0	3	0	0	0	0	0	0	0	60
59	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	59
58	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	58
57	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	57
56	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	56
55	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	55
54	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	54
53	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	53
52	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	52
51	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	51
50	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50
49	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	49
48	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48
47	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	47
46	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46
45	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	45
44	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	44
43	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43
42	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42
41	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	41
40	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40

8.31



DAGGER

Weight: ½-1½ pounds
Length: 3/4-1½ feet

Type: One-hand
Range: 10 feet (-10%)
25 feet (-20%)
50 feet (-30%)

Fumble: 1-1

8.32



FALCHION

Weight: 3½–5 pounds

Fumble: 1–5

One-hand

–

2–3 feet

Type:
Range:
Length:

	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
150	14EK	16EK	18EK	20EK	21EK	21EK	24EK	24EK	22EK	24EK	28EK	28EK	24ES	24ES	29ES	32ES	26ES	29ES	32ES	34ES	150
149	14EK	16EK	18EK	20EK	21EK	21EK	24EK	24EK	22ES	24ES	28ES	28ES	24ES	24ES	29ES	32ES	26ES	29ES	32ES	34ES	149
148	14EK	16EK	18EK	20EK	21EK	21EK	24ES	24EK	22EK	24EK	28EK	28EK	24ES	24ES	29ES	32ES	26ES	29ES	32ES	34ES	148
147	14EK	16EK	18EK	20EK	21EK	21EK	24EK	24EK	22ES	24ES	28ES	27ES	24ES	24ES	29ES	31ES	25ES	28ES	32ES	33ES	147
146	14DK	16EK	18EK	20EK	21EK	21EK	23EK	23EK	22EK	23EK	27EK	27EK	24ES	24ES	28ES	31ES	25ES	28ES	31ES	33ES	146
145	14DK	16DK	18EK	19EK	21EK	20EK	23EK	23EK	21ES	23ES	27ES	27ES	23ES	23ES	28ES	31ES	25ES	28ES	31ES	32ES	145
144	14DK	16DK	17DK	19EK	20EK	20EK	23EK	23EK	21EK	23EK	27EK	26EK	23ES	23ES	28ES	30ES	24ES	27ES	31ES	32ES	144
143	14DK	15DK	17DK	19EK	20EK	20EK	23EK	23EK	21ES	23ES	26ES	26ES	23ES	23ES	27ES	30ES	24ES	27ES	30ES	32ES	143
142	14CK	15DK	17DK	19EK	20DK	20DK	22DK	22EK	21DK	22EK	26EK	26EK	23ES	23ES	27ES	30ES	24ES	27ES	30ES	31ES	142
141	13CK	15DK	17DK	19EK	20DK	20DK	22DK	22EK	20DS	22ES	26ES	25ES	23ES	22ES	27ES	29ES	23ES	26ES	30ES	31ES	141
140	13CK	15CK	17DK	18DK	20DS	19DK	22DK	22EK	20DK	22EK	25EK	25EK	22ES	22ES	27ES	29ES	23ES	26ES	29ES	30ES	140
139	13CK	15CK	17DK	18DK	19DK	19DS	22DK	22EK	20DS	21DS	25DS	25ES	22DS	22ES	26ES	29ES	23ES	26ES	29ES	30ES	139
138	13CK	15CK	16DK	18DK	19DS	19DK	21DS	21DK	20DK	21DK	25DK	24EK	22DS	22ES	26ES	28ES	22ES	25ES	29ES	30ES	138
137	13CK	15CK	16CK	18DK	19DK	19DS	21DK	21DK	19DS	21DS	24DS	24ES	22DS	22ES	26ES	28ES	22ES	25ES	28ES	29ES	137
136	13BK	14CK	16CK	18DK	19DS	19DK	21DS	21DS	19DK	21DK	24DK	24EK	21DS	21DS	25ES	28ES	22ES	24ES	28ES	29ES	136
135	13BS	14CS	16CK	17DK	19DK	18DS	21DK	21DK	19DS	20DS	24DS	23DS	21DS	21DS	25ES	27ES	21ES	24ES	28ES	28ES	135
134	13BK	14CK	16CK	17DK	18DS	18DK	20DS	20DS	19DK	20DK	23DK	23DK	21DS	21DS	25DS	27ES	21ES	24ES	27ES	28ES	134
133	13BS	14BS	15CK	17DK	18DK	18DS	20DK	20DK	19CS	20DS	23DS	23DS	21DS	21DS	24DS	26ES	21DS	23ES	27ES	28ES	133
132	12BK	14BK	15CK	17DK	18CS	18DK	20DS	20DS	18CK	19DK	23DK	22DK	21DS	20DS	24DS	26ES	20DS	23ES	27ES	27ES	132
131	12AS	14BS	15CS	17DK	18CK	18CS	20CK	19DK	18CS	19DS	23DS	22DS	20DS	20DS	24DS	26DS	20DS	23ES	26ES	27ES	131
130	12AK	14BK	15CK	16DK	18CS	17CK	19CS	19DS	18CK	19DK	22DK	22DK	20DS	20DS	24DS	25DS	20DS	22DS	26ES	26ES	130
129	12AS	13BS	15CS	16DK	17CK	17CS	19CK	19DK	18CS	19DS	22DS	21DS	20DS	20DS	23DS	25DS	19DS	22DS	26ES	26ES	129
128	12AK	13BK	15BK	16CK	17CS	17CK	19CS	19DS	17CK	18DK	22DK	21DK	20CS	19DS	23DS	25DS	19DS	22DS	25ES	26ES	128
127	12AS	13BS	14BS	16CS	17CK	17CS	19CK	18DK	17CS	18CS	21DS	21DS	20CS	19DS	23DS	24DS	19DS	21DS	25ES	25ES	127
126	12AK	13AK	14BK	15CK	17CS	17CK	18CS	18DS	17CK	18CK	21DK	20DK	19CS	19DS	22DS	24DS	18DS	21DS	25ES	25ES	126
125	12AS	13AS	14BS	15CS	17CK	16CS	18CK	18DK	17CS	17CS	21DS	20DS	19CS	19DS	22DS	24DS	18DS	21DS	24ES	24ES	125
124	11AK	13AK	14BK	15CK	16CS	16CK	18CS	18DS	16CK	17CK	20CK	20DK	19CS	19DS	22DS	23DS	18DS	20DS	24ES	24ES	124
123	11AS	13AS	14BS	15CS	16BK	16CS	18CK	17CK	16CS	17CS	20CS	19DS	19CS	18DS	21DS	23DS	17DS	20DS	24ES	24ES	123
122	11AK	12AK	14BK	15CK	16BS	16CK	17CS	17CS	16CK	17CK	20CK	19DK	18CS	18DS	21DS	23DS	17DS	19DS	23ES	23DS	122
121	11AS	12AS	13BS	14CS	16BK	15BS	17CK	17CK	16CS	16CS	19CS	19DS	18CS	18DS	21DS	22DS	16DS	19DS	23DS	23DS	121
120	11	12AK	13BK	14CK	16BS	15BK	17CS	17CS	16CK	16CK	19CK	18DS	18CS	18DS	21DS	22DS	16DS	19DS	23DS	22DS	120
119	11	12AS	13AS	14CS	15BK	15BS	17CK	16CK	15CS	16CS	19CS	18DS	18CS	17CS	20DS	22DS	16CS	18DS	22DS	22DS	110
118	11	12AK	13AK	14BK	15BS	15BK	16CS	16CS	15BK	15CK	18CK	18DK	18CS	17CS	20DS	21DS	16CS	18DS	22DS	22DS	118
117	11	12AS	13AS	14BS	15BK	15BS	16BK	16CK	15BS	15CS	18CS	17CS	17CK	17CS	20CS	21DS	15CS	18DS	22DS	21DS	117
116	11	12AK	12AK	13BK	15AS	14BK	16BS	16CS	15BK	15CK	18CK	17CK	17CS	17CS	19CS	20DS	15CS	17DS	21DS	21DS	116
115	10	11	12AS	13BS	15AK	14BS	16BK	15CK	14BS	15CS	18CS	17CS	17CK	17CS	19CS	20DS	15CS	17DS	21DS	20DS	115
114	10	11	12AK	13BK	14AS	14BK	15BS	15CS	14BK	14CK	17CK	16CK	17CS	16CK	19CS	20DS	14CS	17CS	21DS	20DS	114
113	10	11	12AS	13BS	14AK	14BS	15BK	15CK	14BS	14CS	17CS	16CS	16CK	16CS	18CS	19DS	14CS	16CS	20DS	20DS	113
112	10	11	12AK	13BK	14AS	14AK	15BS	14CS	14BK	14BK	17CK	16CK	16BS	16CK	18CK	19DS	14CS	16CS	20DS	19DS	112
111	10	11	12AS	12BS	14AK	13AS	15BK	14CK	13BS	13BS	16CS	15CS	16BK	16CS	18CS	19CS	13CK	16CS	20DS	19DS	111
110	10	11	11AK	12BK	14AS	13AK	14BS	14CS	13BK	13BK	16CK	15CK	16BS	15CK	18CK	18CK	13CS	15CS	20DS	18DS	110
109	10	11	11AS	12AS	13AK	13AS	14BK	14BK	13BS	13BS	16CS	15CS	16BK	15CS	17CS	18CS	13CK	15CS	19DS	18DS	109
108	10	10	11AK	12AK	13AS	13AK	14AS	13BS	13BK	13BK	15CK	14CK	15BS	15CK	17CK	18CK	12CS	14CK	19DS	18DS	108
107	10	10	11AS	12AS	13AK	13AS	14AK	13BK	13BS	12BS	15CS	14CS	15BK	15CS	17CS	17CS	12BK	14CS	19DS	17DS	107
106	9	10	11AK	11AK	13AS	12AK	13AS	13BS	12BK	12BK	15BK	14CK	15BS	14CK	16CK	17CK	12BS	14CK	18DS	17DS	106
105	9	10	10	11AS	13	12AS	13AK	13BK	12BS	12BS	14BS	13CS	15BK	14CS	16CS	17CS	11BK	13CS	18DS	16DS	105
104	9	10	10	11AK	12	12AK	13AS	12BS	12BK	11BK	14BK	13CK	15BS	14CK	16CK	16CK	11BS	13BK	18DS	16CS	104
103	9	10	10	11AS	12	12AS	13AK	12BK	12AK	11BS	14BS	13CS	14BK	14CS	15CS	16CS	11BK	13BS	17DS	16CK	103
102	9	10	10	10AK	12	12AK	12AS	12BS	11AK	11BK	13BK	12CK	14BS	14BK	15BK	16CK	10BS	12BK	17CS	15CS	102
101	9	9	10	10AS	12	11AS	12AK	12BK	11AS	11BS	13BS	12CS	14BK	13BS	15BS	15CS	10AK	12BS	17CS	15CK	101
100	9	9	10	10AK	12	11	12AS	11BS	11AK	10BK	13BK	12CK	14BS	13BK	15BK	15CK	10AS	12BK	16CS	14CS	100
99	9	9	9	10AS	11	11	12AK	11BK	11AS	10BS	12BS	11CS	13BK	13BS	14BS	14BS	9AK	11BS	16CS	14CK	99
98	8	9	9	10AK	11	11	11AS	11AS	10AK	10BK	12BK	11BK	13BS	13BK	14BK	14BK	9AS	11BK	16CS	14CS	98
97	8	9	9	9AS	11	10	11AK	11AK	10AS	9AS	12BS	11BS	13AK	12BS	14BS	14BS	9AK	11BS	15CK	13CK	97
96	8	9	9	9AK	11	10	11AS	10AS	10AK	9AK	12BK	10BK	13AS	12BK	13BK	13BK	8AS	10AK	15CS	13BS	96
95	8	9	9	9	11	10	11	10AK	10AS	9AS	11BS	10BS	13AK	12BS	13BS	13BS	8AK	10AS	15CK	12BK	95
94	8	8	9	9	10	10	10	10AS	10AK	9AK	11BK	10BK	12AS	12BK	13BK	13BK	8	9AK	14CS	12BS	94
93	8	8	8	9	10	10	10	9AK	9AS	8AS	11BS	9BS	12AK	11BS	12BS	12BS	7	9AS	14CK	12BK	93
92	8	8	8	8	10	9	10	9AS	9AK	8AK	10BK	9BK	12AS	11BK	12BK	12BK	7	9AK	14CS	11BS	92
91	8	8	8	8	10	9	10	9AK	9AS	8AS	10AS	9BS	12AK	11BS	12BS	12BS	7	8AS	13CK	11BK	91
90	8	8	8	8	10	9	9	9AS	9	7AK	10AK	8BK	12AS	11BK	12BK	11BK	6	8AK	13BS	10AS	90
89	7	8	8	8	9	9	9	8AK	8	7AS	9AS	8BS	11AK	11BS	11BS	11BS	6	8	13BK	10AK	89
88	7	8	7	8	9	9	9	8AS	8	7AK	9AK	8BK	11AS	10AK	11BK	11BK	6	7	12BS	10AS	88
87	7	7	7	7	9	8	9	8AK	8	7AS	9AS	7BS	11AK	10AS	11BS	10BS	5	7	12BK	9AK	87
86	7	7	7	7	9	8	8	8AS	8	6AK	8AK	7BK	11AS	10AK	10AK	10BK	5	7	12BS	9AS	86
85	7	7	7	7	9	8	8	7	7	6	8AS	7BS	10AK	10AS	10AS	10BS	5	6	11BK	8AK	85
84	7	7	7	7	8	8	8	7	7	6	8AK	6BK	10	9AK	10AK	9BK	4	6	11BS	8	84
83	7	7	7	7	8	8	8	7	7	5	7AS	6BS	10	9AS	9AS	9AS	4	0	11BK	0	83
82	7	7	6	6	8	7	7	7	7	5	7AK	6AK	10	9AK	9AK	8AK	4	0	10BS	0	82
81	7	7	6	6	8	7	7	6	7	5	7AS	5AS	10	9AS	9AS	8AS	3	0	10AK	0	81
80	6	6	6	6	8	7	7	6	6	5	7	5AK	9	9AK	9AK	8AK	3	0	10AS	0	80
79	6	6	6	6	7	7	7	6	6	4	6	5AS	9	8	8AS	7AS	3	0	9AK	0	79
78	6	6	6	5	7	7	6	6	6	4	6	4AK	9	8	8AK	7AK	0	0	9AS	0	78
77	6	6	5	5	7	6	6	5	6	4	6	4AS	9	8	8AS	7AS	0	0	9AK	0	77
76	6	6	5	5	7	6	6	5	5	3	5	4AK	8	8	7AK	6AK	0	0	8AS	0	76
75	6	6	5	5	7	6	6	5	5	3	5	3AS	8	7	7AS	6AS	0	0	8AK	0	75
74	6	6	5	5	6	6	5	4	5	3	5	3AK	8	7	7	6AK	0	0	8	0	74
73	6	5	5	4	6	5	5	4	5	3	4	3AS	8	7	6	5AS	0	0	0	0	73
72	5	5	5	4	6	5	5	4	4	2	4	2AK	8	7	6	5AK	0	0	0	0	72
71	5	5	4	4	6	5	5	4	4	2	4	2AS	7	6	6	5AS	0	0	0	0	71
70	5	5	4	4	6	5	4	3	4	2	3	2	7	6	6	4	0	0	0	0	70
69	5	5	4	4	5	5	4	3	4	0	3	0	7	6	5	4	0	0	0	0	69
68	5	5	4	3	5	4	4	3	4	0	3	0	7	6	5	0	0	0	0	0	68
67	5	5	4	3	5	4	4	3	3	0	2	0	7	6	5	0	0	0	0	0	67
66	5	4	4	3	5	4	3	2	3	0	2	0	6	5	4	0	0	0	0	0	66
65	5	4	3	3	5	4	3	2	3	0	2	0	6	5	4	0	0	0	0	0	65
64	5	4	3	3	4	4	3	2	3	0	0	0	6	5	4	0	0	0	0	0	64
63	4	4	3	2	4	3	3	2	2	0	0	0	6	5	0	0	0	0	0	0	63
62	4	4	3	2	4	3	2	1	2	0	0	0	5	4	0	0	0	0	0	0	62
61	4	4	3	2	4	3	2	1	2	0	0	0	5	4	0	0	0	0	0	0	61
60	4	4	2	2	4	3	2	1	2	0	0	0	5	4	0	0	0	0	0	0	60
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57	4	3	2	1	3	2	1	0	0	0	0	0	4	0	0	0	0	0	0	0	57
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55	4	3	2	1	3	2	1	0	0	0	0	0	4	0	0	0	0	0	0	0	55
54	3	3	1	0	2	2	0	0	0	0	0	0	4	0	0	0	0	0	0	0	54
53	3	3	1	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	53
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51	3	2	1	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	51
50	3	2	1	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50
49	3	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	49
48	3	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48
47	3	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	47
46	2	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46
45	2	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	45
44	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	44
43	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43
42	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42
41	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	41
40	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40
39	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	39
38	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38
37	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37
36	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36
35	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	35
34	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34
33	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33
32	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32
31	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31
30	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30

	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
150	11EK	13EK	15EK	17EK	18EK	18EK	21EK	21EK	18ES	20ES	24ES	24EK	18ES	18ES	23ES	26ES	20ES	23ES	26ES	28ES	150
149	11EK	13EK	15EK	17EK	18EK	18EK	21EK	21EK	18ES	20ES	24ES	24ES	18ES	18ES	23ES	26ES	20ES	23ES	26ES	28ES	149
148	11EK	13EK	15EK	17EK	18EK	18EK	21EK	21EK	18EK	20EK	24EK	24EK	18ES	18ES	23ES	26ES	20ES	23ES	26ES	28ES	148
147	11EK	13EK	15EK	17EK	18EK	18EK	21EK	21EK	18ES	20ES	24ES	24ES	18ES	18ES	23ES	26ES	20ES	23ES	26ES	28ES	147
146	11DK	13DK	15EK	17EK	18EK	18EK	21EK	21EK	18EK	20EK	23EK	23EK	18ES	18ES	23ES	25ES	20ES	22ES	26ES	27ES	146
145	11DK	13DK	15EK	17EK	18EK	18EK	20EK	20EK	18ES	19ES	23ES	23ES	18ES	18ES	22ES	25ES	19ES	22ES	25ES	27ES	145
144	11DK	13DK	15DK	17EK	18EK	18EK	20EK	20EK	17EK	19EK	23EK	23EK	18ES	18ES	22ES	25ES	19ES	22ES	25ES	27ES	144
143	11DK	13DK	15DK	16EK	17EK	17EK	20EK	20EK	17ES	19ES	23ES	23ES	17ES	17ES	22ES	25ES	19ES	22ES	25ES	26ES	143
142	11CK	13CK	14DK	16EK	17DK	17DK	20DK	20EK	17EK	19EK	22EK	22EK	17ES	17ES	22ES	24ES	19ES	21ES	25ES	26ES	142
141	11CK	13CK	14DK	16EK	17DK	17DK	20DK	20EK	17ES	18ES	22ES	22ES	17ES	17ES	22ES	24ES	18ES	21ES	24ES	26ES	141
140	11CK	12CK	14DK	16DK	17DS	17DK	19DK	19EK	17DK	18EK	22EK	22EK	17DS	17ES	21ES	24ES	18EK	21ES	24ES	26ES	140
139	11CK	12CK	14DK	16DK	17DK	17DS	19DK	19EK	17DS	18ES	22ES	21ES	17DS	17ES	21ES	24ES	18ES	21EK	24ES	25ES	139
138	10CK	12CK	14DK	16DK	17DS	17DK	19DS	19DK	16DK	18EK	21EK	21EK	17DK	17ES	21ES	23ES	18EK	20ES	24ES	25EK	138
137	10CS	12CK	14CK	15DK	16DK	16DS	19DK	19DK	16DS	18DS	21DS	21ES	17DS	16DK	21ES	23ES	17ES	20EK	23ES	25ES	137
136	10CK	12CK	14CK	15DK	16DS	16DK	19DS	19DS	16DK	17DK	21DK	21EK	16DK	16DS	20EK	23ES	17DK	20ES	23EK	24EK	136
135	10BS	12BK	13CK	15DK	16DK	16DS	18DK	18DK	16DS	17DS	21DS	20ES	16DS	16DK	20DS	22EK	17DS	20EK	23ES	24ES	135
134	10BK	12BS	13CK	15DK	16DS	16DK	18DS	18DS	16DK	17DK	20DK	20EK	16DK	16DS	20DK	22ES	17DK	19ES	23EK	24EK	134
133	10BS	12BK	13CK	15DK	16DK	16DS	18DK	18DK	15DS	17DS	20DS	20DS	16DS	16DK	20DS	22EK	16DS	19DK	23ES	23ES	133
132	10BK	12BS	13CK	15DK	16CS	16DK	18DS	18DS	15DK	16DK	20DK	20DK	16DK	16DS	20DK	22DS	16DK	19DS	22EK	23EK	132
131	10BS	11BK	13CK	14DK	15CK	15CS	18CK	17DK	15DS	16DS	20DS	19DS	16DS	16DK	19DS	21DK	16DS	19DK	22ES	23ES	131
130	10BK	11BS	13CS	14DK	15CS	15CK	17CS	17DS	15CK	16DK	19DK	19DK	16CK	15DK	19DK	21DS	16DK	18DK	22EK	23EK	130
129	10AS	11BK	13CK	14CK	15CK	15CS	17CK	17DK	15CS	16DS	19DS	19DS	15CK	15DK	19DS	21DS	16DS	18DK	22ES	22ES	129
128	10AK	11AS	12BS	14CK	15CS	15CK	17CS	17DS	15CK	16DK	19DK	18DK	15CK	15DS	19DK	21DS	15DK	18DS	21EK	22EK	128
127	10AS	11AK	12BK	14CK	15CK	15CS	17CK	17DK	14CS	15DS	19DS	18DS	15CS	15DK	18DS	20DK	15DS	18DK	21ES	22ES	127
126	9AK	11AS	12BS	14CS	15CS	15CK	17CS	16DS	14CK	15DK	18DK	18DK	15CK	15DS	18DK	20DS	15DK	17DS	21EK	21DK	126
125	9AS	11AK	12BK	13CK	15CK	14CS	16CK	16DK	14CS	15DS	18DS	18DS	15CS	15DK	18DS	20DK	15DS	17DK	21ES	21DS	125
124	9AK	11AS	12BS	13CS	14CS	14CK	16CS	16CS	14CK	15CK	18DK	17DK	15CK	14DS	18DK	20DS	14CK	17DS	20DK	21DK	124
123	9AS	11AK	12BK	13CK	14CK	14CS	16CK	16CK	14CS	14CS	18DS	17DS	14CS	14DK	18DS	19DK	14CS	17DK	20DS	21DS	123
122	9AK	10AS	12BS	13CS	14BS	14CK	16CS	16CS	13CK	14CK	17CK	17DK	14CK	14DS	17DK	19DS	14CK	16DS	20DK	20DK	122
121	9AS	10AK	12BK	13CK	14BK	14CS	16CK	15CK	13CS	14CS	17CS	17DS	14CS	14CK	17DS	19DK	14CS	16DK	20DS	20DS	121
120	9AK	10AS	11BS	13CS	14BS	14BK	15CS	15CS	13CK	14CK	17CK	16DK	14CK	14CS	17DK	18DS	13CK	16DS	19DK	20DK	120
119	9	10AK	11AK	12CK	14BK	13BS	15CK	15CK	13CS	13CS	16CS	16DS	14CS	14CK	17CS	18DK	13CS	16CK	19DS	19DS	119
118	9	10AS	11AS	12BS	13BS	13BK	15CS	15CS	13CK	13CK	16CK	16DK	14CK	13CS	16CK	18DS	13CK	15CS	19DK	19DK	118
117	9	10AK	11AK	12BK	13BK	13BS	15CK	14CK	13CS	13CS	16CS	15DS	14CS	13CK	16CS	18DK	13CS	15CK	19DS	19DS	117
116	9	10AS	11AS	12BS	13BS	13BK	15BS	14CS	12CK	13CK	16CK	15DK	13CK	13CS	16CK	17DS	12CK	15CS	19DK	18DK	116
115	9	10AK	11AK	12BK	13BK	13BS	14BK	14CK	12BS	13CS	15CS	15CS	13BS	13CK	16CS	17DK	12CS	15CK	18DS	18DS	115
114	8	10	11AS	12BS	13AS	13BK	14BS	14CS	12BK	12CK	15CK	15CK	13BK	13CS	16CK	17DS	12CK	14CS	18DK	18DK	114
113	8	9	10AK	11BK	13AK	12BS	14BK	14CK	12BS	12CS	15CS	14CS	13BS	13CK	15CS	17CK	12BS	14CK	18DS	18DS	113
112	8	9	10AS	11BS	12AS	12BK	14BS	13CS	12BK	12CK	15CK	14CK	13BK	13CS	15CK	16CS	11BK	14CS	18DK	17DK	112
111	8	9	10AK	11BK	12AK	12BS	14BK	13CK	11BS	12CS	14CS	14CS	13BS	12CK	15CS	16CK	11BS	14CK	17DS	17DS	111
110	8	9	10AS	11BS	12AS	12AK	13BS	13BS	11BK	11CK	14CK	14CK	13BK	12CS	15CK	16CK	11BK	13CS	17DK	17CK	110
109	8	9	10AK	11BK	12AK	12AS	13BK	13BK	11BS	11BS	14CS	13CS	12BS	12CK	14CS	16CK	11BS	13BK	17DS	16CS	109
108	8	9	10AS	11AS	12AS	12AK	13BS	13BS	11BK	11BK	14CK	13CK	12BK	12CS	14CK	15CS	11BK	13BS	17DK	16CK	108
107	8	9	10AK	10AK	12AK	11AS	13BK	12BK	11BS	11BS	13CS	13CS	12BS	12CK	14CS	15CK	10AS	13BK	16CS	16CS	107
106	8	9	9AS	10AS	12AS	11AK	13AS	12BS	11BK	11BK	13CK	12CK	12BK	12CS	14CK	15CS	10AK	12BS	16CK	15CK	106
105	8	9	9AK	10AK	11AK	11AS	12AK	12BK	10BS	10BS	13CS	12CS	12BS	11BK	14BS	14CK	10AS	12BK	16CS	15CS	105
104	8	8	9	10AS	11	11AK	12AS	12BS	10BK	10BK	13BK	12CK	12BK	11BS	13BK	14CS	10AK	12BS	16CK	15CK	104
103	7	8	9	10AK	11	11AS	12AK	12BK	10BS	10BS	12BS	12CS	12BS	11BK	13BS	14CK	9AS	12BK	15CS	15CS	103
102	7	8	9	10AS	11	11AK	12AS	11BS	10AK	10BK	12BK	11CK	11BK	11BS	13BK	14BS	9AK	11BS	15CK	14BK	102
101	7	8	9	9AK	11	10AS	12AK	11BK	10AS	9BS	12BS	11CS	11AS	11BK	13BS	13BK	9AS	11AK	15CS	14BS	101
100	7	8	9	9AS	11	10AK	11AS	11BS	9AK	9BK	12BK	11CK	11AK	11BS	13BK	13BS	9AK	11AS	15CK	14BK	100
99	7	8	8	9AK	10	10	11AK	11BK	9AS	9BS	11BS	11CS	11AS	11BK	12BS	13BK	8	11AK	15CS	13BS	99
98	7	8	8	9AS	10	10	11AS	10AS	9AK	9BK	11BK	10CK	11AK	10BS	12BK	13BS	8	10AS	14CK	13BK	98
97	7	8	8	9AK	10	10	11AK	10AK	9AS	9BS	11BS	10CS	11AS	10BK	12BS	12BK	8	10AK	14CS	13BS	97
96	7	8	8	9AS	10	10	11AS	10AS	9AK	8AK	11BK	10BK	10AK	10BS	12BK	12BS	8	10AS	14CK	13AK	96
95	7	7	8	9AK	10	9	10AK	10AK	9AS	8AS	10BS	9BS	10AS	10BK	11BS	12BK	7	10AK	14BS	12AS	95
94	7	7	8	8	10	9	10	10AS	8AK	8AK	10BK	9BK	10AK	10BS	11BK	12BS	7	9	13BK	12AK	94
93	7	7	8	8	9	9	10	9AK	8AS	8AS	10BS	9BS	10AS	10BK	11BS	11BK	7	9	13BS	12AS	93
92	7	7	8	8	9	9	10	9AS	8AK	7AK	10BK	9BK	10AK	9AS	11BK	11BS	7	9	13BK	11AK	92
91	6	7	7	8	9	9	10	9AK	8	7AS	9AS	8BS	10AS	9AK	11BS	11BK	7	9	13BS	11AS	91
90	6	7	7	8	9	9	9	9AS	8	7AK	9AK	8BK	10AK	9AS	10AK	10BS	6	8	12BK	11AK	90
89	6	7	7	8	9	8	9	9AK	7	7AS	9AS	8BS	9	9AK	10AS	10BK	6	8	12BS	10	89
88	6	7	7	7	9	8	9	8AS	7	6AK	8AK	8BK	9	9AS	10AK	10BS	6	8	12BK	10	88
87	6	7	7	7	9	8	9	8AK	7	6AS	8AS	7BS	9	9AK	10AS	10AK	6	8	12BS	10	87
86	6	7	7	7	8	8	9	8AS	7	6	8AK	7BK	9	8AS	9AK	9AS	5	7	11AK	10	86
85	6	6	7	7	8	8	8	8AK	7	6	8AS	7BS	9	8AK	9AS	9AK	5	7	11AS	9	85
84	6	6	6	7	8	8	8	7	7	6	7AK	6BK	9	8	9AK	9AS	5	7	11AK	9	84
83	6	6	6	7	8	7	8	7	6	5	7AS	6BS	9	8	9AS	9AK	5	7	11AS	9	83
82	6	6	6	6	8	7	8	7	6	5	7AK	6BK	8	8	9AK	8AS	4	6	11AK	8	82
81	6	6	6	6	8	7	8	7	6	5	7	6AS	8	8	8AS	8AK	4	6	10AS	8	81
80	6	6	6	6	7	7	7	7	6	5	6	5AK	8	8	8AK	8AS	4	6	10AK	8	80
79	5	6	6	6	7	7	7	6	6	4	6	5AS	8	7	8	8AK	4	0	10	0	79
78	5	6	6	6	7	7	7	6	5	4	6	5AK	8	7	8	7AS	3	0	10	0	78
77	5	6	5	6	7	6	7	6	5	4	6	5AS	8	7	7	7AK	3	0	9	0	77
76	5	5	5	5	7	6	7	6	5	4	5	4AK	8	7	7	7AS	3	0	9	0	76
75	5	5	5	5	7	6	6	6	5	4	5	4AS	7	7	7	6AK	3	0	9	0	75
74	5	5	5	5	6	6	6	5	5	3	5	4AK	7	7	7	6	0	0	9	0	74
73	5	5	5	5	6	6	6	5	5	3	5	3AS	7	6	7	6	0	0	8	0	73
72	5	5	5	5	6	6	6	5	4	3	4	3AK	7	6	6	6	0	0	8	0	72
71	5	5	5	5	6	5	6	5	4	3	4	3	7	6	6	5	0	0	8	0	71
70	5	5	4	4	6	5	5	5	4	2	4	3	7	6	6	5	0	0	8	0	70
69	5	5	4	4	6	5	5	4	4	2	4	2	6	6	6	5	0	0	0	0	69
68	5	5	4	4	6	5	5	4	4	2	3	2	6	6	5	5	0	0	0	0	68
67	4	4	4	4	5	5	5	4	3	2	3	2	6	6	5	4	0	0	0	0	67
66	4	4	4	4	5	5	5	4	3	0	3	0	6	5	5	4	0	0	0	0	66
65	4	4	4	4	5	4	4	3	3	0	3	0	6	5	5	4	0	0	0	0	65
64	4	4	4	3	5	4	4	3	3	0	2	0	6	5	5	0	0	0	0	0	64
63	4	4	4	3	5	4	4	3	3	0	2	0	6	5	4	0	0	0	0	0	63
62	4	4	3	3	5	4	4	3	3	0	2	0	5	5	4	0	0	0	0	0	62
61	4	4	3	3	4	4	4	3	2	0	0	0	5	5	4	0	0	0	0	0	61
60	4	4	3	3	4	4	3	2	2	0	0	0	5	4	4	0	0	0	0	0	60
59	4	4	3	3	4	3	3	2	2	0	0	0	5	4	0	0	0	0	0	0	59
58	4	3	3	2	4	3	3	2	2	0	0	0	5	4	0	0	0	0	0	0	58
57	4	3	3	2	4	3	3	2	2	0	0	0	5	4	0	0	0	0	0	0	57
56	3	3	3	2	4	3	3	2	0	0	0	0	5	4	0	0	0	0	0	0	56
55	3	3	2	2	3	3	2	1	0	0	0	0	4	4	0	0	0	0	0	0	55
54	3	3	2	2	3	3	2	1	0	0	0	0	4	0	0	0	0	0	0	0	54
53	3	3	2	2	3	2	2	1	0	0	0	0	4	0	0	0	0	0	0	0	53
52	3	3	2	1	3	2	2	1	0	0	0	0	4	0	0	0	0	0	0	0	52
51	3	3	2	1	3	2	2	0	0	0	0	0	4	0	0	0	0	0	0	0	51
50	3	3	2	1	3	2	1	0	0	0	0	0	4	0	0	0	0	0	0	0	50
49	3	2	2	1	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	49
48	3	2	1	1	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	48
47	3	2	1	1	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	47
46	3	2	1	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46
45	3	2	1	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	45
44	2	2	1	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	44
43	2	2	1	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43
42	2	2	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42
41	2	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	41
40	2	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40
39	2	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	39
38	2	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38
37	2	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37
36	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36
35	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	35
34	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34
33	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33
32	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32
31	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31
30	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30
29	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	29
28	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28
27	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27
26	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26
25	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25
24	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24
23	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23
22	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22

8.33



HAND AXE

Weight: 4-6 pounds
Length: 2-3 feet

Fumble: 1-4

Type: One-hand
Range: 10 feet (-15%)
25 feet (-30%)
50 feet (-45%)

8.34



MAIN GAUCHE

Weight: **1-2 pounds**

Fumble: 1-2

Type: One-hand

Range: 10 feet (-15%)

Length: 1-1½ feet

	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
150	4CP	6CP	8EP	10EP	9EP	9EP	12EP	12EP	8EP	10EP	14EP	14EP	10EP	10EP	15EP	18EP	12EP	15EP	18EP	20EP	150
149	4CP	6CP	8DP	10EP	9DP	9DP	12EP	12EP	8EP	10EP	14EP	14EP	10EP	10EP	15EP	18EP	12EP	15EP	18EP	20EP	149
148	4BP	6CP	8DP	10EP	9DP	9DP	12DP	12EP	8EP	10EP	14EP	14EP	10EP	10EP	15EP	18EP	12EP	15EP	18EP	20EP	148
147	4BP	6BP	8CP	10DP	9CP	9DP	12DP	12EP	8DP	10EP	14EP	14EP	10EP	10EP	15EP	18EP	12EP	15EP	18EP	20EP	147
146	4BP	6BP	8CP	10DP	9CP	9CP	12DP	12DP	8DP	10EP	14EP	14EP	10EP	10EP	15EP	18EP	12EP	15EP	18EP	20EP	146
145	4AP	6BP	8CP	10DP	9CP	9CP	12DP	12DP	8DP	10DP	14DP	14EP	10EP	10EP	15EP	17EP	12EP	15EP	18EP	19EP	145
144	4AP	6BP	8CP	10DP	9CP	9CP	12CP	12DP	8DP	10DP	14DP	13EP	10EP	10EP	15EP	17EP	12EP	14EP	18EP	19EP	144
143	4AP	6AP	8CP	10CP	9CP	9CP	12CP	12DP	8CP	10DP	13DP	13EP	10DP	10EP	14EP	17EP	11EP	14EP	17EP	19EP	143
142	4AP	6AP	8BP	10CP	9BP	9CP	11CP	11DP	8CP	10DP	13DP	13DP	10DP	10EP	14EP	17EP	11EP	14EP	17EP	19EP	142
141	4AP	6AP	8BP	9CP	9BP	9CP	11CP	11DP	8CP	9DP	13DP	13DP	10DP	10DP	14EP	17EP	11EP	14EP	17EP	19EP	141
140	4AK	6AP	8BP	9CP	9BP	9BP	11CP	11CP	8CP	9CP	13DP	13DP	10DP	10DP	14DP	16EP	11DP	14EP	17EP	18EP	140
139	4	6AP	8BP	9CP	9BP	8BP	11CP	11CP	8CP	9CP	13DP	13DP	10DP	10DP	14DP	16EP	11DP	14EP	17EP	18EP	139
138	4	6AP	7BP	9CP	8BP	8BP	11CP	11CP	8CP	9CP	13CP	12DP	9DP	9DP	14DP	16DP	11DP	13DP	17EP	18EP	138
137	4	6AP	7BP	9CP	8BP	8BP	11CP	11CP	7CP	9CP	12CP	12DP	9DP	9DP	14DP	16DP	10DP	13DP	16EP	18EP	137
136	4	6AP	7BP	9BP	8AP	8BP	11CP	11CP	7CP	9CP	12CP	12DP	9CP	9DP	13DP	16DP	10DP	13DP	16EP	17EP	136
135	4	6AK	7AP	9BP	8AP	8BP	10BP	10CP	7CP	9CP	12CP	12DP	9CP	9DP	13DP	15DP	10DP	13DP	16EP	17EP	135
134	4	6	7AP	9BP	8AP	8BP	10BP	10CP	7CP	9CP	12CP	12DP	9CP	9DP	13DP	15DP	10DP	13DP	16EP	17EP	134
133	4	6	7AP	9BP	8AP	8BP	10BP	10CP	7BP	8CP	12CP	12CP	9CP	9DP	13DP	15DP	10DP	13DP	16EP	17DP	133
132	4	5	7AP	8BP	8AP	8AP	10BP	10CP	7BP	8CP	12CP	11CP	9CP	9DP	13DP	15DP	10CP	12DP	16EP	17DP	132
131	4	5	7AP	8BP	8AP	8AP	10BP	10CP	7BP	8CP	11CP	11CP	9CP	9DP	13DP	15DP	10CS	12DP	15EP	16DP	131
130	4	5	7AP	8BP	8AP	8AP	10BP	10BP	7BP	8CP	11CP	11CP	9CP	9CP	12DP	14DP	9CP	12DP	15DP	16DP	130
129	4	5	7AP	8BP	8AS	8AP	10BP	10BP	7BP	8BP	11CP	11CP	9CP	9CP	12CP	14DP	9CS	12DP	15DP	16DP	129
128	4	5	7AP	8AP	8AP	7AP	10BP	9BP	7BP	8BP	11CP	11CP	9CP	9CP	12CP	14DP	9CP	12CS	15DP	16DP	128
127	4	5	7AS	8AP	7AS	7AP	9AP	9BP	7BP	8BP	11CP	11CP	9CP	8CP	12CP	14DP	9CS	12CP	15DP	16DS	127
126	4	5	6AP	8AP	7AP	7AS	9AP	9BP	7BS	8BP	11CP	10CP	8CP	8CP	12CP	14DP	9CP	11CS	15DP	15DP	126
125	4	5	6AK	8AP	7AK	7AP	9AP	9BP	6BP	7BP	10BP	10CP	8CP	8CP	12CP	13CP	9CS	11CP	14DP	15DS	125
124	4	5	6	8AP	7	7AS	9AP	9BP	6BS	7BP	10BP	10CP	8CP	8CP	12CP	13CP	8CP	11CS	14DP	15DP	124
123	4	5	6	7AP	7	7AP	9AP	9BP	6BP	7BS	10BP	10CP	8CP	8CP	11CP	13CP	8CS	11CP	14DP	15DS	123
122	4	5	6	7AP	7	7AS	9AP	9BP	6AS	7BP	10BP	10CP	8BP	8CP	11CP	13CP	8CP	11CS	14DP	14DP	122
121	3	5	6	7AP	7	7AP	9AS	8BP	6AP	7BS	10BP	9CP	8BS	8CP	11CP	13CP	8BS	11CP	14DS	14CS	121
120	3	5	6	7AP	7	7AK	9AP	8BP	6AS	7BP	10BS	9CP	8BP	8CP	11CP	12CP	8BP	10CS	14DP	14CP	120
119	3	5	6	7AP	7	7	8AS	8AP	6AP	7BS	9BP	9CP	8BS	8CP	11CP	12CP	8BS	10CP	14DS	14CS	119
118	3	5	6	7AP	7	6	8AP	8AP	6AS	7BP	9BS	9BP	8BP	8CS	11CP	12CP	7BP	10BS	13DP	14CP	118
117	3	5	6	7AS	7	6	8AS	8AP	6AP	7AS	9BP	9BP	8BS	8CP	10CP	12CP	7BS	10BP	13CS	13CS	117
116	3	5	6	7AP	6	6	8AP	8AP	6AS	6AP	9BS	9BP	8BP	7CS	10CS	12CP	7BP	10BS	13CP	13CP	116
115	3	4	6	7AK	6	6	8AK	8AP	6AP	6AS	9BP	8BP	8BS	7CP	10BP	11CP	7BS	10BP	13CS	13CS	115
114	3	4	5	6	6	6	8	7AP	6AS	6AP	9BS	8BS	7BP	7BS	10BS	11CS	7BP	9BS	13CP	13CP	114
113	3	4	5	6	6	6	8	7AS	5AP	6AS	8AP	8BP	7BS	7BP	10BP	11CP	7AS	9BP	13CS	13CS	113
112	3	4	5	6	6	6	7	7AP	5AS	6AP	8AS	8BS	7BP	7BS	10BS	11BS	7AP	9BS	12CP	12CP	112
111	3	4	5	6	6	6	7	7AS	5AP	6AS	8AP	8BP	7BS	7BP	10BP	11BP	6AS	9BP	12CS	12BS	111
110	3	4	5	6	6	6	7	7AP	5AK	6AP	8AS	8BS	7BP	7BS	9BS	10BS	6AP	9BS	12CP	12BP	110
109	3	4	5	6	6	6	7	7AS	5	6AS	8AP	7BP	7BS	7BP	9BP	10BP	6AS	9AP	12CS	12BS	109
108	3	4	5	6	6	6	7	7AP	5	5AP	8AS	7BS	7AP	7BS	9BS	10BS	6AP	8AS	12CP	11BP	108
107	3	4	5	6	6	5	7	6AS	5	5AS	8AP	7BP	7AS	7BP	9BP	10BP	6AS	8AP	12CS	11BS	107
106	3	4	5	6	6	5	7	6AP	5	5AP	7AS	7BS	7AP	7BS	9BS	10BS	6AP	8AS	11CP	11BP	106
105	3	4	5	5	5	5	6	6AK	5	5AK	7AP	7BP	7AS	6BP	9BP	9BP	5AS	8AP	11BS	11BS	105
104	3	4	5	5	5	5	6	6	5	5	7AS	7AS	7AP	6BS	8BS	9BS	5AP	8AS	11BP	11BP	104
103	3	4	5	5	5	5	6	6	5	5	7AP	6AP	7AS	6BP	8BP	9BP	5AK	8AP	11BS	10BS	103
102	3	4	4	5	5	5	6	6	5	5	7AS	6AS	6AP	6BS	8BS	9BS	5	7AS	11BP	10AP	102
101	3	4	4	5	5	5	6	6	4	5	7AP	6AP	6AS	6BP	8BP	9BP	5	7AP	11BS	10AS	101
100	3	4	4	5	5	5	6	5	4	4	6AK	6AS	6AP	6AS	8BS	8BS	5	7AS	10BP	10AP	100
99	3	4	4	5	5	5	6	5	4	4	6	6AP	6AS	6AP	8AP	8BP	4	7AP	10BS	10AS	99
98	3	4	4	5	5	5	6	5	4	4	6	5AS	6AP	6AS	8AS	8BS	4	7AK	10BP	9AP	98
97	3	3	4	5	5	4	5	5	4	4	6	5AP	6AS	6AP	7AP	8BP	4	7	10BS	9AS	97
96	3	3	4	4	5	4	5	5	4	4	6	5AS	6AP	6AS	7AS	8BS	4	6	10BP	9AP	96
95	3	3	4	4	5	4	5	5	4	4	6	5AP	6AS	6AP	7AP	7AP	4	6	10BS	9AS	95
94	3	3	4	4	4	4	5	5	4	4	5	5AS	6AP	6AS	7AS	7AS	4	6	10AP	8AP	94
93	3	3	4	4	4	4	5	4	4	4	5	5AP	6AK	5AP	7AP	7AP	4	6	9AS	8AK	93
92	2	3	4	4	4	4	5	4	4	4	5	4AS	6	5AS	7AS	7AS	3	6	9AP	8	92
91	2	3	4	4	4	4	5	4	4	3	5	4AP	6	5AP	6AP	7AP	3	6	9AS	8	91
90	2	3	3	4	4	4	4	4	4	3	5	4AK	5	5AS	6AS	6AS	3	5	9AP	8	90
89	2	3	3	4	4	4	4	4	3	3	5	4	5	5AP	6AP	6AP	3	5	9AS	7	89
88	2	3	3	4	4	4	4	4	3	3	4	4	5	5AK	6AS	6AS	3	5	9AP	7	88
87	2	3	3	3	4	4	4	4	3	3	4	4	5	5	6AP	6AP	3	5	8AS	7	87
86	2	3	3	3	4	3	4	3	3	3	4	3	5	5	6AS	6AS	2	5	8AP	7	86
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83	2	3	3	3	3	3	4	3	3	2	4	3	5	5	5AS	5AP	2	0	8AK	0	83
82	2	3	3	3	3	3	3	3	3	2	3	3	5	4	5	5AS	2	0	8	0	82
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37	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37
36	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36

	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
150	7EK	7EK	8EK	13EK	11EK	11EK	14EK	14EK	16ES	18ES	22ES	22ES	20ES	20ES	25ES	28ES	22ES	25ES	28ES	30ES	150
149	7DK	7DK	8EK	13EK	11ES	11ES	14ES	14ES	16ES	18ES	22ES	22ES	20ES	20ES	25ES	28ES	22ES	25ES	28ES	30ES	149
148	7DK	7DK	8EK	13EK	11EK	11EK	14EK	14EK	16ES	18ES	22ES	22ES	20ES	20ES	25ES	28ES	22ES	25ES	28ES	30ES	148
147	7CK	7CK	8DK	13EK	11ES	11ES	14ES	14ES	16ES	18ES	22ES	22ES	20ES	20ES	25ES	28ES	22ES	25ES	28ES	29ES	147
146	7CK	7CK	8DK	13EK	11DK	11DK	14DK	14EK	16ES	18ES	21ES	21ES	20ES	20ES	24ES	27ES	21ES	24ES	27ES	29ES	146
145	7CK	7CK	8DK	13EK	11DS	11DS	14DS	14ES	16ES	17ES	21ES	21ES	20ES	20ES	24ES	27ES	21ES	24ES	27ES	29ES	145
144	7CK	7CK	8DK	13EK	11DK	11DK	14DK	14EK	15ES	17ES	21ES	21ES	19ES	19ES	24ES	27ES	21ES	24ES	27ES	28ES	144
143	7CK	7CK	8DK	13DK	11DS	11DS	13DS	13ES	15DS	17ES	21ES	20ES	19ES	19ES	24ES	26ES	20ES	23ES	26ES	28ES	143
142	7BS	7CK	8CK	12DK	11DK	11DK	13DK	13DK	15DS	17ES	20ES	20ES	19ES	19ES	23ES	26ES	20ES	23ES	26ES	27ES	142
141	7BK	7BK	8CK	12DK	11DS	10DS	13DS	13DS	15DS	16DS	20DS	20ES	19ES	19ES	23ES	26ES	20ES	23ES	26ES	27ES	141
140	7BS	7BK	8CK	12DK	10DK	10DK	13DK	13DK	15DS	16DS	20DS	20ES	19DS	19ES	23ES	25ES	19ES	22ES	26ES	27ES	140
139	7BK	7BS	8CK	12DK	10CS	10DS	13DS	13DS	14DS	16DS	19DS	19ES	18DS	18ES	23ES	25ES	19ES	22ES	25ES	26ES	139
138	7BS	7BK	8CK	12DK	10CK	10CK	13CK	13DK	14DS	16DS	19DS	19ES	18DS	18ES	22ES	25ES	19ES	22ES	25ES	26ES	138
137	7BK	7BS	7CS	12DK	10CS	10CS	12CS	12DS	14DS	15DS	19DS	19DS	18DS	18DS	22ES	24ES	19ES	21ES	25ES	26ES	137
136	7BS	7BK	7CK	12DK	10CK	10CK	12CK	12DK	14DS	15DS	19DS	18DS	18DS	18DS	22ES	24ES	18ES	21ES	24ES	25ES	136
135	7AK	7BS	7CS	11DK	10CS	10CS	12CS	12DS	14CS	15DS	18DS	18DS	18DS	18DS	21DS	24ES	18ES	21ES	24ES	25ES	135
134	7AS	6BK	7BK	11DK	10CK	10CK	12CK	12DK	14CK	15DS	18DS	18DS	18DS	17DS	21DS	23ES	18DS	20ES	24ES	24ES	134
133	7AK	6AS	7BS	11CS	10CS	10CS	12CS	12DS	13CS	14DK	18DS	17DS	17DS	17DS	21DS	23ES	17DS	20ES	23ES	24ES	133
132	6AS	6AK	7BK	11CK	10BK	9CK	12CK	12DK	13CK	14DS	18DK	17DS	17DS	17DS	21DS	23DS	17DS	20ES	23ES	24ES	132
131	6AK	6AS	7BS	11CS	9BS	9CS	12CS	11CS	13CS	14DK	17DS	17DS	17DS	17DS	20DS	22DS	17DS	19DS	23ES	23ES	131
130	6AS	6AK	7BK	11CK	9BK	9BK	11CK	11CK	13CK	14CS	17DK	17DS	17CS	17DS	20DS	22DS	16DS	19DS	23ES	23ES	130
129	6AK	6AS	7BS	11CS	9BS	9BS	11CS	11CS	13CS	13CK	17DS	16DS	17CS	16DS	20DS	22DS	16DS	19DS	22ES	23ES	129
128	6AS	6AK	7BK	11CK	9BK	9BK	11CK	11CK	12CK	13CS	16CK	16DK	16CS	16DS	20DS	21DS	16DS	18DS	22ES	22ES	128
127	6AK	6AS	7BS	10CS	9BS	9BS	11CS	11CS	12CS	13CK	16CS	16DS	16CS	16DS	19DS	21DS	16DS	18DS	22ES	22ES	127
126	6AS	6AK	7BK	10CK	9BK	9BK	11BK	11CK	12CK	13CS	16CK	15DK	16CK	16DS	19DS	21DS	15DS	18DS	21ES	21ES	126
125	6AK	6AS	7AS	10CS	9BS	9BS	11BS	10CS	12CS	13CK	16CS	15DS	16CS	16DS	19DS	20DS	15DS	17DS	21ES	21ES	125
124	6	6AK	6AK	10BK	9AK	9BK	10BK	10CK	12CK	12CS	15CK	15DK	16CK	15DS	18DS	20DS	15DS	17DS	21ES	21ES	124
123	6	6AS	6AS	10BS	9AS	8BS	10BS	10CS	11CS	12CK	15CS	15DS	15CS	15DK	18DS	20DS	14DS	17DS	21ES	20DS	123
122	6	6AK	6AK	10BK	8AK	8BK	10BK	10CK	11BK	12CS	15CK	14DK	15CK	15DS	18DK	19DS	14DS	16DS	20DS	20DS	122
121	6	6AS	6AS	10BS	8AS	8BS	10BS	10CS	11BS	12CK	14CS	14CS	15CS	15CK	18DS	19DS	14DS	16DS	20DS	20DS	121
120	6	6AK	6AK	9BK	8AK	8AK	10BK	10BK	11BK	11CS	14CK	14CK	15CK	15CS	17DK	19DS	13CK	16DS	20DS	19DS	120
119	6	6	6AS	9BS	8AS	8AS	10BS	9BS	11BS	11CK	14CK	13CS	15CS	14CK	17CS	18DK	13CS	15DS	19DS	19DS	119
118	6	5	6AK	9BK	8AK	8AK	10BK	9BK	11BK	11CS	14CK	13CK	15CK	14CS	17CK	18DS	13CK	15DS	19DS	18DS	118
117	6	5	6AS	9BS	8AS	8AS	9AS	9BS	10BS	11BK	13CS	13CS	14CS	14CK	17CS	18DK	12CS	15DK	19DS	18DS	117
116	6	5	6AK	9BK	8AK	8AK	9AK	9BK	10BK	10BS	13CK	12CK	14CK	14CS	16CK	17DS	12CK	14CS	18DS	18DS	116
115	5	5	6AS	9BS	8AS	7AS	9AS	9BS	10BS	10BK	13CS	12CS	14BS	14CK	16CS	17DK	12CS	14CK	18DS	17DS	115
114	5	5	6AK	9AK	8	7AK	9AK	9BK	10BK	10BS	13CK	12CK	14BK	13CS	16CK	17DS	12CK	12CS	18DS	17DK	114
113	5	5	6AS	8AS	7	7AS	9AS	8BS	10BS	10BK	12CS	12CS	14BS	13CK	15CS	16CK	11CS	13CK	18DS	17DS	113
112	5	5	5AK	8AK	7	7AK	9AK	8BK	9BK	9BS	12BK	11CK	13BK	13CS	15CK	16CS	11CK	13CS	17DS	16DK	112
111	5	5	5AS	8AS	7	7AS	8AS	8BS	9BS	9BK	12BS	11CS	13BS	13CK	15CS	16CK	11CS	13CK	17DS	16DS	111
110	5	5	5AK	8AK	7	7AK	8AK	8BK	9BK	9BS	11BK	11CK	13BK	13CS	15CK	15CS	10CK	12CS	17DS	15DK	110
109	5	5	5	8AS	7	7	8AS	8AS	9AS	9BK	11BS	10CS	13BS	12CK	14CS	15CK	10BS	12CK	16DS	15DS	109
108	5	5	5	8AK	7	7	8AK	8AK	9AK	8BS	11BK	10CK	13BK	12CS	14CK	15CS	10BK	12CS	16DK	15DK	108
107	5	5	5	8AS	7	7	8AS	7AS	9AS	8BK	11BS	10CS	12BS	12CK	14CS	14CK	9BS	11BK	16DS	14DS	107
106	5	5	5	8AK	7	6	8AK	7AK	8AK	8BS	10BK	9CK	12BK	12CS	14CK	14CS	9BK	11BS	15DK	14DK	106
105	5	5	5	7AS	7	6	8AS	7AS	8AS	8BK	10BS	9CS	12BS	12BK	13BS	14CK	9BS	11BK	15DS	14DS	105
104	5	5	5	7AK	6	6	7	7AK	8AK	7AS	10BK	9BK	12BK	11BS	13BK	13CS	9AK	10BS	15DK	13CK	104
103	5	5	5	7AS	6	6	7	7AS	8AS	7AK	10BS	9BS	12BS	11BK	13BS	13CK	8AS	10BK	15CS	13CS	103
102	5	4	5	7AK	6	6	7	7AK	8AK	7AS	9BK	8BK	12BK	11BS	12BK	13BS	8AK	10BS	14CK	12CK	102
101	5	4	5	7AS	6	6	7	7AS	7AS	7AK	9BS	8BS	11AS	11BK	12BS	12BK	8AS	9BK	14CS	12CS	101
100	5	4	5	7AK	6	6	7	6AK	7AK	7AS	9BK	8BK	11AK	11BS	12BK	12BS	7AK	9AS	14CK	12CK	100
99	5	4	4	7	6	6	7	6AS	7	6AK	8AS	7BS	11AS	10BK	12BS	12BK	7	9AK	13CS	11CS	99
98	4	4	4	6	6	6	6	6AK	7	6AS	8AK	7BK	11AK	10BS	11BK	11BS	7	8AS	13CK	11BK	98
97	4	4	4	6	6	5	6	6AS	7	6AK	8AS	7BS	11AS	10BK	11BS	11BK	6	8AK	13CS	11BS	97
96	4	4	4	6	6	5	6	6AK	6	6AS	8AK	7BK	10AK	10BS	11BK	11BS	6	8AS	13CK	10BK	96
95	4	4	4	6	6	5	6	6AS	6	5AK	7AS	6BS	10AS	10BK	11BS	10BK	6	7AK	12CS	10BS	95
94	4	4	4	6	5	5	6	5	6	5	7AK	6BK	10AK	9BS	10BK	10BS	6	7	12CK	9BK	94
93	4	4	4	6	5	5	6	5	6	5	7AS	6BS	10AS	9BK	10BS	10BK	5	7	12CS	9AS	93
92	4	4	4	6	5	5	6	5	6	5	6AK	5BK	10AK	9AK	10BK	9BK	5	6	11BK	9AK	92
91	4	4	4	6	5	5	5	5	6	4	6AS	5BS	9AS	9AK	9BS	9BK	5	6	11BS	8AS	91
90	4	4	4	5	5	5	5	5	5	4	6AK	5BK	9AK	9AS	9AK	9BS	4	6	11BK	8AK	90
89	4	4	4	5	5	5	5	5	5	4	6	4AS	9	8AK	9AS	8BK	4	0	10BS	0	89
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87	4	4	4	5	5	4	5	4	5	3	5	4AS	9	8AK	8AS	8AK	3	0	10BS	0	87
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85	4	3	3	5	4	4	4	4	4	3	5	3AS	8	8AK	8AS	7AK	3	0	9BS	0	85
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83	4	3	3	4	4	4	4	4	4	2	4	3AS	8	7	7AS	6AK	0	0	9AS	0	83
82	4	3	3	4	4	4	4	3	4	2	4	2AK	8	7	7AK	6AS	0	0	8AK	0	82
81	4	3	3	4	4	4	4	3	4	2	3	2AS	8	7	7AS	6AK	0	0	8AS	0	81
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78	3	3	3	4	4	3	3	3	3	0	3	0	7	6	6	5AS	0	0	0	0	78
77	3	3	3	4	4	3	3	3	3	0	2	0	7	6	6	4AK	0	0	0	0	77
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75	3	3	3	3	3	3	3	2	3	0	2	0	6	6	5	4AK	0	0	0	0	75
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64	3	2	2	2	2	2	1	0	0	0	0	0	4	0	0	0	0	0	0	0	64
63	2	2	2	2	2	2	1	0	0	0	0	0	4	0	0	0	0	0	0	0	63
62	2	2	2	2	2	1	1	0	0	0	0	0	4	0	0	0	0	0	0	0	62
61	2	2	1	1	2	1	1	0	0	0	0	0	4	0	0	0	0	0	0	0	61
60	2	2	1	1	2	1	1	0	0	0	0	0	4	0	0	0	0	0	0	0	60
59	2	2	1	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	59
58	2	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	58
57	2	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	57
56	2	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	56
55	2	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	55
54	2	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	54
53	2	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	53
52	2	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	52
51	2	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	51
50	2	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50
49	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	49
48	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48
47	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	47
46	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46
45	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	45
44	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	44
43	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43
42	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42
41	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	41
40	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40
39	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	39
38	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38
37	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37
36	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36
35	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	35
34	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34
33	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33
32	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32
31	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31
30	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30

8.35



SCIMITAR

Weight: 3–5 pounds

Fumble: 1–4

Type: One-hand

Range: –

Length: 2½–4 feet

8.36



RAPIER

Type: One-hand
Range: -
Length: 3-5 feet

Weight: 1½-3 pounds
Fumble: 1-4

	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
150	3CP	5DP	7EP	9EP	9EP	9EP	12EP	12EP	8EP	10EP	14EP	14EP	12EP	12EP	17EP	20EP	14EP	17EP	20EP	22EP	150
149	3CP	5CP	7EP	9EP	9EP	9EP	12EP	12EP	8EP	10EP	14EP	14EP	12EP	12EP	17EP	20EP	14EP	17EP	20EP	22EP	149
148	3CP	5CP	7DP	9EP	9EP	9EP	12EP	12EP	8EP	10EP	14EP	14EP	12EP	12EP	17EP	20EP	14EP	17EP	20EP	22EP	148
147	3CP	5CP	7DP	9EP	9EP	9EP	12EP	12EP	8EP	10EP	14EP	14EP	12EP	12EP	17EP	20EP	14EP	17EP	20EP	22EP	147
146	3CP	5CP	7DP	9DP	9DP	9DP	12DP	12EP	8EP	10EP	14EP	14EP	12EP	12EP	17EP	20EP	14EP	17EP	20EP	22EP	146
145	3BP	5CP	7CP	9DP	9DP	9DP	12DP	12EP	8DP	10EP	14EP	14EP	12EP	12EP	17EP	20EP	14EP	17EP	20EP	22EP	145
144	3BP	5CP	7CP	9DP	9DP	9DP	12DP	12EP	8DP	10EP	14EP	14EP	12EP	12EP	17EP	19EP	14EP	17EP	20EP	22EP	144
143	3BP	5BP	7CP	9DP	9DP	9DP	12DP	12EP	8DP	10DP	14DP	14EP	12EP	12EP	17EP	19EP	14EP	17EP	20EP	21EP	143
142	3BP	5BP	7CP	9DP	9DP	9DP	12DP	12DP	8DP	10DP	13DP	13EP	12EP	12EP	16EP	19EP	13EP	16EP	19EP	21EP	142
141	3BP	5BP	7CP	9DP	9DP	9DP	11DP	11DP	8DP	10DP	13DP	13EP	12EP	12EP	16EP	19EP	13EP	16EP	19EP	21EP	141
140	3BP	5BP	7CP	9CP	9DP	9DP	11DP	11DP	8DP	10DP	13DP	13EP	12EP	12EP	16EP	19EP	13EP	16EP	19EP	21EP	140
139	3AP	5BP	7CP	9CP	9CP	9DP	11DP	11DP	8CP	9DP	13DP	13DP	12EP	12EP	16EP	19EP	13EP	16EP	19EP	21EP	139
138	3AP	5BP	7CP	8CP	9CP	9CP	11CP	11DP	8CP	9DP	13DP	13DP	12DP	12EP	16EP	18EP	13EP	16EP	19EP	21EP	138
137	3AP	5BP	7BP	8CP	8CP	8CP	11CP	11DP	8CP	9DP	13DP	13DP	11DP	11EP	16EP	18EP	13EP	16EP	19EP	20EP	137
136	3AP	5AP	7BP	8CP	8CP	8CP	11CP	11DP	8CP	9DP	13DP	13DP	11DP	11EP	16EP	18EP	13EP	16EP	19EP	20EP	136
135	3AP	5AP	7BP	8CP	8CP	8CP	11CP	11DP	8CP	9CP	13DP	12DP	11DP	11DP	16EP	18EP	13EP	16EP	19EP	20EP	135
134	3AS	5AP	6BP	8CP	8CP	8CP	11CP	11DP	7CP	9CP	12DP	12DP	11DP	11DP	15EP	18EP	12EP	15EP	18EP	20EP	134
133	3AP	5AP	6BP	8CP	8CP	8CP	11CP	10DP	7CP	9CP	12CP	12DP	11DP	11DP	15DP	18EP	12EP	15EP	18EP	20EP	133
132	3AS	5AP	6BP	8CP	8CP	8CP	10CP	10DP	7CP	9CP	12CP	12DP	11DP	11DP	15DP	17EP	12EP	15EP	18EP	20EP	132
131	3AP	5AP	6BP	8BP	8BP	8CP	10CP	10DP	7CP	9CP	12CP	12DP	11DP	11DP	15DP	17EP	12EP	15EP	18EP	19EP	131
130	3AK	5AP	6BP	8BP	8BP	8CP	10CP	10CP	7CP	9CP	12CP	12DP	11DP	11DP	15DP	17DP	12EP	15EP	18EP	19EP	130
129	3	5AS	6BP	8BP	8BP	8BP	10CP	10CP	7CP	9CP	12CP	12DP	11DP	11DP	15DP	17DP	12DP	15EP	18EP	19EP	129
128	3	5AP	6AP	8BP	8BP	8BP	10CP	10CP	7CP	8CP	12CP	12DP	11DP	11DP	15DP	17DP	12DP	15EP	18EP	19EP	128
127	3	5AS	6AP	8BP	8BP	8BP	10CP	10CP	7CP	8CP	12CP	11DP	11DP	11DP	14DP	17DP	12DP	14EP	18EP	19EP	127
126	3	5AP	6AP	7BP	8BP	8BP	10CP	10CP	7BP	8CP	11CP	11CP	11CP	11DP	14DP	16DP	11DP	14DP	17EP	19EP	126
125	3	4AK	6AP	7BP	8BP	7BP	10BP	10CP	7BP	8CP	11CP	11CP	11CP	10DP	14DP	16DP	11DP	14DP	17EP	18EP	125
124	3	4	6AP	7BP	7BP	7BP	10BP	9CP	7BP	8CP	11CP	11CP	10CP	10DP	14DP	16DP	11DP	14DP	17EP	18EP	124
123	3	4	6AP	7BP	7BP	7BP	9BP	9CP	7BP	8CP	11CP	11CP	10CP	10DP	14DP	16DP	11DP	14DP	17EP	18EP	123
122	3	4	6AP	7BP	7AP	7BP	9BP	9CP	7BP	8CP	11CP	11CP	10CP	10DP	14DP	16DP	11DP	14DP	17EP	18EP	122
121	3	4	6AS	7AP	7AP	7BP	9BP	9CP	7BP	8BP	11CP	11CP	10CP	10DP	14DP	16DP	11DP	14DP	17EP	18EP	121
120	3	4	6AP	7AP	7AP	7BP	9BP	9CP	7BP	8BP	11CP	10CP	10CP	10DP	14DP	15DP	11DP	14DP	17EP	18EP	120
119	3	4	6AS	7AP	7AP	7BP	9BP	9CP	6BP	8BP	11CP	10CP	10CP	10DP	13DP	15DP	11DP	13DP	17EP	17EP	119
118	3	4	5AP	7AP	7AS	7AP	9BP	9CP	6BP	7BP	10CP	10CP	10CP	10DP	13DP	15DP	10DP	13DP	16EP	17EP	118
117	3	4	5AS	7AP	7AP	7AP	9BP	9BP	6BP	7BP	10BP	10CP	10CP	10DP	13DP	15DP	10DP	13DP	16EP	17EP	117
116	3	4	5AP	7AP	7AS	7AP	9BP	8BP	6BP	7BP	10BP	10CP	10CP	10CP	13DP	15DP	10DP	13DP	16DP	17DP	116
115	3	4	5AK	7AP	7AP	7AP	9BP	8BP	6BP	7BP	10BP	10CP	10CP	10CP	13CP	15DP	10DP	13DP	16DP	17DP	115
114	3	4	5	6AP	7AS	7AP	8AP	8BP	6BP	7BP	10BP	10CP	10CP	10CP	13CP	14DP	10DP	13DP	16DP	17DP	114
113	3	4	5	6AS	7AP	6AS	8AP	8BP	6BS	7BP	10BP	9CP	10CP	9CP	13CP	14DP	10DP	13DP	16DP	16DP	113
112	3	4	5	6AP	7AS	6AP	8AP	8BP	6AP	7BP	10BP	9CP	10CP	9CP	12CP	14DP	10DP	12DP	16DP	16DP	112
111	3	4	5	6AS	6AP	6AS	8AP	8BP	7AS	7BP	9BP	9CP	9CP	9CP	12CP	14DP	10DS	12DP	15DP	16DP	111
110	3	4	5	6AP	6AK	6AP	8AS	8BP	6AP	7BS	9BP	9CP	9CP	9CP	12CP	14DP	9CP	12DP	15DP	16DP	110
109	3	4	5	6AS	6	6AS	8AP	8BP	6AS	7BP	9BP	9BP	9BP	9CP	12CP	14CP	9CS	12DP	15DP	16DP	109
108	3	4	5	6AP	6	6AP	8AS	8BP	6AP	7BS	9BP	9BP	9BS	9CP	12CP	13CP	9CP	12DS	15DP	16DP	108
107	3	4	5	6AS	6	6AS	8AP	7BP	6AS	6BP	9BS	9BP	9BP	9CP	12CP	13CP	9CS	12DP	15DP	15DP	107
106	2	4	5	6AP	6	6AP	8AS	7BP	6AP	6AS	9BP	9BP	9BS	9CP	12CP	13CP	9CP	12CS	15DP	15DP	106
105	2	4	5	6AK	6	6AK	7AP	7BP	6AS	6AP	9BS	8BP	9BP	9CS	12CP	13CP	9CS	12CP	15DP	15DS	105
104	2	4	5	6	6	6	7AS	7AP	5AP	6AS	9BP	8BP	9BS	9CP	11CP	13CP	9CP	11CS	15DP	15DP	104
103	2	4	5	6	6	6	7AP	7AP	5AS	6AP	8AS	8BP	9BP	9CS	11CP	13CP	9CS	11CP	14DP	15DS	103
102	2	4	4	5	6	6	7AS	7AS	5AP	6AS	8AP	8BP	9BS	9CP	11CS	12CP	8CP	11CS	14DP	15DP	102
101	2	3	4	5	6	6	7AP	7AP	5AS	6AP	8AS	8BP	9BP	9CS	11CP	12CP	8CS	11CP	14DP	14DS	101
100	2	3	4	5	6	5	7AK	7AS	5AP	6AS	8AP	8BP	9BS	8CP	11BS	12CP	8CP	11CS	14DP	14DP	100
99	2	3	4	5	6	5	7	6AP	5AK	6AP	8AS	8BS	9BP	8CS	11BP	12CS	8CS	11CP	14DS	14DS	99
98	2	3	4	5	5	5	7	6AS	5	6AS	8AP	7BP	8BS	8CP	11BS	12CP	8CP	11CS	14DP	14DP	98
97	2	3	4	5	5	5	6	6AP	5	6AP	8AS	7BS	8BP	8BS	10BP	12BS	8CS	11CP	14DS	14DS	97
96	2	3	4	5	5	5	6	6AS	5	5AS	8AP	7BP	8BS	8BP	10BS	11BP	8BP	10CS	14DP	14DP	96
95	2	3	4	5	5	5	6	6AP	5	5AP	7AS	7BS	8BP	8BS	10BP	11BS	8BS	10BP	13DS	13DS	95
94	2	3	4	5	5	5	6	6AS	5	5AK	7AP	7BP	8BS	8BP	10BS	11BP	7BP	10BS	13DP	13DP	94
93	2	3	4	5	5	5	6	6AP	5	5	7AS	7AS	8AP	8BS	10BP	11BS	7BS	10BP	13CS	13CS	93
92	2	3	4	5	5	5	6	6AS	5	5	7AP	7AP	8AS	8BP	10BS	11BP	7BP	10BS	13CP	13CP	92
91	2	3	4	4	5	5	6	5AP	5	5	7AS	7AS	8AP	8BS	10BP	11BS	7BS	10BP	13CS	13CS	91
90	2	3	4	4	5	5	6	5AK	5	5	7AP	6AP	8AS	8BP	10BS	10BP	7BP	10BS	13CP	13CP	90
89	2	3	4	4	5	5	6	5	4	5	7AK	6AS	8AP	8BS	9BP	10BS	7AS	9BP	13CS	12CS	89
88	2	3	4	4	5	4	5	5	4	5	7	6AP	8AS	7BP	9BS	10BP	7AP	9BS	13CP	12CP	88
87	2	3	4	4	5	4	5	5	4	5	6	6AS	8AP	7BS	9BP	10BS	7AS	9BP	12CS	12CS	87
86	2	3	3	4	5	4	5	5	4	4	6	6AP	8AS	7BP	9BS	10BP	6AP	9AS	12CP	12CP	86
85	2	3	3	4	4	4	5	5	4	4	6	6AS	7AP	7BS	9BP	10BS	6AK	9AP	12CS	12CS	85
84	2	3	3	4	4	4	5	5	4	4	6	6AP	7AS	7BP	9BS	9BP	6	9AS	12CP	12BP	84
83	2	3	3	4	4	4	5	5	4	4	6	5AS	7AP	7BS	9AP	9BS	6	9AP	12CS	11BS	83
82	2	3	3	4	4	4	5	4	4	4	6	5AP	7AS	7AP	9AS	9BP	6	9AS	12CP	11BP	82
81	2	3	3	4	4	4	5	4	4	4	6	5AS	7AP	7AS	8AP	9BS	6	8AP	12CS	11BS	81
80	2	3	3	4	4	4	5	4	4	4	5	5AP	7	7AP	8AS	9AP	6	8AK	11BP	11BP	80
79	2	3	3	3	4	4	4	4	4	4	5	5AK	7	7AS	8AP	9AS	6	8	11BS	11BS	79
78	2	3	3	3	4	4	4	4	4	4	5	5	7	7AP	8AS	8AP	5	8	11BP	11AP	78
77	2	2	3	3	4	4	4	4	4	4	5	5	7	7AS	8AP	8AS	5	8	11BS	10AS	77
76	2	2	3	3	4	3	4	4	4	4	5	4	7	6AP	8AS	8AP	5	8	11BP	10AP	76
75	2	2	3	3	4	3	4	4	4	3	5	4	7	6	8AP	8AS	5	8	11BS	10AK	75
74	2	2	3	3	4	3	4	3	3	3	5	4	7	6	7AS	8AP	5	7	11BP	10	74
73	2	2	3	3	4	3	4	3	3	3	5	4	7	6	7AP	8AS	5	7	11BS	10	73
72	2	2	3	3	3	3	4	3	3	3	4	4	6	6	7AS	7AP	5	7	10BP	10	72
71	2	2	3	3	3	3	4	3	3	3	4	4	6	6	7AP	7AS	5	7	10AS	9	71
70	2	2	2	3	3	3	3	3	3	3	4	4	6	6	7	7AP	4	7	10AP	9	70
69	2	2	2	3	3	3	3	3	3	3	4	4	6	6	7	7AS	4	7	10AS	9	69
68	2	2	2	3	3	3	3	3	3	3	4	3	6	6	7	7AP	4	7	10AP	9	68
67	2	2	2	2	3	3	3	3	3	3	4	3	6	6	7	7AS	4	7	10AS	9	67
66	2	2	2	2	3	3	3	3	3	3	4	3	6	6	6	6AP	4	6	10AP	9	66
65	2	2	2	2	3	3	3	2	3	3	4	3	6	6	6	6	4	6	10AK	8	65
64	2	2	2	2	3	3	3	2	3	2	3	3	6	6	6	6	4	6	9	8	64
63	2	2	2	2	3	2	3	2	3	2	3	3	6	5	6	6	4	6	9	8	63
62	1	2	2	2	3	2	3	2	3	2	3	3	6	5	6	6	3	6	9	8	62
61	1	2	2	2	3	2	2	2	3	2	3	2	6	5	6	6	3	6	9	8	61
60	1	2	2	2	3	2	2	2	3	2	3	2	6	5	6	5	3	6	9	8	60
59	1	2	2	2	2	2	2	2	2	2	3	2	5	5	5	5	3	0	9	0	59
58	1	2	2	2	2	2	2	2	2	2	3	2	5	5	5	5	3	0	9	0	58
57	1	2	2	2	2	2	2	1	2	2	3	2	5	5	5	5	3	0	9	0	57
56	1	2	2	2	2	2	2	1	2	2	2	2	5	5	5	5	3	0	8	0	56
55	1	2	2	1	2	2	2	1	2	2	2	2	5	5	5	5	3	0	8	0	55
54	1	2	1	1	2	2	2	1	2	0	2	0	5	5	5	4	0	0	8	0	54
53	1	1	1	1	2	2	2	1	2	0	2	0	5	5	5	4	0	0	8	0	53
52	1	1	1	1	2	2	1	1	2	0	2	0	5	5	5	4	0	0	8	0	52
51	1	1	1	1	2	1	1	1	2	0	2	0	5	4	4	4	0	0	8	0	51
50	1	1	1	1	2	1	1	1	2	0	2	0	5	4	4	4	0	0	8	0	50
49	1	1	1	1	2	1	1	0	2	0	0	0	5	4	4	0	0	0	0	0	49
48	1	1	1	1	2	1	1	0	2	0	0	0	5	4	4	0	0	0	0	0	48
47	1	1	1	1	2	1	1	0	2	0	0	0	5	4	4	0	0	0	0	0	47
46	1	1	1	1	1	1	1	0	2	0	0	0	4	4	4	0	0	0	0	0	46
45	1	1	1	1	1	1	1	0	2	0	0	0	4	4	4	0	0	0	0	0	45
44	1	1	1	0	1	1	0	0	0	0	0	0	4	4	0	0	0	0	0	0	44
43	1	1	1	0	1	1	0	0	0	0	0	0	4	4	0	0	0	0	0	0	43
42	1	1	1	0	1	1	0	0	0	0	0	0	4	4	0	0	0	0	0	0	42
41	1	1	1	0	1	1	0	0	0	0	0	0	4	4	0	0	0	0	0	0	41
40	1	1	1	0	1	1	0	0	0	0	0	0	4	4	0	0	0	0	0	0	40
39	1	1	0	0	1	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	39
38	1	1	0	0	1	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	38
37	1	1	0	0	1	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	37
36	1	1	0	0	1	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	36
35	1	1	0	0	1	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	35
34	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34
33	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33
32	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32
31	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31
30	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30
29	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	29
28	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28
27	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27
26	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26
25	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25
24	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24
23	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23
22	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22
21	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21

8.37



BROADSWORD

Type: One-hand
Range: –
Length: 2-3½ feet

Weight: **3-5 pounds**

Fumble: 1-3

	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
150	8EK	10EK	12EK	14EK	15EK	15EK	18EK	18ES	16EK	18EK	22ES	22ES	20EK	20ES	25ES	28ES	22ES	25ES	28ES	30ES	150
149	8DK	10DK	12EK	14ES	15EK	15EK	18EK	18EP	16EK	18EK	22ES	22ES	20EP	20EP	25ES	28ES	22ES	25ES	28ES	30ES	149
148	8DK	10DK	12EK	14EK	15EK	15EK	18EK	18ES	16EK	18EK	22ES	22ES	20EK	20ES	25ES	28ES	22ES	25ES	28ES	30ES	148
147	8CK	10CK	12DK	14ES	15EK	15EK	18EK	18EP	16EK	18EK	22ES	22ES	20EP	20EP	25ES	28ES	22ES	25ES	28ES	30ES	147
146	8CK	10CK	12DK	14EK	15DK	15DK	18EK	18ES	16EK	18EK	22ES	21ES	20EK	20ES	25ES	27ES	21ES	24ES	27ES	29ES	146
145	8CK	10CK	12DS	14ES	15DK	15DK	18DK	18EP	16EK	17EK	21ES	21ES	20EP	20EP	24EP	27ES	21ES	24ES	27ES	29ES	145
144	8CK	10CK	12DP	14EP	15DK	15DK	17DS	17EK	16EK	17EK	21ES	21ES	19EK	19EK	24ES	27ES	21ES	24ES	27ES	29ES	144
143	8CK	10CK	12DK	13DK	15DK	14DK	17DP	17ES	15DK	17EK	21ES	21ES	19EP	19ES	24EP	26ES	21ES	24ES	27ES	28ES	143
142	8BK	10CK	12CS	13DS	14DK	14DK	17DK	17EP	15DK	17EK	21ES	20ES	19EK	19EP	24ES	26ES	20ES	23ES	26ES	28ES	142
141	8BK	10BK	11CP	13DP	14DK	14DK	17DS	17DK	15DK	17EK	20ES	20EP	19ES	19EK	23EP	26ES	20ES	23ES	26ES	28ES	141
140	8BK	10BK	11CK	13DK	14DK	14DK	17DP	17DS	15DK	16DK	20DS	20ES	19EP	19ES	23ES	26ES	20ES	23ES	26ES	27ES	140
139	8BK	10BK	11CS	13DS	14CK	14DK	16DK	16DP	15DK	16DK	20DP	20EP	19DK	19EP	23EP	25ES	20ES	22ES	26ES	27ES	139
138	8BK	9BK	11CP	13DP	14CK	14CK	16DS	16DK	15DK	16DK	20DS	19ES	18DS	18EK	23ES	25ES	19ES	22ES	25ES	27ES	138
137	8BK	9BK	11CK	13DK	14CK	14CK	16DP	16DS	14DK	16DK	19DP	19EP	18DP	18ES	22EP	25ES	19ES	22ES	25ES	26ES	137
136	8BK	9BK	11CS	12DS	14CK	13CK	16CK	16DP	14DK	16DK	19DS	19DS	18DK	18DP	22ES	24ES	19ES	22ES	25ES	26ES	136
135	8AK	9BK	11CP	12DP	13CK	13CK	16CS	16DK	14CK	15DK	19DP	19DP	18DS	18DK	22EP	24ES	19ES	21ES	25ES	26ES	135
134	7AK	9BK	11BK	12DK	13CK	13CK	15CP	15DS	14CK	15DS	19DS	18DS	18DP	18DS	22DS	24ES	18ES	21ES	24ES	25ES	134
133	7AK	9AP	10BS	12CS	13CK	13CP	15CK	15DP	14CK	15DP	18DS	18DP	18DK	17DP	21DP	24ES	18ES	21ES	24ES	25ES	133
132	7AK	9AK	10BP	12CP	13BK	13CK	15CS	15DK	14CK	15DK	18DP	18DS	17DS	17DK	21DS	23ES	18DS	20ES	24ES	25ES	132
131	7AK	9AP	10BK	12CK	13BK	13CP	15CP	15DS	13CK	15DS	18DK	18DP	17DP	17DS	21DP	23DS	17DS	20ES	24ES	24ES	131
130	7AK	9AK	10BS	12CS	13BK	13BK	15CK	15DP	13CK	14DP	18DS	17DS	17DK	17DP	21DK	23DS	17DS	20ES	23ES	24ES	130
129	7AP	9AS	10BP	11CP	13BK	12BP	15CS	14DK	13CK	14DK	17DP	17DP	17DS	17DK	20DS	22DS	17DS	20DS	23ES	24ES	129
128	7AK	9AP	10BK	11CK	12BK	12BK	14CP	14CS	13CK	14CS	17DK	17DS	17CP	17DS	20DP	22DS	17DK	19DS	23ES	23ES	128
127	7AS	8AK	10BS	11CS	12BK	12BP	14CK	14CP	13CS	14CP	17DS	17DP	17CK	16DP	20DK	22DS	16DS	19DS	23EK	23EK	127
126	7AP	8AS	10BP	11CP	12BK	12BK	14CS	14CK	13CP	13CK	17CP	16DS	16CS	16DK	20DS	22DS	16DP	19DS	22ES	23ES	126
125	7AK	8AP	10BK	11CK	12BP	12BP	14CP	14CS	12CK	13CS	16CK	16DP	16CP	16DS	19DP	21DS	16DK	18DS	22EK	22ES	125
124	7	8AK	9AS	11BS	12BK	12BK	14CK	13CP	12CS	13CP	16CS	16DS	16CK	16DP	19DK	21DS	16DS	18DS	22ES	22ES	124
123	7	8AS	9AP	11BP	12AP	11BS	13CS	13CK	12CP	13CK	16CP	15DP	16CS	16DK	19DS	21DS	15DP	18DS	21EK	22ES	123
122	7	8AP	9AK	10BK	12AK	11BP	13BP	13CS	12CK	13CS	15CK	15DS	16CP	16DS	19DP	20DS	15DK	18DP	21ES	21ES	122
121	7	8AK	9AS	10BS	11AS	11BK	13BK	13CP	12BS	12CP	15CS	15DP	16CK	15DP	18DK	20DS	15DS	17DS	21EK	21DS	121
120	7	8AS	9AP	10BP	11AP	11BS	13BS	13CK	12BP	12CK	15CP	15DK	15CS	15DK	18DS	20DS	15DP	17DP	21DS	21DS	120
119	6	8	9AK	10BK	11AK	11AP	13BP	12CS	11BK	12CS	15CK	14CS	15CP	15CS	18DP	19DS	14DK	17DS	20DP	20DS	119
118	6	8	9AS	10BS	11AS	11AK	12BK	12CP	11BS	12CP	15CS	14CP	15CK	15CP	18DK	19DK	14DS	16DP	20DK	20DS	118
117	6	8	9AP	10BP	11AP	11AS	12BS	12CK	11BP	12CK	14CP	14CK	15CS	15CK	18CS	19DS	14DP	16DK	20DS	20DS	117
116	6	7	8AK	10BK	11AK	10AP	12BP	12CS	11BK	11CS	14CK	14CS	15CP	14CS	17CP	19DP	14CK	16DS	20DP	19DP	116
115	6	7	8AS	9BS	11AS	10AK	12BK	12BP	11BS	11CP	14CS	13CP	15CK	14CP	17CK	18DK	13CS	16DP	19DK	19DS	115
114	6	7	8AP	9AP	10AP	10AS	12BS	11BK	11BP	11BK	14CP	13CK	14CS	14CK	17CS	18DS	13CP	15DK	19DS	19DP	114
113	6	7	8AK	9AK	10AK	10AP	12BP	11BS	10BK	11BS	13CK	13CS	14CP	14CS	17CP	18DP	13CK	15DS	19DP	19DS	113
112	6	7	8AS	9AS	10AS	10AK	11BK	11BP	10BS	11BP	13CS	13CP	14BK	14CP	16CK	17DK	12CS	15CP	19DK	18DP	112
111	6	7	8AP	9AP	10AP	10AS	11AS	11BK	10BP	10BK	13CP	12CK	14BS	14CK	16CS	17CS	12CP	15CK	18DS	18DS	111
110	6	7	8AK	9AK	10AK	10AP	11AP	11BS	10BK	10BS	13CK	12CS	14BP	13CS	16CP	17CP	12CK	14CS	18DP	18DP	110
109	6	7	8	9AS	10	9AK	11AK	10BP	10BS	10BP	12BS	12CP	14BK	13CP	16CK	17CK	12CS	14CP	18DK	17DS	109
108	6	7	8	8AP	10	9AS	11AS	10BK	10BP	10BK	12BP	12CK	13BS	13CK	15CS	16CS	11CP	14CK	18DS	17DP	108
107	6	7	7	8AK	9	9AP	10AP	10BS	9AK	9BS	12BK	11CS	13BP	13CS	15CP	16CP	11CK	13CS	17DP	17DS	107
106	6	7	7	8AS	9	9AK	10AK	10BP	9AS	9BP	12BS	11CP	13BK	13CP	15CK	16CK	11CS	13CP	17DK	16DP	106
105	6	6	7	8AP	9	9AS	10AS	10BK	9AP	9BK	12BP	11CK	13BS	13CK	15CS	15CS	11CP	13CK	17DS	16DS	105
104	5	6	7	8AK	9	9	10AP	9BS	9AK	9BS	11BK	11CS	13BP	12CS	14CP	15CP	10BK	13CS	17DP	16DP	104
103	5	6	7	8AS	9	9	10AK	9BP	9AS	9BP	11BS	10CP	13BK	12CP	14CK	15CK	10BS	12CP	16DK	15DK	103
102	5	6	7	7AP	9	8	9AS	9AK	9AP	8BK	11BP	10CK	12BS	12BK	14BS	15CS	10BP	12BK	16DS	15DS	102
101	5	6	7	7AK	9	8	9AP	9AS	8AK	8BS	11BK	10BS	12BP	12BS	14BP	14CP	10BK	12BS	16DP	15CP	101
100	5	6	7	7AS	8	8	9AK	9AP	8AS	8AP	10BS	10BP	12BK	12BP	13BK	14CK	9BS	11BP	16CK	14CK	100
99	5	6	6	7	8	8	9	8AK	8AP	8AK	10BP	9BK	12BS	11BK	13BS	14BS	9BP	11BK	15CS	14CS	99
98	5	6	6	7	8	8	9	8AS	8AK	8AS	10BK	9BS	12BP	11BS	13BP	13BP	9AK	11BS	15CP	14CP	98
97	5	6	6	7	8	8	9	8AP	8AS	7AP	10BS	9BP	12AK	11BP	13BK	13BK	9AS	11BP	15CK	13CK	97
96	5	6	6	7	8	7	8	8AK	8AP	7AK	9BP	8BK	11AS	11BK	12BS	13BS	8BP	10BK	14CS	13CS	96
95	5	6	6	6	8	7	8	8AS	7AK	7AS	9AK	8BS	11AP	11BS	12BP	13BP	8AK	10BS	14CP	13CP	95
94	5	5	6	6	8	7	8	7AP	7	7AP	9AS	8BP	11AK	11BP	12BK	12BK	8	10AP	14CK	12CK	94
93	5	5	6	6	7	7	8	7AK	7	7AK	9AP	8BK	11AS	10BK	12BS	12BS	7	9AK	14CS	12BS	93
92	5	5	6	6	7	7	8	7AS	7	6AS	8AK	7BS	11AP	10BS	11BP	12BP	7	9AS	13CP	12BP	92
91	5	5	5	6	7	7	7	7AP	7	6AP	8AS	7BP	11AK	10BP	11BK	11BK	7	9AP	13CK	11BK	91
90	5	5	5	6	7	7	7	7AK	7	6AK	8AP	7BK	10AS	10BK	11BS	11BS	7	9AK	13CS	11BS	90
89	4	5	5	6	7	6	7	6	6	6	8AK	7BS	10AP	10BS	11BP	11BP	6	8	13CP	11BP	89
88	4	5	5	5	7	6	7	6	6	5	7AS	6BP	10AK	10AP	11BK	10BK	6	8	12BK	10AK	88
87	4	5	5	5	7	6	7	6	6	5	7AP	6BK	10AS	9AK	10BS	10BS	6	8	12BS	10AS	87
86	4	5	5	5	6	6	6	6	6	5	7AK	6BS	10AP	9AS	10AP	10BP	6	7	12BP	10AP	86
85	4	5	5	5	6	6	6	6	6	5	7AS	6AP	10AK	9AP	10AK	10BK	5	7	12BK	9AK	85
84	4	5	5	5	6	6	6	5	6	5	6	5AK	9	9AK	10AS	9BS	5	7	11BS	9	84
83	4	4	5	5	6	6	6	5	5	4	6	5AS	9	9AS	9AP	9AP	5	7	11BP	9	83
82	4	4	4	5	6	5	6	5	5	4	6	5AP	9	8AP	9AK	9AK	5	6	11BK	8	82
81	4	4	4	4	6	5	6	5	5	4	6	5AK	9	8AK	9AS	8AS	4	6	11BS	8	81
80	4	4	4	4	6	5	5	5	5	4	5	4AS	9	8AS	9AP	8AP	4	6	10AP	8	80
79	4	4	4	4	5	5	5	4	5	4	5	4AP	9	8	8AK	8AK	4	0	10AK	0	79
78	4	4	4	4	5	5	5	4	5	3	5	4AK	8	8	8AS	8AS	4	0	10AS	0	78
77	4	4	4	4	5	5	5	4	4	3	5	4AS	8	8	8AP	7AP	3	0	10AP	0	77
76	4	4	4	4	5	5	5	4	4	3	4	3AP	8	7	8AK	7AK	3	0	9AK	0	76
75	4	4	4	4	5	4	4	4	4	3	4	3AK	8	7	7AS	7AS	3	0	9AS	0	75
74	3	4	3	3	5	4	4	3	4	3	4	3	8	7	7	6AP	0	0	9	0	74
73	3	4	3	3	5	4	4	3	4	2	4	3	8	7	7	6AK	0	0	9	0	73
72	3	3	3	3	4	4	4	3	4	2	3	2	7	7	7	6AS	0	0	8	0	72
71	3	3	3	3	4	4	4	3	3	2	3	2	7	7	6	6AP	0	0	8	0	71
70	3	3	3	3	4	4	3	3	3	2	3	2	7	6	6	5AK	0	0	8	0	70
69	3	3	3	3	4	3	3	2	3	0	3	0	7	6	6	5	0	0	0	0	69
68	3	3	3	3	4	3	3	2	3	0	2	0	7	6	6	5	0	0	0	0	68
67	3	3	3	2	4	3	3	2	3	0	2	0	7	6	5	4	0	0	0	0	67
66	3	3	3	2	4	3	3	2	3	0	2	0	6	6	5	4	0	0	0	0	66
65	3	3	2	2	3	3	3	2	2	0	2	0	6	5	5	4	0	0	0	0	65
64	3	3	2	2	3	3	2	1	2	0	0	0	6	5	5	0	0	0	0	0	64
63	3	3	2	2	3	3	2	1	2	0	0	0	6	5	4	0	0	0	0	0	63
62	3	3	2	2	3	2	2	1	2	0	0	0	6	5	4	0	0	0	0	0	62
61	3	2	2	2	3	2	2	1	2	0	0	0	6	5	4	0	0	0	0	0	61
60	3	2	2	1	3	2	2	1	2	0	0	0	5	5	4	0	0	0	0	0	60
59	2	2	2	1	3	2	1	0	0	0	0	0	5	4	0	0	0	0	0	0	59
58	2	2	2	1	2	2	1	0	0	0	0	0	5	4	0	0	0	0	0	0	58
57	2	2	1	1	2	2	1	0	0	0	0	0	5	4	0	0	0	0	0	0	57
56	2	2	1	1	2	2	1	0	0	0	0	0	5	4	0	0	0	0	0	0	56
55	2	2	1	1	2	1	1	0	0	0	0	0	5	4	0	0	0	0	0	0	55
54	2	2	1	0	2	1	0	0	0	0	0	0	4	0	0	0	0	0	0	0	54
53	2	2	1	0	2	1	0	0	0	0	0	0	4	0	0	0	0	0	0	0	53
52	2	2	1	0	2	1	0	0	0	0	0	0	4	0	0	0	0	0	0	0	52
51	2	2	1	0	1	1	0	0	0	0	0	0	4	0	0	0	0	0	0	0	51
50	2	1	1	0	1	1	0	0	0	0	0	0	4	0	0	0	0	0	0	0	50
49	2	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	49
48	2	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48
47	2	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	47
46	2	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46
45	2	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	45
44	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	44
43	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43
42	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42
41	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	41
40	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40
39	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	39
38	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38
37	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37
36	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36
35	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	35
34	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34
33	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33
32	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32
31	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31
30	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30

8.38



SHORT SWORD

Weight: 2-4 pounds

Fumble: 1-2

Type: One-hand
Range: 10 feet (-30%)
Length: 1½-2 feet

	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
150	5CK	7DK	9EK	11EK	10EK	10EK	13EK	13ES	11EK	13EK	17ES	17ES	16EK	16ES	21ES	24ES	18ES	21ES	24ES	26ES	150
149	5CK	7CK	9EK	11ES	10EK	10EK	13EK	13EP	11EK	13EK	17ES	17ES	16EP	16EP	21ES	24ES	18ES	21ES	24ES	26ES	149
148	5CK	7CK	9DK	11EK	10DK	10DK	13EK	13ES	11EK	13EK	17ES	17ES	16EK	16ES	21ES	24ES	18ES	21ES	24ES	26ES	148
147	5BK	7CK	9DK	11ES	10DK	10DK	13DK	13EP	11EK	13EK	17ES	17ES	16EP	16EP	21ES	24ES	18ES	21ES	24ES	26ES	147
146	5BK	7CK	9DS	11DK	10DK	10DK	13DK	13EK	11EK	13EK	17ES	17ES	16EK	16ES	21ES	24ES	18ES	21ES	24ES	26ES	146
145	5BK	7BK	9CP	11DS	10DK	10DK	13DS	13ES	11DK	13EK	17ES	17ES	16EP	16EP	21EP	23ES	18ES	21ES	24ES	25ES	145
144	5BK	7BK	9CK	11DP	10CK	10DK	13DP	13DP	11DK	13EK	16ES	16ES	16EK	16EK	20ES	23ES	17ES	20ES	23ES	25ES	144
143	5AK	7BK	9CS	11DK	10CK	10CK	13DK	12DK	11DK	13EK	16ES	16ES	16EP	16ES	20EP	23ES	17ES	20ES	23ES	25ES	143
142	5AK	7BP	9CP	11DS	10CK	10CK	12CS	12DS	11DK	12DK	16DS	16EP	16EK	15EP	20ES	23ES	17ES	20ES	23ES	25ES	142
141	5AK	7BK	9CK	10DP	10CK	10CK	12CP	12DP	11DK	12DK	16DS	16ES	15ES	15EK	20EP	22ES	17ES	20ES	23ES	24ES	141
140	5AK	7BP	9CS	10CK	10CK	10CK	12CK	12DK	10DK	12DK	16DP	16EP	15DP	15ES	20ES	22ES	17ES	20ES	23ES	24ES	140
139	5AK	7AK	9BP	10CS	9CK	9CK	12CS	12DS	10CK	12DK	16DS	15ES	15DK	15EP	19EP	22ES	16ES	19ES	22ES	24ES	139
138	5AK	7AP	8BK	10CP	9BK	9CK	12CP	12DP	10CK	12DK	15DP	15DP	15DS	15DK	19ES	22ES	16ES	19ES	22ES	24ES	138
137	5AP	7AK	8BS	10CK	9BK	9CK	12CK	12DK	10CK	12DK	15DS	15DS	15DP	15DS	19EP	22ES	16ES	19ES	22ES	23ES	137
136	5AK	7AS	8BP	10CS	9BK	9BP	12CS	11CS	10CK	12DK	15DP	15DP	15DK	15DP	19DS	21ES	16ES	19ES	22ES	23ES	136
135	5AS	7AP	8BK	10CP	9BK	9BK	11CP	11CP	10CK	11DS	15DK	15DS	15DS	15DK	19DP	21ES	16ES	19ES	22ES	23ES	135
134	5	6AK	8BS	10CK	9BK	9BP	11CK	11CK	10CK	11DP	15DS	15DP	15DP	14DS	19DS	21DS	16DS	18ES	22ES	23ES	134
133	5	6AS	8BP	10CS	9BK	9BK	11CS	11CS	10CK	11CK	15DP	14DS	14DK	14DP	18DP	21DS	15DS	18ES	21ES	23ES	133
132	5	6AP	8BK	9BP	9BK	9BP	11CP	11CP	10CK	11CS	14DK	14DP	14DS	14DK	18DS	20DS	15DS	18ES	21ES	22ES	132
131	5	6AK	8AS	9BK	9AK	9BK	11BK	11CK	10CK	11CP	14CS	14DS	14DP	14DS	18DP	20DS	15DS	18DS	21ES	22ES	131
130	5	6AS	8AP	9BS	9AP	9BS	11BS	11CS	9CK	11CK	14CP	14DP	14CK	14DP	18DK	20DS	15DS	18DS	21ES	22ES	130
129	5	6	8AK	9BP	9AK	8BP	11BP	10CP	9CS	11CS	14CK	14DS	14CS	14DK	14DS	20DS	15DS	17DS	21ES	22ES	129
128	5	6	8AS	9BK	8AS	8BK	11BK	10CK	9CP	10CP	14CS	13DP	14CP	14DS	17DP	20DS	14DS	17DS	20ES	21ES	128
127	5	6	7AP	9BS	8AP	8AS	10BS	10CS	9CK	10CK	13CP	13DS	14CK	14DP	17DK	19DS	14DS	17DS	20ES	21ES	127
126	5	6	7AK	9BP	8AK	8AP	10BP	10CP	9BS	10CS	13CK	13DP	14CS	13DK	17DS	19DS	14DK	17DS	20EK	21ES	126
125	4	6	7AS	9AK	8AS	8AK	10BK	10BK	9BP	10CP	13CS	13DS	14CP	13DS	17DP	19DS	14DS	17DS	20ES	21ES	125
124	4	6	7AP	9BS	8AP	8AS	10BS	10BS	9BK	10CK	13CP	13CP	13CK	13DP	17DK	19DS	14DP	16DS	20EK	20ES	124
123	4	6	7AK	8AP	8AK	8AP	10BP	10BP	9BS	10CS	13CK	12CK	13CS	13CK	17DS	18DS	13DK	16DS	19ES	20DS	123
122	4	6	7AS	8AK	8AS	8AK	10AK	9BK	9BP	10CP	13CS	12CS	13CP	13CS	16DP	18DS	13DS	16DS	19DK	20DS	122
121	4	6	7AP	8AS	8AP	8AS	10AS	9BS	8BK	9CK	12CP	12CP	13CK	13CP	16CK	18DS	13DP	16DS	19DS	20DS	121
120	4	6	7AK	8AP	8AK	8AP	9AP	9BP	8BS	9CS	12CK	12CK	13CS	13CK	16CS	18DS	13CK	16DS	19DK	19DS	120
119	4	6	7	8AK	8	7AK	9AK	9BK	8BP	9BP	12CS	12CS	13CP	13CS	16CP	18DS	13CS	15DS	19DS	19DS	119
118	4	5	7	8AS	7	7AS	9AS	9BS	8BK	9BK	12CP	12CP	13CK	12CP	16CK	17DK	13CP	15DP	19DK	19DS	118
117	4	5	7	8AP	7	7AP	9AP	9BP	8BS	9BS	12CK	11CK	13CS	12CK	15CS	17CS	12CK	15DS	18DS	19DS	117
116	4	5	6	8AK	7	7AK	9AK	9BK	8BP	9BP	12CS	11CS	12CP	12CS	15CP	17CP	12CS	15DP	18DP	19DS	116
115	4	5	6	7AS	7	7AS	9AS	8BS	8BK	9BK	11BP	11CP	12CK	12CP	15CK	17CK	12CP	15CS	18DK	18DS	115
114	4	5	6	7AP	7	7	9AP	8BP	8BS	8BS	11BK	11CK	12BS	12CK	15CS	16CS	12CK	14CP	18DS	18DP	114
113	4	5	6	7AK	7	7	8AK	8AK	8AP	8BP	11BS	11CS	12BP	12CS	15CP	16CP	12CS	14CK	18DP	18DS	113
112	4	5	6	7AS	7	7	8AS	8AS	8AK	8BK	11BP	10CP	12BK	12CP	15CK	16CK	11CP	14CS	17DK	18DP	112
111	4	5	6	7AP	7	7	8AP	8AP	7AS	8BS	11BK	10CK	12BS	12CK	15CS	16CS	11CK	14CP	17DS	17DS	111
110	4	5	6	7AK	7	7	8AK	8AK	7AP	8BP	10BS	10CS	12BP	11CS	14CP	16CP	11CS	14CK	17DP	17DP	110
109	4	5	6	7	7	6	8	8AS	7AK	8BK	10BP	10CP	12BK	11CP	14CK	15CK	11CP	13CS	17DK	17DS	109
108	4	5	6	7	7	6	8	7AP	7AS	8BS	10BK	10CK	11BS	11CK	14CS	15CS	11CK	13CP	17DS	17DP	108
107	4	5	6	7	6	6	8	7AK	7AP	7BP	10BS	9BS	11BP	11CS	14CP	15CP	10CS	13CK	16DP	16DS	107
106	4	5	6	6	6	6	8	7AS	7AK	7BK	10BP	9BP	11BK	11CP	13CK	15CK	10BP	13CS	16DK	16DP	106
105	4	5	5	6	6	6	7	7AP	7AS	7AS	10BK	9BK	11BS	11BK	13BS	14CS	10BK	13CP	16DS	16CS	105
104	4	5	5	6	6	6	7	7AK	7AP	7AP	9BS	9BS	11BP	11BS	13BP	14BP	10BS	12CK	16DP	16CP	104
103	4	5	5	6	6	6	7	7AS	7AK	7AK	9BP	9BP	11BK	11BP	13BK	14BK	10BP	12BS	16CK	15CS	103
102	4	4	5	6	6	6	7	7AP	6AS	7AS	9AK	9BK	11BS	10BK	13BS	14BS	10BK	12BP	16CS	15CP	102
101	3	4	5	6	6	6	7	6AK	6AP	7AP	9AS	8BS	11BP	10BS	13BP	14BP	9BS	12BK	15CP	15CK	101
100	3	4	5	6	6	6	7	6AS	6AK	7AK	9AP	8BP	11BK	10BP	12BK	13BK	9BP	12BS	15CK	15CS	100
99	3	4	5	6	6	5	7	6	6	6AS	9AK	8BK	10BS	10BK	12BS	13BS	9BK	11BP	15CS	15CP	99
98	3	4	5	6	6	5	6	6	6	6AP	8AS	8BS	10AP	10BS	12BP	13BP	9AS	11BK	15CP	14CK	98
97	3	4	5	5	5	5	6	6	6	6AK	8AP	8BP	10AK	10BP	12BK	13BK	9AP	11BS	15CK	14CS	97
96	3	4	5	5	5	5	6	6	6	6AS	8AK	7BK	10AS	10BK	12BS	12BS	8AK	11BP	14CS	14CP	96
95	3	4	5	5	5	5	6	6	6	6AP	8AS	7BS	10AP	10BS	11BP	12BP	8AS	11BK	14CP	14BK	95
94	3	4	5	5	5	5	6	5	6	6	8AP	7BP	10AK	9BP	11BK	12BK	8AP	10BS	14CK	13BS	94
93	3	4	4	5	5	5	6	5	6	6	7AK	7BK	10AS	9BK	11BS	12BS	8AK	10AP	14CS	13BP	93
92	3	4	4	5	5	5	6	5	5	5	7AS	7AS	10AP	9BS	11BP	12BP	8AS	10AK	14CP	13BK	92
91	3	4	4	5	5	5	6	5	5	5	7AP	7AP	9AK	9BP	11BK	11BK	8AP	10AS	13CK	13BS	91
90	3	4	4	5	5	5	5	5	5	5	7AK	6AK	9AS	9AK	11BS	11BS	7AK	10AP	13CS	12BP	90
89	3	4	4	5	5	4	5	5	5	5	7	6AS	9AP	9AS	10BP	11BP	7	9AK	13BP	12BK	89
88	3	4	4	4	5	4	5	5	5	5	7	6AP	9AK	9AP	10AK	11BK	7	9AS	13BK	12BS	88
87	3	4	4	4	5	4	5	4	5	5	6	6AK	9AS	9AK	10AS	10AS	7	9AP	13BS	12AP	87
86	3	3	4	4	4	4	5	4	5	5	6	6AS	9AP	8AS	10AP	10AP	7	9AK	13BP	11AK	86
85	3	3	4	4	4	4	5	4	5	4	6	5AP	9AK	8AP	10AK	10AK	6	9AS	12BK	11AS	85
84	3	3	4	4	4	4	5	4	5	4	6	5AK	9	8AK	9AS	10AS	6	8	12BS	11AP	84
83	3	3	4	4	4	4	4	4	5	4	6	5AS	9	8AS	9AP	10AP	6	8	12BP	11AK	83
82	3	3	3	4	4	4	4	4	4	4	6	5AP	8	8AP	9AK	9AK	6	8	12BK	11AS	82
81	3	3	3	4	4	4	4	4	4	4	5	5AK	8	8AK	9AS	9AS	6	8	12BS	10AP	81
80	3	3	3	3	4	4	4	3	4	4	5	4AS	8	8AS	9AP	9AP	5	8	11BP	10AK	80
79	3	3	3	3	4	3	4	3	4	4	5	4	8	8	9AK	9AK	5	7	11BK	10	79
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77	2	3	3	3	4	3	4	3	4	3	5	4	8	7	8AP	8AP	5	7	11AP	9	77
76	2	3	3	3	4	3	3	3	4	3	4	4	8	7	8AK	8AK	5	7	11AK	9	76
75	2	3	3	3	3	3	3	3	4	3	4	4	8	7	8AS	8AS	5	7	10AS	9	75
74	2	3	3	3	3	3	3	3	4	3	4	3	7	7	8	8AP	4	6	10AP	9	74
73	2	3	3	3	3	3	3	2	3	3	4	3	7	7	7	7AK	4	6	10AK	8	73
72	2	3	3	3	3	3	3	2	3	3	4	3	7	7	7	7AS	4	6	10AS	8	72
71	2	3	2	2	3	3	3	2	3	2	4	3	7	7	7	7AP	4	6	10AP	8	71
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69	2	2	2	2	3	2	3	2	3	2	3	2	7	6	7	6	3	0	9	0	69
68	2	2	2	2	3	2	2	2	3	2	3	2	7	6	7	6	3	0	9	0	68
67	2	2	2	2	3	2	2	2	3	2	3	2	7	6	6	6	3	0	9	0	67
66	2	2	2	2	3	2	2	1	3	2	3	2	6	6	6	6	3	0	9	0	66
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149	2	2	5BK	5DK	2BK	2CK	5CK	5EK	2DK	2EK	5EK	5EK	4EK	4EK	7EK	9EK	4EK	7EK	8EK	10EK	149
148	2	2	5AK	5CK	2AK	2BK	5CK	5DK	2CK	2DK	5DK	5EK	4EK	4EK	7EK	9EK	4EK	7EK	8EK	10EK	148
147	2	2	5AK	5CK	2AK	2BK	5CK	5DK	2CK	2DK	5DK	5EK	4DK	4EK	7EK	9EK	4EK	7EK	8EK	10EK	147
146	2	2	5AK	4CK	2AK	2BK	4CK	5CK	2CK	2CK	5DK	5DK	4DK	4DK	7DK	9EK	4DK	7EK	8EK	10EK	146
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143	2	2	5	5BK	2	2AK	5BK	5CK	2BK	2CK	5CK	5DK	4CK	4DK	7DK	9DK	4DK	7DK	8EK	10EK	143
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117	2	2	3	3	2	2	3	3	2	2	3	3AK	3	3AK	5AK	6AK	3	4AK	5BK	6AK	117
116	2	2	3	3	2	2	3	3	2	2	3	3AK	3	3AK	5AK	5AK	3	4AK	5BK	6AK	116
115	2	2	3	3	2	2	3	3	2	2	3	3AK	3	3AK	4AK	5AK	3	4AK	5BK	6AK	115
114	2	2	3	3	2	2	3	3	2	1	3	3AK	3	3	4AK	5AK	3	4	5BK	5AK	114
113	2	2	3	3	2	2	3	3	2	1	3	3AK	3	3	4AK	5AK	3	4	5BK	5AK	113
112	2	2	3	3	2	2	3	3	2	1	3	3AK	3	3	4AK	5AK	2	4	5AK	5AK	112
111	2	2	3	3	2	2	3	3	2	1	3	3AK	3	3	4AK	5AK	2	4	5AK	5AK	111
110	2	2	3	3	2	2	3	3	2	1	3	3AK	3	3	4AK	5AK	2	4	5AK	5AK	110
109	2	2	3	3	2	2	3	3	1	1	3	3	3	3	4	5AK	2	3	4AK	5	109
108	2	2	3	3	2	2	3	3	1	1	3	3	3	3	4	5AK	2	3	4AK	5	108
107	2	2	3	3	2	1	3	3	1	1	3	2	3	2	4	4AK	2	3	4AK	4	107
106	2	2	3	3	2	1	3	3	1	1	3	2	3	2	4	4AK	2	3	4AK	4	106
105	2	2	3	3	2	1	3	3	1	1	3	2	3	2	4	4AK	2	3	4AK	4	105
104	2	1	3	2	1	1	3	2	1	1	2	2	2	2	4	4	2	3	4AK	4	104
103	2	1	3	2	1	1	3	2	1	1	2	2	2	2	3	4	2	3	4AK	4	103
102	2	1	3	2	1	1	3	2	1	1	2	2	2	2	3	4	2	3	4AK	4	102
101	2	1	2	2	1	1	2	2	1	1	2	2	2	2	3	4	2	3	4AK	4	101
100	2	1	2	2	1	1	2	2	1	1	2	2	2	2	3	4	2	3	4AK	3	100
99	1	1	2	2	1	1	2	2	1	1	2	2	2	2	3	3	2	2	3	3	99
98	1	1	2	2	1	1	2	2	1	1	2	2	2	2	3	3	2	2	3	3	98
97	1	1	2	2	1	1	2	2	1	1	2	2	2	2	3	3	2	2	3	3	97
96	1	1	2	2	1	1	2	2	1	1	2	2	2	2	3	3	2	2	3	3	96
95	1	1	2	2	1	1	2	2	1	1	2	2	2	2	3	3	2	2	3	3	95
94	1	1	2	2	1	1	2	2	1	1	2	2	2	2	3	3	2	2	3	3	94
93	1	1	2	2	1	1	2	2	1	1	2	1	2	2	3	3	1	2	3	2	93
92	1	1	2	2	1	1	2	2	1	1	2	1	2	2	2	3	1	2	3	2	92
91	1	1	2	2	1	1	2	2	1	1	2	1	2	2	2	3	1	2	3	2	91
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79	1	1	1	1	1	1	1	1	1	0	1	0	1	1	1	1	1	0	1	0	79
78	1	1	1	1	1	1	1	1	1	0	1	0	1	1	1	1	1	0	1	0	78
77	1	1	1	1	1	1	1	1	1	0	1	0	1	1	1	1	1	0	1	0	77
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74	1	1	1	0	1	1	1	0	1	0	0	0	1	1	1	0	0	0	1	0	74
73	1	1	1	0	1	1	1	0	1	0	0	0	1	1	1	0	0	0	1	0	73
72	1	1	1	0	1	1	1	0	1	0	0	0	1	1	1	0	0	0	1	0	72
71	1	1	1	0	1	1	1	0	1	0	0	0	1	1	1	0	0	0	1	0	71
70	1	1	1	0	1	1	1	0	1	0	0	0	1	1	1	0	0	0	1	0	70
69	1	1	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	69
68	1	1	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	68
67	1	1	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	67
66	1	1	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	66
65	1	1	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	65
64	1	1	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	64
63	1	1	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	63
62	1	1	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	62
61	1	1	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	61
60	1	1	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	60
59	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	59
58	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	58
57	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	57
56	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	56
55	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	55
54	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	54
53	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	53
52	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	52
51	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	51
50	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50

8.41



BARE FIST

Weight: -

Fumble: 1-1

(lose swing)

Type: One-hand

Range: -

Length: -

8.42

CLUB

Weight: 3-7 pounds

Fumble: 1-4

Type: Two-hand
Range: 10 feet (-40%)
Length: 3-5 feet

	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
150	8DK	10EK	12EK	14EK	15EK	15EK	18EK	18EK	13EK	15EK	19EK	19EK	13EK	13EK	18EK	21EK	14EK	17EK	20EK	22EK	150
149	8CK	10DK	12EK	14EK	15EK	15EK	18EK	18EK	13EK	15EK	19EK	19EK	13EK	13EK	18EK	21EK	14EK	17EK	20EK	22EK	149
148	8CK	10CK	12DK	14EK	15DK	15DK	18EK	18EK	13EK	15EK	19EK	19EK	13EK	13EK	18EK	21EK	14EK	17EK	20EK	22EK	148
147	8CK	10CK	12DK	14EK	15DK	15DK	18DK	18EK	13EK	15EK	19EK	19EK	13EK	13EK	18EK	21EK	14EK	17EK	20EK	22EK	147
146	8CK	10CK	12DK	14EK	15DK	15DK	18DK	18EK	13EK	15EK	19EK	19EK	13EK	13EK	18EK	21EK	14EK	17EK	20EK	22EK	146
145	8BK	10CK	12CK	14DK	15DK	15DK	18DK	17EK	13DK	15EK	18EK	18EK	13EK	13EK	18EK	20EK	14EK	17EK	20EK	21EK	145
144	8BK	10CK	12CK	14DK	15CK	15DK	17DK	17DK	13DK	14EK	18EK	18EK	13EK	13EK	17EK	20EK	13EK	16EK	19EK	21EK	144
143	8BK	10BK	12CK	13DK	14CK	14CK	17DK	17DK	13DK	14DK	18DK	18EK	13DK	13EK	17EK	20EK	13EK	16EK	19EK	21EK	143
142	8BK	10BK	12CK	13DK	14CK	14CK	17CK	17DK	12DK	14DK	18DK	18EK	13DK	13EK	17EK	20EK	13EK	16EK	19EK	21EK	142
141	8BK	10BK	11CK	13DK	14CK	14CK	17CK	17DK	12DK	14DK	17DK	17EK	13DK	13DK	17EK	19EK	13EK	16EK	19EK	20EK	141
140	8BK	10BK	11CK	13DK	14CK	14CK	17CK	16DK	12CK	14DK	17DK	17DK	12DK	12DK	17EK	19EK	13DK	16EK	19EK	20EK	140
139	8AK	10BK	11CK	13DK	14CK	14CK	16CK	16DK	12CK	13DK	17DK	17DK	12DK	12DK	17DK	19EK	13DK	15EK	19EK	20EK	139
138	8AK	9BK	11BK	13CK	14BK	14CK	16CK	16DK	12CK	13DK	17DK	17DK	12DK	12DK	16DK	19EK	12DK	15EK	18EK	20EK	138
137	8AK	9BK	11BK	13CK	14BK	13CK	16CK	16DK	12CK	13DK	17DK	16DK	12DK	12DK	16DK	19DK	12DK	15DK	18EK	20EK	137
136	8AK	9AK	11BK	12CK	13BK	13BK	16CK	16DK	12CK	13DK	16DK	16DK	12CK	12DK	16DK	18DK	12DK	15DK	18EK	19EK	136
135	8AK	9AK	11BK	12CK	13BK	13BK	19CK	15CK	11CK	13CK	16DK	16DK	12CK	12DK	16DK	18DK	12DK	15DK	18EK	19EK	135
134	7AK	9AK	11BK	12CK	13BK	13BK	15CK	15CK	11CK	13CK	16CK	16DK	12CK	12DK	16DK	18DK	12DK	15DK	18EK	19EK	134
133	7AK	9AK	10BK	12CK	13BK	13BK	15CK	15CK	11CK	12CK	16CK	15DK	12CK	12DK	16DK	18DK	12DK	14DK	18EK	19EK	133
132	7AK	9AK	10BK	12CK	13BK	13BK	15CK	15CK	11CK	12CK	15CK	15DK	12CK	12DK	15DK	17DK	11DK	14DK	17EK	18EK	132
131	7AK	9AK	10BK	12CK	13AK	13BK	15BK	15CK	11CK	12CK	15CK	15DK	12CK	11DK	15DK	17DK	11CK	14DK	17EK	18DK	131
130	7AK	9AK	10BK	12BK	13AK	12BK	15BK	14CK	11CK	12CK	15CK	15DK	11CK	11DK	15DK	17DK	11CK	14DK	17EK	18DK	130
129	7	9AK	10AK	11BK	12AK	12BK	14BK	14CK	11BK	12CK	15CK	15DK	11CK	11CK	15DK	17DK	11CK	14DK	17DK	18DK	129
128	7	9AK	10AK	11BK	12AK	12BK	14BK	14CK	10BK	11CK	15CK	14CK	11CK	11CK	15CK	17DK	11CK	13DK	17DK	17DK	128
127	7	8AK	10AK	11BK	12AK	12AK	14BK	14CK	10BK	11CK	14CK	14CK	11CK	11CK	14CK	16DK	11CK	13CK	17DK	17DK	127
126	7	8AK	10AK	11BK	12AK	12AK	14BK	13CK	10BK	11CK	14CK	14CK	11CK	11CK	14CK	16DK	10CK	13CK	16DK	17DK	126
125	7	8AK	10AK	11BK	12AK	12AK	14BK	13CK	10BK	11CK	14CK	14CK	11CK	11CK	14CK	16DK	10CK	13CK	16DK	17DK	125
124	7	8	9AK	11BK	12AK	11AK	13BK	13BK	10BK	11CK	14CK	13CK	11BK	11CK	14CK	16DK	18CK	13CK	16DK	17DK	124
123	7	8	9AK	11BK	11AK	11AK	13BK	13BK	10BK	11BK	13CK	13CK	11BK	11CK	14CK	15CK	10CK	13CK	16DK	16DK	123
122	7	8	9AK	10BK	11AK	11AK	13AK	13BK	10BK	10BK	13CK	13CK	11BK	10CK	14CK	15CK	10BK	12CK	16DK	16DK	122
121	7	8	9AK	10BK	11AK	11AK	13AK	12BK	9BK	10BK	13CK	13CK	10BK	10CK	13CK	15CK	10BK	12CK	16DK	16DK	121
120	7	8	9AK	10AK	11AK	11AK	13AK	12BK	9BK	10BK	13BK	12CK	10BK	10CK	13CK	15CK	9BK	12CK	15DK	16DK	120
119	6	8	9AK	10AK	11	1AK	12AK	12BK	9BK	10BK	13BK	12CK	10BK	10CK	13CK	15CK	9BK	12BK	15DK	15CK	119
118	6	8	9AK	10AK	11	10AK	12AK	12BK	9BK	10BK	12BK	12CK	10BK	10CK	13CK	14CK	9BK	12BK	15DK	15CK	118
117	6	8	9AK	10AK	11	10AK	12AK	12BK	9AK	9BK	12BK	12CK	10BK	10CK	13CK	14CK	9BK	11BK	15DK	15CK	117
116	6	7	8AK	10AK	10	10AK	12AK	11BK	9AK	9BK	12BK	11CK	10BK	10CK	13BK	14CK	9AK	11BK	15DK	15CK	116
115	6	7	8AK	9AK	10	10AK	12AK	11BK	9AK	9BK	12BK	11CK	10BK	10BK	12BK	14CK	9AK	11BK	15CK	15CK	115
114	6	7	8	9AK	10	10	11AK	11BK	8AK	9BK	11BK	11CK	10PK	10BK	12BK	13CK	8AK	11BK	14CK	14CK	114
113	6	7	8	9AK	10	10	11AK	11AK	8AK	9BK	11BK	11CK	10BK	9BK	12BK	13BK	8AK	11BK	14CK	14CK	113
112	6	7	8	9AK	10	10	11AK	11AK	8AK	8BK	11BK	10BK	10AK	9BK	12BK	13BK	8AK	11AK	14CK	14BK	112
111	6	7	8	9AK	10	9	11AK	10AK	8AK	8BK	11BK	10BK	9AK	9BK	12BK	13BK	8AK	10AK	14CK	14BK	111
110	6	7	8	9AK	10	9	11AK	10AK	8AK	8AK	11BK	10BK	9AK	9BK	12BK	13BK	8AK	10AK	14CK	13BK	110
109	6	7	8	9AK	9	9	10	10AK	8AK	8AK	10BK	10BK	9AK	9BK	11BK	12BK	8	10AK	13CK	13BK	109
108	6	7	8	8AK	9	9	10	10AK	8AK	8AK	10BK	10BK	9AK	9BK	11BK	12BK	7	10AK	13CK	13BK	108
107	6	7	7	8AK	9	9	10	9AK	7AK	8AK	10AK	9BK	9AK	9BK	11BK	12BK	7	10AK	13CK	13BK	107
106	6	7	7	8AK	9	9	10	9AK	7AK	7AK	10AK	9BK	9AK	9BK	11BK	12BK	7	9AK	13CK	12AK	106
105	6	6	7	8AK	9	8	10	9AK	7AK	7AK	9AK	9BK	9AK	9BK	11BK	11BK	7	9AK	13BK	12AK	105
104	5	6	7	8	9	8	9	9AK	7	7AK	9AK	9BK	9AK	9BK	10BK	11BK	7	9	13BK	12AK	104
103	5	6	7	8	9	8	9	9AK	7	7AK	9AK	8BK	9AK	8AK	10BK	11BK	7	9	12BK	12AK	103
102	5	6	7	7	8	8	9	8AK	7	7AK	9AK	8BK	8AK	8AK	10AK	11BK	6	9	12BK	12AK	102
101	5	6	7	7	8	8	9	8AK	7	6AK	9AK	8BK	8AK	8AK	10AK	11BK	6	9	12BK	11AK	101
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99	5	6	6	7	8	8	8	8	6	6	8AK	7BK	8	8AK	10AK	10BK	6	8	12BK	11	99
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95	5	6	6	6	7	7	8	7	6	5	7AK	6AK	8	7AK	9AK	9AK	5	7	11AK	10	95
94	5	5	6	6	7	7	7	7	6	5	7	6AK	8	7	9AK	9AK	5	7	11AK	10	94
93	5	5	6	6	7	7	7	7	6	5	7	6AK	8	7	9AK	9AK	5	7	11AK	10	93
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87	4	5	5	5	6	6	6	5	5	4	5	5AK	7	7	8	7AK	4	6	10	8	87
86	4	5	5	5	6	5	6	5	5	4	5	4AK	7	6	7	7AK	4	6	10	8	86
85	4	5	5	5	6	5	6	5	4	4	5	4AK	7	6	7	7AK	4	6	9	8	85
84	4	5	5	5	6	5	5	5	4	3	5	4	7	6	7	7	3	0	9	0	84
83	4	4	5	5	6	5	5	4	4	3	5	4	7	6	7	7	3	0	9	0	83
82	4	4	4	5	5	5	5	4	4	3	4	3	6	6	7	6	3	0	9	0	82
81	4	4	4	4	5	5	5	4	4	3	4	3	6	6	6	6	3	0	9	0	81
80	4	4	4	4	5	5	5	4	4	3	4	3	6	6	6	6	3	0	9	0	80
79	4	4	4	4	5	4	4	4	4	2	4	3	6	6	6	6	0	0	8	0	79
78	4	4	4	4	5	4	4	3	3	2	3	2	6	6	6	5	0	0	8	0	78
77	4	4	4	4	5	4	4	3	3	2	3	2	6	5	6	5	0	0	8	0	77
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75	4	4	4	4	4	4	4	3	3	2	3	2	6	5	5	5	0	0	8	0	75
74	3	4	3	3	4	4	3	3	3	0	3	0	6	5	5	5	0	0	0	0	74
73	3	4	3	3	4	3	3	2	3	0	2	0	5	5	5	4	0	0	0	0	73
72	3	3	3	3	4	3	3	2	3	0	2	0	5	5	5	4	0	0	0	0	72
71	3	3	3	3	4	3	3	2	2	0	2	0	5	5	5	4	0	0	0	0	71
70	3	3	3	3	4	3	3	2	2	0	2	0	5	5	5	4	0	0	0	0	70
69	3	3	3	3	3	3	2	2	2	0	0	0	5	5	4	0	0	0	0	0	69
68	3	3	3	3	3	3	2	1	2	0	0	0	5	4	4	0	0	0	0	0	68
67	3	3	3	2	3	3	2	1	2	0	0	0	5	4	4	0	0	0	0	0	67
66	3	3	3	2	3	2	2	1	2	0	0	0	5	4	4	0	0	0	0	0	66
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63	3	3	2	2	3	2	1	0	0	0	0	0	4	4	0	0	0	0	0	0	63
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61	3	2	2	2	2	2	1	0	0	0	0	0	4	4	0	0	0	0	0	0	61
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55	2	2	1	1	1	1	0	0	0	0	0	0	4	0	0	0	0	0	0	0	55
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45	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	45
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31	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31
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	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
150	12EK	14EK	16EK	18EK	19EK	19EK	22EK	22EK	18EK	20EK	24EK	24EK	17EK	17EK	22EK	25EK	18EK	21EK	24EK	26EK	150
149	12EP	14EP	16EP	18EP	19EP	19EP	22EP	22EP	18EP	20EP	24EP	24EP	17EP	17EP	22EP	25EP	18EP	21EP	24EP	26EP	149
148	12EK	14EK	16EK	18EK	19EK	19EK	22EK	22EK	18EK	20EK	24EK	24EK	17EK	17EK	22EK	25EK	18EK	21EK	24EK	26EK	148
147	12EP	14EP	16EP	18EP	19EP	19EP	22EP	22EP	18EP	20EP	24EP	24EP	17EP	17EP	22EP	25EP	18EP	21EP	24EP	26EP	147
146	12EK	14EK	16EK	18EK	19EK	19EK	22EK	22EK	18EK	20EK	23EK	23EK	17EK	17EK	22EK	24EK	18EK	21EK	24EK	25EK	146
145	12EP	14EP	16EP	18EP	19EP	19EP	21EP	21EP	18EP	19EP	23EP	23EP	17EP	17EP	21EP	24EP	17EP	20EP	23EP	25EP	145
144	12EK	14EK	16EK	17EK	18EK	18EK	21EK	21EK	17EK	19EK	23EK	23EK	17EK	17EK	21EK	24EK	17EK	20EK	23EK	25EK	144
143	12DP	14DP	15EP	17EP	18EP	18EP	21EP	21EP	17EP	19EP	23EP	23EP	17EP	16EP	21EP	24EP	17EP	20EP	23EP	24EP	143
142	12DK	14DK	15EK	17EK	18EK	18EK	21EK	21EK	17EK	19EK	22EK	22EK	16EK	16EK	21EK	23EK	17EK	20EK	23EK	24EK	142
141	12DP	13DP	15DP	17EP	18EP	18EP	21EP	20EP	17DP	19EP	22EP	22EP	16EP	16EP	21EP	23EP	16EP	19EP	22EP	24EP	141
140	12DK	13DK	15DK	17EK	18DK	18EK	20EK	20EK	17DK	18EK	22EK	22EK	16DK	16EK	20EK	23EK	16EK	19EK	22EK	24EK	140
139	11DP	13DP	15DP	17EP	18DP	18DP	20DP	20EP	17DP	18EP	22EP	22EP	16DP	16EP	20EP	23EP	16EP	19EP	22EP	23EP	139
138	11DK	13DK	15DK	16DK	17DK	17DK	20DK	20EK	16DK	18DK	21DK	21EK	16DK	16EK	20EK	22EK	16EK	19EK	22EK	23EK	138
137	11CP	13CP	15DP	16DP	17DP	17DP	20DP	20EP	16DP	18DP	21EP	21EP	16DP	16DP	20EP	22EP	16EP	18EP	22EP	23EP	137
136	11CK	13CK	14DK	16DK	17DK	17DK	19DK	19DK	16DK	17DK	21DK	21EK	16DK	15DK	20EK	22EK	15EK	18EK	21EK	22EK	136
135	11CP	13CP	14DP	16DP	17DP	17DP	19DP	19DP	16DP	17DP	21DP	20EP	15DP	15DP	19DP	22EP	15DP	18EP	21EP	22EP	135
134	11CK	13CK	14DK	16DK	17DK	17DK	19DK	19DK	16DK	17DK	20DK	20DK	15DK	15DK	19DK	21EK	15DK	17EK	21EK	22EK	134
133	11CP	12CP	14DP	15DP	17DP	16DP	19DP	19DP	15DP	17DP	20DP	20DP	15DP	15DP	19DP	21EP	15DP	17EP	21EP	22EP	133
132	11CK	12CK	14CK	15DK	16DK	16DK	19DK	18DK	15CK	17DK	20DK	20DK	15DK	15DK	19DK	21DK	14DK	17DK	20EK	21EK	132
131	11CP	12CP	14CP	15DP	16DP	16DP	18DP	18DP	15CP	16DP	20DP	19DP	15DP	15DP	19DP	21DP	14DP	17DP	20EP	21EP	131
130	11CK	12CK	13CK	15DK	16DK	16DK	18DK	18DK	15CK	16DK	19DK	19DK	15CK	15DK	18DK	20DK	14DK	17DK	20EK	21EK	130
129	10BP	12CP	13CP	15DP	16CP	16DP	18DP	18DP	15CP	16DP	19DP	19DP	15CP	14DP	18DP	20DP	14DP	16DP	20EP	20EP	129
128	10BK	12BK	13CK	15DK	16CK	16DK	18DK	17DK	15CK	16DK	19DK	19DK	14CK	14DK	18DK	20DK	14DK	16DK	20EK	20EK	128
127	10BP	12BP	13CP	14DP	16CP	15CP	17CP	17DP	14CP	15DP	19DP	18DP	14DP	14CP	18DP	20DP	13DP	16DP	19EP	20EP	127
126	10BK	12BK	13CK	14DK	15CK	15CK	17CK	17DK	14CK	15CK	18DK	18DK	14CK	14DK	17DK	19DK	13DK	16DK	19EK	20EK	126
125	10BP	11BP	13CP	14CP	15CP	15CP	17CP	17DP	14CP	15CP	18DP	18DP	14CP	14DP	17DP	19DP	13CP	15DP	19EP	19DP	125
124	10AK	11BK	13CK	14CK	15CK	15CK	17CK	17DK	14CK	15CK	18CK	18DK	14CK	14DK	17DK	19DK	13DK	15DK	19EK	19DK	124
123	10AP	11BP	12CP	14CP	15CP	15CP	17CP	16DP	14CP	15CP	18CP	17DP	14CP	14DP	17DP	19DP	12DP	15DP	18DP	19DP	123
122	10AK	11BK	12CK	14CK	15CK	14CK	16CK	16DK	14CK	14CK	17CK	17DK	14CK	13DK	17DK	18DK	12CK	15DK	18DK	18DK	122
121	10AP	11AP	12BP	13CP	15CP	14CP	16CP	16DP	13CP	14CP	17CP	17DP	13CP	13DP	16DP	18DP	12CP	14DP	18DP	18DP	121
120	10AK	11AK	12BK	13CK	14CK	14CK	16CK	16CK	13CK	14CK	17CK	16DK	13CK	13CK	16DK	18DK	12CK	14DK	18DK	18DK	120
119	10AP	11AP	12BP	13CP	14CP	14CP	16CP	15CP	13CP	14CP	17CP	16DP	13CP	13CP	16CP	18DP	12CP	14DP	18DP	18DP	119
118	9AK	11AK	12BK	13CK	14BK	14CK	16CK	15CK	13BK	13CK	16CK	16DK	13CK	13CK	16CK	17DK	11CK	14CK	17DK	17DK	118
117	9AP	11AP	12BP	13CP	14BP	14CP	15CP	15CP	13BP	13CP	16CP	16CP	13CP	13CP	16CP	17DP	11CP	13CP	17DP	17DP	117
116	9AK	10AK	11BK	12CK	14BK	13CK	15CK	15CK	12BK	13CK	16CK	15CK	13CK	13CK	15CK	17DK	11CK	13CK	17DK	17DK	116
115	9AS	10AP	11BP	12CP	14BP	13BP	15CP	14CP	12BP	13CP	16CP	15CP	13CP	12CP	15CP	17DP	11CP	13CP	17DP	16DP	115
114	9	10AK	11BK	12CK	13BK	13BK	15CK	14CK	12BK	13CK	15CK	15CK	13BK	12CK	15CK	16DK	10CK	13CK	16DK	16DK	114
113	9	10AP	11BP	12BP	13BP	13BP	14CP	14CP	12BP	12CP	15CP	15CP	12BP	12CP	15CP	16CP	10CP	13CP	16DP	16DP	113
112	9	10AK	11AK	12BK	13BK	13BK	14CK	14CK	12BK	12BK	15CK	14CK	12BK	12CK	15CK	16CK	10CK	12CK	16DK	16DK	112
111	9	10AP	11AP	12BP	13AP	13BP	14CP	14CP	12BP	12BP	15CP	14CP	12BP	12CP	14CP	16CP	10BP	12CP	16DP	15DP	111
110	9	10AK	10AK	11BK	13AK	12BK	14BK	13CK	11BK	12BK	14CK	14CK	12BK	12CK	14CK	15CK	9BK	12CK	16DK	15DK	110
109	9	10	10AP	11BP	12AP	12BP	14BP	13CP	11BP	11BP	14CP	14CP	12BP	12CP	14CP	15CP	9BP	12BP	15DP	15DP	109
108	8	9	10AK	11BK	12AK	12BK	13BK	13CK	11BK	11BK	14CK	13CK	12BK	11CK	14CK	15CK	9BK	11BK	15DK	14CK	108
107	8	9	10AP	11BP	12AP	12BP	13BP	13CP	11BP	11BP	14BP	13CP	12BP	11CP	14CP	14CP	9BP	11BP	15DP	14CP	107
106	8	9	10AK	11BK	12AK	12AK	13BK	13CK	11BK	11BK	13BK	13CK	11BK	11CK	13CK	14CK	9BK	11BK	15DK	14CK	106
105	8	9	10AP	10BP	12AP	11AP	13BP	12CP	11AP	11BP	13BP	12CP	11BP	11CP	13CP	14CP	8AP	11BP	14CP	14CP	105
104	8	9	10AK	10AK	12AK	11AK	12BK	12BK	10AK	10BK	13BK	12CK	11BK	11CK	13BK	14CK	8AK	10BK	14CK	13CK	104
103	8	9	9AP	10AP	11AP	11AP	12BP	12BP	10AP	10BP	13BP	12CP	11BP	11BP	13BP	13CP	8AP	10BP	14CP	13CP	103
102	8	9	9AK	10AK	11AK	11AK	12BK	11BK	10AK	10BK	12BK	12CK	11BK	10BK	12BK	13CK	8AK	10AK	14CK	13CK	102
101	8	9	9AP	10AP	11AP	11AP	12AP	11BP	10AP	10BP	12BP	11CP	11BP	10BP	12BP	13BP	7AP	10AP	14CP	12CP	101
100	8	8	9AK	10AK	11AK	11AK	12AK	11BK	10AK	9BK	12BK	11CK	11BK	10BK	12BK	13BK	7AK	9AK	13CK	12BK	100
99	8	8	9	9AP	11	10AP	11AP	11BP	9AP	9AP	12BP	11BP	10AP	10BP	12BP	12BP	7	9AP	13CP	12BP	99
98	8	8	9	9AK	11	10AK	11AK	11BK	9AK	9AK	11BK	11BK	10AK	10BK	12BK	12BK	7	9AK	13CK	12BK	98
97	7	8	8	9AP	10	10AP	11AP	10BP	9AP	9AP	11BP	10BP	10AP	10BP	11BP	12BP	7	9AP	13CP	11BP	97
96	7	8	8	9AK	10	10AK	11AK	10BK	9AK	9AK	11BK	10BK	10AK	10BK	11BK	12BK	6	8AK	12CK	11BK	96
95	7	8	8	9AP	10	10AS	11AP	10BP	9AS	8AP	11BP	10BP	10AP	9BP	11BP	11BP	6	8AS	12CP	11BP	95
94	7	8	8	9AK	10	9	10AK	10BK	9	8AK	10AK	10BK	10AK	9BK	11BK	11BK	6	8	12BK	10AK	94
93	7	8	8	8AP	10	9	10AP	9AP	8	8AP	10AP	9BP	10AP	9BP	11BP	11BP	6	8	12BP	10AP	93
92	7	7	8	8AK	10	9	10AK	9AK	8	8AK	10AK	9BK	9AK	9BK	10BK	11BK	5	7	12BK	10AK	92
91	7	7	8	8AP	9	9	10AP	9AP	8	7AP	10AP	9BP	9AP	9BP	10BP	10BP	5	7	11BP	10AP	91
90	7	7	7	8AK	9	9	9AK	9AK	8	7AK	9AK	8BK	9AK	9BK	10BK	10BK	5	7	11BK	9AK	90
89	7	7	7	8	9	9	9	9AP	8	7	9AP	8BP	9AP	9AP	10BP	10BP	5	7	11BP	9	89
88	7	7	7	7	9	8	9	8AK	8	7	8AK	8BK	9AK	8AK	10AK	10BK	5	6	11BK	9	88
87	6	7	7	7	9	8	9	8AP	7	7	9AP	8BP	9AP	8AP	9AP	9BP	4	6	10BP	8	87
86	6	7	7	7	9	8	9	8AK	7	6	8AK	7BK	9AK	8AK	9AK	9BK	4	6	10AK	8	86
85	6	7	7	7	8	8	8	8AP	7	6	8AS	7BP	8AS	8AP	9AP	9BP	4	6	10AP	8	85
84	6	7	7	7	8	8	8	7AK	7	6	8	7AK	8	8AK	9AK	9AK	4	0	10AK	0	84
83	6	6	7	7	8	7	8	7AP	7	6	8	7AP	8	8AP	9AP	8AP	3	0	10AP	0	83
82	6	6	6	6	8	7	8	7AK	6	5	7	6AK	8	8AK	8AK	8AK	3	0	9AK	0	82
81	6	6	6	6	8	7	7	7AP	6	5	7	6AP	8	7AP	8AP	8AP	3	0	9AP	0	81
80	6	6	6	6	8	7	7	6AK	6	5	7	6AK	8	7AK	8AK	8AK	3	0	9AK	0	80
79	6	6	6	6	7	7	7	6	6	5	7	6AP	8	7	8AP	7AP	0	0	9	0	79
78	6	6	6	6	7	7	7	6	6	5	6	5AK	8	7	7AK	7AK	0	0	8	0	78
77	6	6	5	5	7	6	7	6	6	4	6	5AP	7	7	7AP	7AP	0	0	8	0	77
76	5	6	5	5	7	6	6	6	5	4	6	5AK	7	7	7AK	7AK	0	0	8	0	76
75	5	5	5	5	7	6	6	5	5	4	6	4AS	7	7	7AS	6AP	0	0	8	0	75
74	5	5	5	5	6	6	6	5	5	4	5	4	7	6	7	6AK	0	0	0	0	74
73	5	5	5	5	6	6	6	5	5	3	5	4	7	6	6	6AP	0	0	0	0	73
72	5	5	5	5	6	6	6	5	5	3	5	4	7	6	6	6AK	0	0	0	0	72
71	5	5	5	4	6	5	5	4	5	3	5	3	7	6	6	5AP	0	0	0	0	71
70	5	5	4	4	6	5	5	4	4	3	4	3	6	6	6	5AK	0	0	0	0	70
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63	4	4	3	3	5	4	4	3	3	0	3	0	5	5	4	0	0	0	0	0	63
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61	4	4	3	3	4	4	3	2	3	0	2	0	5	5	4	0	0	0	0	0	61
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59	4	4	3	2	4	3	3	2	3	0	0	0	5	4	0	0	0	0	0	0	59
58	4	3	3	2	4	3	2	1	2	0	0	0	5	4	0	0	0	0	0	0	58
57	4	3	2	2	4	3	2	1	2	0	0	0	5	4	0	0	0	0	0	0	57
56	4	3	2	2	3	3	2	1	2	0	0	0	4	4	0	0	0	0	0	0	56
55	3	3	2	2	3	2	2	1	2	0	0	0	4	4	0	0	0	0	0	0	55
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53	3	3	2	1	3	2	1	0	0	0	0	0	4	0	0	0	0	0	0	0	53
52	3	3	2	1	3	2	1	0	0	0	0	0	4	0	0	0	0	0	0	0	52
51	3	3	2	1	3	2	1	0	0	0	0	0	4	0	0	0	0	0	0	0	51
50	3	2	1	1	2	2	1	0	0	0	0	0	4	0	0	0	0	0	0	0	50
49	3	2	1	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	49
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47	3	2	1	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	47
46	3	2	1	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46
45	2	2	1	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	45
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43	2	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43
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41	2	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	41
40	2	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40
39	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	39
38	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38
37	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37
36	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36
35	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	35
34	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34
33	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33
32	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32
31	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31
30	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30
29	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	29
28	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28
27	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27
26	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26
25	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25

8.43



WAR HAMMER

Weight: 4-7 pounds
Length: 1½-4 feet

Fumble: 1-4

Type: One-hand
Range: 10 feet (-20%)
25 feet (-40%)
50 feet (-60%)

8.44



MACE

Weight: 3½-8 pounds

Fumble: 1-2

Type: One-hand
Range: 10 feet (-35%)
Length: 1-3 feet

	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
150	12EK	14EK	16EK	18EK	19EK	19EK	22EK	22EK	14EK	16EK	20EK	20EK	15EK	15EK	20EK	23EK	15EK	18EK	21EK	23EK	150
149	12EK	14EK	16EK	18EK	19EK	19EK	22EK	22EK	14EK	16EK	20EK	20EK	15EK	15EK	20EK	23EK	15EK	18EK	21EK	23EK	149
148	12EK	14EK	16EK	18EK	19EK	19EK	22EK	22EK	14EK	16EK	20EK	20EK	15EK	15EK	20EK	23EK	15EK	18EK	21EK	23EK	148
147	12EK	14EK	16EK	18EK	19EK	19EK	22EK	22EK	14EK	16EK	20EK	20EK	15EK	15EK	20EK	23EK	15EK	18EK	21EK	23EK	147
146	12EK	14EK	16EK	18EK	19EK	19EK	22EK	22EK	14EK	16EK	20EK	20EK	15EK	15EK	20EK	23EK	15EK	18EK	21EK	22EK	146
145	12DK	14DK	16EK	18EK	19EK	19EK	21EK	21EK	14EK	16EK	19EK	19EK	15EK	15EK	20EK	22EK	15EK	17EK	21EK	22EK	145
144	12DK	14DK	16EK	17EK	19EK	18EK	21EK	21EK	14EK	15EK	19EK	19EK	15EK	15EK	19EK	22EK	14EK	17EK	20EK	22EK	144
143	12DK	14DK	15DK	17EK	18EK	18EK	21EK	21EK	13DK	15EK	19EK	19EK	15EK	15EK	19EK	22EK	14EK	17EK	20EK	22EK	143
142	12DK	14DK	15DK	17EK	18EK	18EK	21EK	21EK	13DK	15EK	19EK	19EK	14DK	14EK	19EK	22EK	14EK	17EK	20EK	21EK	142
141	12DK	13DK	15DK	17EK	18DK	18DK	21DK	21EK	13DK	15DK	19DK	18EK	14DK	14EK	19EK	21EK	14EK	17EK	20EK	21EK	141
140	12CK	13CK	15DK	17EK	18DK	18DK	20DK	20EK	13DK	15DK	18DK	18EK	14DK	14DK	19EK	21EK	14EK	16EK	20EK	21EK	140
139	11CK	13CK	15DK	17DK	18DK	18DK	20DK	20EK	13DK	14DK	18DK	18EK	14DK	14DK	18EK	21EK	13DK	16EK	19EK	21EK	139
138	11CK	13CK	15DK	16DK	18DK	17DK	20DK	20EK	13DK	14DK	18DK	18EK	14DK	14DK	18DK	21EK	13DK	16EK	19EK	20EK	138
137	11CK	13CK	15DK	16DK	17DK	17DK	20DK	20DK	13DK	14DK	18DK	17EK	14DK	14DK	18DK	20EK	13DK	16EK	19EK	20EK	137
136	11CK	13CK	14DK	16DK	17DK	17DK	20DK	19DK	12DK	14DK	17DK	17DK	14DK	14DK	18DK	20DK	13DK	16DK	19EK	20EK	136
135	11CK	13CK	14CK	16DK	17DK	17DK	19DK	19DK	13CK	14DK	17DK	17DK	14DK	14DK	18DK	20DK	13DK	15DK	19EK	20EK	135
134	11BK	13CK	14CK	16DK	17DK	17DK	19DK	19DK	12CK	14DK	17DK	17DK	13CK	13DK	17DK	20DK	12DK	15DK	18EK	19EK	134
133	11BK	13BK	14CK	16DK	17DK	17DK	19DK	19DK	12CK	13DK	17DK	17DK	13CK	13DK	17DK	19DK	12DK	15DK	18EK	19EK	133
132	11BK	12BK	14CK	15DK	17DK	16DK	19DK	19DK	12CK	13DK	17DK	16DK	13CK	13DK	17DK	19DK	12DK	15DK	18EK	19EK	132
131	11BK	12BK	14CK	15DK	16CK	16DK	19DK	18DK	12CK	13DK	16DK	16DK	13CK	13DK	17DK	19DK	12DK	15DK	18EK	19EK	131
130	11BK	12BK	14CK	15DK	16CK	16CK	18CK	18DK	12CK	13CK	16DK	16DK	13CK	13DK	17DK	19DK	12DK	14DK	18EK	18DK	130
129	11AK	12BK	13CK	15DK	16CK	16CK	18CK	18DK	11CK	13CK	16DK	16DK	13CK	13DK	16DK	18DK	11CK	14DK	17EK	18DK	129
128	10AK	12BK	13CK	15DK	16CK	16CK	18CK	18DK	11CK	12CK	16CK	15DK	13CK	13DK	16DK	18DK	11CK	14DK	17DK	18DK	128
127	10AK	12BK	13CK	15CK	16CK	16CK	18CK	17DK	11CK	12CK	15CK	15DK	13CK	12CK	16DK	18DK	11CK	14DK	17DK	18DK	127
126	10AK	12AK	13BK	14CK	16CK	15CK	18CK	17DK	11CK	12CK	15CK	15DK	12CK	12CK	16DK	18DK	11CK	14DK	17DK	17DK	126
125	10AK	12AK	13BK	14CK	15CK	15CK	17CK	17DK	11CK	12CK	15CK	15DK	12CK	12CK	16CK	17DK	11CK	13CK	17DK	17DK	125
124	10AK	11AK	13BK	14CK	15CK	15CK	17CK	17DK	11CK	12CK	15CK	14DK	12CK	12CK	15CK	17DK	10CK	13CK	17DK	17DK	124
123	10AK	11AK	13BK	14CK	15CK	15CK	17CK	17DK	11CK	11CK	15CK	14DK	12CK	12CK	15CK	17DK	10CK	13CK	16DK	17DK	123
122	10AK	11AK	12BK	14CK	15BK	15CK	17CK	16CK	10CK	11CK	14CK	14DK	12CK	12CK	15CK	17DK	10CK	13CK	16DK	16DK	122
121	10AK	11AK	12BK	14CK	15BK	15CK	16CK	16CK	10BK	11CK	14CK	14DK	12CK	12CK	15CK	16CK	10CK	13CK	16DK	16DK	121
120	10AK	11AK	12BK	13CK	15BK	14BK	16CK	16CK	10BK	11CK	14CK	13CK	12CK	12CK	15CK	16CK	10CK	12CK	16DK	16DK	120
119	10	11AK	12BK	13CK	14BK	14BK	16CK	16CK	10BK	11CK	14CK	13CK	12BK	11CK	14CK	16CK	10CK	12CK	16DK	16DK	119
118	10	11AK	12BK	13CK	14BK	14BK	16CK	16CK	10BK	11CK	13CK	13CK	11BK	11CK	14CK	16CK	9CK	12CK	15DK	15DK	118
117	9	11AK	12AK	13CK	14BK	14BK	16CK	15CK	10BK	10CK	13CK	13CK	11BK	11CK	14CK	15CK	9BK	12CK	15DK	15CK	117
116	9	11AK	12AK	13BK	14BK	14BK	15CK	15CK	10BK	10BK	13CK	13CK	11BK	11CK	14CK	15CK	9BK	11CK	15DK	15CK	116
115	9	10AK	11AK	13BK	14AK	14BK	15BK	15CK	9BK	10BK	13CK	12CK	11BK	11CK	14CK	15CK	9BK	11CK	15DK	15CK	115
114	9	10	11AK	12BK	14AK	13BK	15BK	15CK	9BK	10BK	13CK	12CK	11BK	11CK	13CK	15CK	9BK	11BK	15DK	14CK	114
113	9	10	11AK	12BK	13AK	13BK	15BK	14CK	9BK	10BK	12CK	12CK	11BK	11CK	13CK	14CK	8BK	11BK	14CK	14CK	113
112	9	10	11AK	12BK	13AK	13BK	15BK	14CK	9BK	9BK	12CK	12CK	11BK	10CK	13CK	14CK	8BK	11BK	14CK	14CK	112
111	9	10	11AK	12BK	13AK	13AK	14BK	14CK	9BK	9BK	12BK	11CK	11BK	10BK	13CK	14CK	8BK	10BK	14CK	14CK	111
110	9	10	11AK	12BK	13AK	13AK	14BK	14CK	9BK	9BK	12BK	11CK	10BK	10BK	13BK	14CK	8BK	10BK	14CK	13CK	110
109	9	10	11AK	12BK	13AK	12AK	14BK	14CK	9BK	9BK	11BK	11CK	10BK	10BK	12BK	13BK	8AK	10BK	14CK	13CK	109
108	9	10	10AK	11BK	13AK	12AK	14BK	13BK	8BK	9BK	11BK	11CK	10BK	10BK	12BK	13BK	7AK	10BK	13CK	13CK	108
107	9	10	10AK	11AK	12AK	12AK	14BK	13BK	8AK	9BK	11BK	10CK	10BK	10BK	12BK	13BK	7AK	10BK	13CK	13BK	107
106	8	9	10AK	11AK	12AK	12AK	13AK	13BK	8AK	8BK	11BK	10CK	10BK	10BK	12BK	13BK	7AK	9BK	13CK	12BK	106
105	8	9	10AK	11AK	12AK	12AK	13AK	13BK	8AK	8BK	11BK	10CK	10BK	10BK	12BK	12BK	7AK	9AK	13CK	12BK	105
104	8	9	10	11AK	12	12AK	13AK	12BK	8AK	8BK	10BK	10CK	10AK	9BK	11BK	12BK	7AK	9AK	13CK	12BK	104
103	8	9	10	11AK	12	11AK	13AK	12BK	8AK	8BK	10BK	9CK	10AK	9BK	11BK	12BK	7AK	9AK	12CK	12BK	103
102	8	9	10	10AK	12	11AK	13AK	12BK	8AK	8AK	10BK	9BK	9AK	9BK	11BK	12BK	6AK	9AK	12CK	11BK	102
101	8	9	9	10AK	11	11AK	12AK	12BK	7AK	7AK	10BK	9BK	9AK	9BK	11BK	11BK	6AK	8AK	12CK	11BK	101
100	8	9	9	10AK	11	11AK	12AK	12BK	7AK	7AK	9BK	9BK	9AK	9BK	11BK	11BK	6AK	8AK	12BK	11BK	100
99	8	9	9	10AK	11	11	12AK	11BK	7AK	7AK	9BK	9BK	9AK	9BK	10BK	11BK	6	8AK	12BK	11AK	99
98	8	8	9	10AK	11	11	12AK	11BK	7AK	7AK	9BK	8BK	9AK	9BK	10BK	11BK	6	8AK	12BK	10AK	98
97	8	8	9	9AK	11	10	11AK	11AK	7AK	7AK	9AK	8BK	9AK	9AK	10BK	10BK	5	8AK	11BK	10AK	97
96	8	8	9	9AK	11	10	11AK	11AK	7AK	6AK	9AK	8BK	9AK	8AK	10BK	10BK	5	7AK	11BK	10AK	96
95	7	8	9	9AK	10	10	11AK	11AK	7AK	6AK	8AK	8BK	9AK	8AK	10BK	10BK	5	7AK	11BK	10AK	95
94	7	8	8	9	10	10	11	10AK	6	6AK	8AK	7BK	8AK	8AK	9AK	10BK	5	7	11BK	9AK	94
93	7	8	8	9	10	10	11	10AK	6	6AK	8AK	7BK	8AK	8AK	9AK	9BK	5	7	11BK	9AK	93
92	7	8	8	9	10	10	10	10AK	6	6AK	8AK	7BK	8AK	8AK	9AK	9AK	4	7	10BK	9AK	92
91	7	8	8	8	10	9	10	10AK	6	6AK	7AK	7BK	8AK	8AK	9AK	9AK	4	6	10BK	9AK	91
90	7	8	8	8	10	9	10	9AK	6	5AK	7AK	6BK	8AK	8AK	9AK	9AK	4	6	10BK	8AK	90
89	7	7	8	8	10	9	10	9AK	6	5	7AK	6BK	8	7AK	8AK	8AK	4	6	10AK	8	89
88	7	7	8	8	9	9	10	9AK	6	5	7AK	6BK	8	7AK	8AK	8AK	4	6	10AK	8	88
87	7	7	7	8	9	9	9	9AK	5	5	7AK	6BK	8	7AK	8AK	8AK	3	0	9AK	0	87
86	7	7	7	8	9	9	9	9AK	5	5	6AK	5AK	7	7AK	8AK	8AK	3	0	9AK	0	86
85	7	7	7	7	9	8	9	8AK	5	4	6AK	5AK	7	7AK	8AK	7AK	3	0	9AK	0	85
84	6	7	7	7	9	8	9	8	5	4	6	5AK	7	7	7AK	7AK	3	0	9AK	0	84
83	6	7	7	7	9	8	9	8	5	4	6	5AK	7	7	7AK	7AK	3	0	9AK	0	83
82	6	7	7	7	8	8	8	8	5	4	5	5AK	7	7	7AK	7AK	0	0	8AK	0	82
81	6	7	7	7	8	8	8	7	5	4	5	4AK	7	6	7AK	6AK	0	0	8AK	0	81
80	6	6	6	7	8	8	8	7	4	4	5	4AK	7	6	7AK	6AK	0	0	8AK	0	80
79	6	6	6	6	8	7	8	7	4	3	5	4AK	7	6	6	6AK	0	0	8	0	79
78	6	6	6	6	8	7	8	7	4	3	5	4AK	6	6	6	6AK	0	0	8	0	78
77	6	6	6	6	8	7	7	7	4	3	4	3AK	6	6	6	5AK	0	0	0	0	77
76	6	6	6	6	7	7	7	6	4	3	4	3AK	6	6	6	5AK	0	0	0	0	76
75	6	6	6	6	7	7	7	6	4	3	4	3AK	6	6	6	5AK	0	0	0	0	75
74	6	6	6	6	7	6	7	6	4	2	4	3	6	5	5	5	0	0	0	0	74
73	5	6	5	5	7	6	7	6	3	2	3	2	6	5	5	4	0	0	0	0	73
72	5	5	5	5	7	6	6	6	3	2	3	2	6	5	5	4	0	0	0	0	72
71	5	5	5	5	7	6	6	5	3	2	3	2	6	5	5	4	0	0	0	0	71
70	5	5	5	5	6	6	6	5	3	2	3	2	5	5	5	4	0	0	0	0	70
69	5	5	5	5	6	6	6	5	3	0	3	0	5	5	4	0	0	0	0	0	69
68	5	5	5	5	6	5	5	5	3	0	2	0	5	5	4	0	0	0	0	0	68
67	5	5	5	4	6	5	5	4	3	0	2	0	5	5	4	0	0	0	0	0	67
66	5	5	4	4	6	5	5	4	2	0	2	0	5	4	4	0	0	0	0	0	66
65	5	5	4	4	6	5	5	4	2	0	2	0	5	4	4	0	0	0	0	0	65
64	5	5	4	4	5	5	5	4	2	0	0	0	5	4	0	0	0	0	0	0	64
63	5	4	4	4	5	5	4	4	2	0	0	0	5	4	0	0	0	0	0	0	63
62	4	4	4	4	5	4	4	3	2	0	0	0	4	4	0	0	0	0	0	0	62
61	4	4	4	3	5	4	4	3	2	0	0	0	4	4	0	0	0	0	0	0	61
60	4	4	4	3	5	4	4	3	2	0	0	0	4	4	0	0	0	0	0	0	60
59	4	4	3	3	5	4	4	3	0	0	0	0	4	0	0	0	0	0	0	0	59
58	4	4	3	3	4	4	3	2	0	0	0	0	4	0	0	0	0	0	0	0	58
57	4	4	3	3	4	4	3	2	0	0	0	0	4	0	0	0	0	0	0	0	57
56	4	4	3	3	4	3	3	2	0	0	0	0	4	0	0	0	0	0	0	0	56
55	4	4	3	2	4	3	3	2	0	0	0	0	4	0	0	0	0	0	0	0	55
54	4	3	3	2	4	3	3	2	0	0	0	0	0	0	0	0	0	0	0	0	54
53	4	3	3	2	4	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	53
52	4	3	2	2	3	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	52
51	3	3	2	2	3	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	51
50	3	3	2	2	3	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	50
49	3	3	2	1	3	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	49
48	3	3	2	1	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	48
47	3	3	2	1	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	47
46	3	2	2	1	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	46
45	3	2	1	1	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	45
44	3	2	1	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	44
43	3	2	1	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43
42	3	2	1	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42
41	3	2	1	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	41
40	2	2	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40
39	2	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	39
38	2	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38
37	2	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37
36	2	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36
35	2	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	35
34	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34
33	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33
32	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32
31	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31
30	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30
29	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	29
28	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28
27	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27
26	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26
25	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25
24	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24
23	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23
22	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22
21	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21
20	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20

	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
150	15EK	17EK	19EK	21EK	22EK	22EK	25EK	25EK	21EK	23EK	27EK	27EK	25EK	25EK	30EK	33EK	27EK	30EK	33EK	35EK	150
149	15EK	17EK	19EK	21EK	22EK	22EK	25EK	25EK	21EK	23EK	27EK	27EK	25EK	25EK	30EK	33EK	27EK	30EK	33EK	35EK	149
148	15EK	17EK	19EK	21EK	22EK	22EK	25EK	25EK	21EK	23EK	27EK	27EK	25EK	25EK	30EK	33EK	27EK	30EK	33EK	35EK	148
147	15EK	17EK	19EK	21EK	22EK	22EK	25EK	25EK	21EK	23EK	27EK	27EK	25EK	25EK	30EK	33EK	27EK	30EK	33EK	34EK	147
146	15EK	17EK	19EK	21EK	22EK	22EK	25EK	25EK	21EK	23EK	26EK	26EK	25EK	25EK	29EK	32EK	26EK	29EK	32EK	34EK	146
145	15DK	17DK	19EK	21EK	22EK	22EK	24EK	24EK	21EK	22EK	26EK	26EK	24EK	24EK	29EK	32EK	26EK	29EK	32EK	34EK	145
144	15DK	17DK	18EK	20EK	21EK	21EK	24EK	24EK	20EK	22EK	26EK	26EK	24EK	24EK	29EK	32EK	26EK	29EK	32EK	33EK	144
143	15DK	17DK	18DK	20EK	21EK	21EK	24EK	24EK	20EK	22EK	26EK	25EK	24EK	24EK	29EK	31EK	25EK	28EK	31EK	33EK	143
142	15DP	16DK	18DK	20EK	21DK	21DK	24EK	24EK	20EK	22EK	25EK	25EK	24EK	24EK	28EK	31EK	25EK	28EK	31EK	33EK	142
141	14DK	16DP	18DK	20EK	21DK	21DK	23DK	23EK	20EK	21EK	25EK	25EK	24EK	24EK	28EK	31EK	25EK	28EK	31EK	32EK	141
140	14CP	16CK	18DK	20EK	21DK	21DK	23DK	23EK	20EK	21EK	25EK	25EK	23EK	23EK	28EK	30EK	24EK	27EK	30EK	32EK	140
139	14CK	16CP	18DP	19DK	20DP	20DK	23DK	23EK	19DK	21EK	25EK	24EK	23EK	23EK	27EK	30EK	24EK	27EK	30EK	31EK	139
138	14CP	16CK	17DK	19DK	20DK	20DP	23DK	23EK	19DK	21EK	24EK	24EK	23EK	23EK	27EK	30EK	24EP	27EK	30EK	31EK	138
137	14CK	16CP	17DP	19DP	20DP	20DK	22DP	22DK	19DP	20EK	24DK	24EK	23DK	23EK	27EK	29EK	23EK	26EP	30EK	31EK	137
136	14CP	16CK	17DK	19DK	20DK	20DP	22DK	22DK	19DK	20DP	24DK	23EK	23DP	22EK	27EK	29EK	23EP	26EK	29EK	30EP	136
135	14CK	15CP	17CP	19DP	20DP	20DK	22DP	22DP	19DP	20DK	23DP	23EK	22DK	22DP	26EK	29EK	23EK	26EP	29EK	30EK	135
134	14CP	15CK	17CK	18DK	19DK	19DP	22DK	22DK	18DK	20DP	23DK	23EK	22DP	22DK	26EP	28EK	23EP	25EK	29EP	30EP	134
133	14CK	15CP	17CP	18DP	19DP	19DK	21DP	21DP	18DP	19DK	23DP	23EP	22DK	22DP	26EK	28EP	22EK	25EP	28EK	29EK	133
132	13BP	15BK	16CK	18DK	19DK	19DP	21DK	21DK	18DK	19DP	23DK	22DK	22DP	22DK	25DP	28EK	22EP	25EK	28EP	29EP	132
131	13BK	15BP	16CP	18DP	19CP	19DK	21DP	21DP	18DP	19DK	22DP	22DP	22DK	21DP	25DK	27EP	22DK	24EP	28EK	28EK	131
130	13BP	15BK	16CK	18DK	19CK	19CP	21DK	21DK	18DK	19DP	22DK	22DK	21DP	21DK	25DP	27EK	21DP	24EK	27EP	28EP	130
129	13BK	15BP	16CP	17DP	19CP	18CK	21CP	20DP	17DP	18DK	22DP	21DP	21DK	21DP	25DK	27DP	21DK	24DP	27EK	28EK	129
128	13BP	14BK	16CK	17DK	18CK	18CP	20CK	20DK	17CK	18DP	22DK	21DK	21DP	21DK	24DP	26DK	21DP	23DK	27EP	27EP	128
127	13BK	14BP	16CP	17CP	18CP	18CK	20CP	20DP	17CP	18DK	21DP	21DP	21DK	20DP	24DK	26DP	20DK	23DP	27EK	27EK	127
126	13BP	14BK	15CK	17CK	18CK	18CP	20CK	20DK	17CK	18DP	21DK	21DK	21DP	20DK	24DP	26DK	20DP	23DK	26EP	27EP	126
125	13AK	14BP	15BP	17CP	18CP	18CK	20CP	19DP	17CP	17DK	21DP	20DP	20CK	20DP	23DK	25DP	20DK	22DP	26EK	26EK	125
124	13AP	14AK	15BK	16CK	18CK	17CP	19CK	19DK	16CK	17DP	20DK	20DK	20CP	20DK	23DP	25DK	19DP	22DK	26EP	26EP	124
123	12AK	14AP	15BP	16CP	17CP	17CK	19CP	19DP	16CP	17DK	20DP	20DP	20CK	20DP	23DK	25DP	19DK	22DP	25EK	26EK	123
122	12AP	14AK	15BK	16CK	17CK	17CP	19CK	19DK	16CK	17CP	20DK	19DK	20CP	19DK	23DP	24DK	19DP	21DK	25EP	25EP	122
121	12AK	13AP	15BP	16CP	17CP	17CK	19CP	18CP	16CP	16CK	20CP	19DP	19CK	19DP	22DK	24DP	19DK	21DP	25EK	25EK	121
120	12AP	13AK	14BK	16CK	17BK	17CP	18CK	18CK	16CK	16CP	19CK	19DK	19CP	19DK	22DP	24DK	18DP	21DK	24EP	24DP	120
119	12AK	13AP	14BP	15CP	17BP	16CK	18CP	18CP	15CP	15CK	19CP	19DP	19CK	19DP	22DK	23DP	18DK	20DP	24DK	24DK	119
118	12AP	13AK	14BK	15CK	16BK	16BP	18CK	18CK	15CK	16CP	19CK	18DK	19CP	19DK	21DP	23DK	18DP	20DK	24DP	24DP	118
117	12AK	13AP	14BP	15CP	16BP	16BK	18CP	17CP	15CP	16CK	19CP	18DP	19CK	18CP	21DK	23DP	17DK	20DP	24DK	23DK	117
116	12AP	13AK	14BK	15CK	16BK	16BP	17CK	17CK	15CK	15CP	18CK	18DK	18CP	18CK	21DP	22DK	17CP	19DK	23DP	23DP	116
115	11AK	13AP	14AP	15BP	16BP	16BK	17CP	17CP	15CP	15CK	18CP	17DP	18CK	18CP	21DK	22DP	17CK	19DP	23DK	23DK	115
114	11	12AK	13AK	14BK	16BK	15BP	17CK	17CK	14CK	15CP	18CK	17DK	18CP	18CK	20CP	22DK	16CP	19DK	23DP	22DP	114
113	11	12AP	13AP	14BP	15BP	15BK	17CP	16CP	14CP	15CK	17CP	17CP	18CK	17CP	20CK	21DP	16CK	18DP	22DK	22DK	113
112	11	12AK	13AK	14BK	15AK	15BP	17BK	16CK	14BK	14CP	17CK	17CK	18CP	17CK	20CP	21DK	16CP	18CK	22DP	21DP	112
111	11	12AP	13AP	14BP	15AP	15BK	16BP	16CP	14BP	14CK	17CP	16CP	17CK	17CP	20CK	21DP	16CK	18CP	22DK	21DK	111
110	11	12AK	13AK	14BK	15AK	15BP	16BK	16CK	14BK	14CP	17CK	16CK	17CP	17CK	19CP	20DK	15CP	17CK	21DP	21DP	110
109	11	12	12AP	13BP	15AP	14BK	16BP	15CP	13BP	14CK	16CP	16CP	17BK	17CP	19CK	20DP	15CK	17CP	21DK	20DK	109
108	11	12	12AK	13BK	15AK	14AP	16BK	15CK	13BK	13CP	16CK	15CK	17BP	16CK	19CP	20CK	15CP	17CK	21DP	20DP	108
107	11	11	12AP	13BP	14AP	14AK	15BP	15CP	13BP	13CK	16CP	15CP	17BK	16CP	18CK	19CP	14CK	16CP	20DK	20DK	107
106	10	11	12AK	13BK	14AK	14AP	15BK	15CK	13BK	13BP	16CK	15CK	16BP	16CK	18CP	19CK	14CP	16CK	20DP	19DP	106
105	10	11	12AP	13BP	14AP	14AK	15BP	14BP	13BP	13BK	15CP	15CP	16BK	16CP	18CK	19CP	14CK	16CP	20DK	19DK	105
104	10	11	12AK	12AK	14AK	13AP	15BK	14BK	12BK	12BP	15CK	14CK	16BP	15CK	18CP	18CK	13BP	15CK	20DP	19DP	104
103	10	11	11AP	12AP	14AP	13AK	14BP	14BP	12BP	12BK	15CP	14CP	16BK	15CP	17CK	18CP	13BK	15CP	19DK	18DK	103
102	10	11	11AK	12AK	13AK	13AP	14BK	14BK	12BK	12BP	14BK	14CK	16BP	15CK	17CP	18CK	13BP	15BK	19DP	18DP	102
101	10	11	11AP	12AP	13AP	13AK	14AP	13BP	12BP	12BK	14BP	13CP	15BK	15CP	17CK	17CP	12BK	14BP	19DK	17DK	101
100	10	10	11AK	12AK	13AK	13AP	14AK	13BK	12BK	11BP	14BK	13CK	15BP	15CK	16CP	17CK	12BP	14BK	18DP	17CP	100
99	10	10	11	11AP	13	12AK	13AP	13BP	11AP	11BK	14BP	13CP	15BK	14BP	16CK	17CP	12AK	14BP	18CK	17CK	99
98	10	10	11	11AK	13	12AP	13AK	13BK	11AK	11BP	13BK	13CK	15BP	14BK	16BP	16CK	11AP	13BK	18CP	16CP	98
97	9	10	10	11AP	12	12AK	13AP	12BP	11AP	11BK	13BP	12CP	14BK	14BP	16BK	16CP	11AK	13BP	17CK	16CK	97
96	9	10	10	11AK	12	12AP	13AK	12BK	11AK	10BP	13BK	12CK	14AP	14BK	15BP	16CK	11AP	13BK	17CP	16CP	96
95	9	10	10	11AP	12	12AK	13AP	12BP	11AP	10BK	13BP	12CP	14AK	14BP	15BK	15BP	11AK	12AP	17CK	15CK	95
94	9	10	10	10AK	12	11	12AK	12BK	10AK	10BP	12BK	11CK	14AP	13BK	15BP	15BK	10	12AK	17CP	15CP	94
93	9	9	10	10AP	12	11	12AP	11BP	10AP	10AK	12BP	11BP	14AK	13BP	14BK	15BP	10	12AP	16CK	14CK	93
92	9	9	10	10AK	11	11	12AK	11AK	10AK	9AP	12BK	11BK	13AP	13BK	14BP	14BK	10	11AK	16CP	14BP	92
91	9	9	9	10AP	11	11	12AP	11AP	10AP	9AK	12BP	11BP	13AK	13BP	14BK	14BP	9	11AP	16CK	14BK	91
90	9	9	9	10AK	11	11	11AK	11AK	10AK	9AP	11AK	10BK	13AP	12BK	14BP	14BK	9	11AK	15CP	13BP	90
89	9	9	9	9	11	10	11	10AP	9	9AK	11AP	10BP	13AK	12BP	13BK	13BP	9	10	15CK	13BK	89
88	8	9	9	9	11	10	11	10AK	9	9AP	11AK	10BK	13AP	12BK	13BP	13BK	8	10	15CP	13BP	88
87	8	9	9	9	11	10	11	10AP	9	8AK	10AP	9BP	12AK	12AP	13BK	13BP	8	10	14BK	12AK	87
86	8	9	9	9	10	10	10	10AK	9	8AP	10AK	9BK	12AP	12AK	12BP	12BK	8	9	14BP	12AP	86
85	8	8	8	9	10	10	10	9AP	9	8AK	10AP	9BP	12AK	11AP	12BK	12BP	7	9	14BK	12AK	85
84	8	8	8	8	10	9	10	9AK	8	8	10AK	9BK	12	11AK	12AP	12BK	7	9	14BP	11	84
83	8	8	8	8	10	9	10	9AP	8	7	9AP	8BP	12	11AP	12AK	11BP	7	8	13BK	11	83
82	8	8	8	8	10	9	9	9AK	8	7	9AK	8BK	11	11AK	11AP	11BK	7	8	13BP	10	82
81	8	8	8	8	9	9	9	8AP	8	7	9AP	8BP	11	10AP	11AK	11AP	6	8	13BK	10	81
80	7	8	8	8	9	9	9	8AK	8	7	9AK	7BK	11	10AK	11AP	10AK	6	7	12BP	10	80
79	7	8	7	7	9	8	9	8	7	6	8	7AP	11	10	11AK	10AP	6	7	12AK	9	79
78	7	7	7	7	9	8	9	8	7	6	8	7AK	11	10	10AP	10AK	5	7	12AP	9	78
77	7	7	7	7	9	8	8	7	7	6	8	7AP	10	10	10AK	9AP	5	6	11AK	9	77
76	7	7	7	7	8	8	8	7	7	6	7	6AK	10	9	10AP	9AK	5	6	11AP	8	76
75	7	7	7	7	8	8	8	7	7	5	7	6AP	10	9	9AK	9AP	4	6	11AK	8	75
74	7	7	6	6	8	7	8	7	6	5	7	6AK	10	9	9	8AK	4	0	11	0	74
73	7	7	6	6	8	7	7	6	6	5	7	5AP	10	9	9	8AP	4	0	10	0	73
72	7	7	6	6	8	7	7	6	6	5	6	5AK	9	9	9	8AK	3	0	10	0	72
71	6	6	6	6	8	7	7	6	6	4	6	5AP	9	8	8	7AP	3	0	10	0	71
70	6	6	6	6	7	7	7	6	6	4	6	5AK	9	8	8	7AK	3	0	9	0	70
69	6	6	6	5	7	6	6	5	5	4	6	4	9	8	8	7	0	0	9	0	69
68	6	6	5	5	7	6	6	5	5	4	5	4	8	8	7	6	0	0	9	0	68
67	6	6	5	5	7	6	6	5	5	3	5	4	8	7	7	6	0	0	8	0	67
66	6	6	5	5	7	6	6	5	5	3	5	3	8	7	7	6	0	0	8	0	66
65	6	6	5	5	6	6	5	4	5	3	4	3	8	7	7	5	0	0	8	0	65
64	6	5	5	4	6	5	5	4	4	3	4	3	8	7	6	5	0	0	0	0	64
63	6	5	5	4	6	5	5	4	4	2	4	3	7	7	6	5	0	0	0	0	63
62	5	5	4	4	6	5	5	4	4	2	4	2	7	6	6	4	0	0	0	0	62
61	5	5	4	4	6	5	5	3	4	2	3	2	7	6	5	4	0	0	0	0	61
60	5	5	4	4	5	5	4	3	4	2	3	2	7	6	5	4	0	0	0	0	60
59	5	5	4	3	5	4	4	3	3	0	3	0	7	6	5	0	0	0	0	0	59
58	5	5	4	3	5	4	4	3	3	0	3	0	6	5	5	0	0	0	0	0	58
57	5	4	4	3	5	4	4	2	3	0	2	0	6	5	4	0	0	0	0	0	57
56	5	4	3	3	5	4	3	2	3	0	2	0	6	5	4	0	0	0	0	0	56
55	5	4	3	3	4	4	3	2	3	0	2	0	6	5	4	0	0	0	0	0	55
54	5	4	3	2	4	3	3	2	2	0	0	0	6	5	0	0	0	0	0	0	54
53	4	4	3	2	4	3	3	1	2	0	0	0	5	4	0	0	0	0	0	0	53
52	4	4	3	2	4	3	2	1	2	0	0	0	5	4	0	0	0	0	0	0	52
51	4	4	3	2	4	3	2	1	2	0	0	0	5	4	0	0	0	0	0	0	51
50	4	3	2	2	4	3	2	1	2	0	0	0	5	4	0	0	0	0	0	0	50
49	4	3	2	1	3	2	2	0	0	0	0	0	5	0	0	0	0	0	0	0	49
48	4	3	2	1	3	2	1	0	0	0	0	0	4	0	0	0	0	0	0	0	48
47	4	3	2	1	3	2	1	0	0	0	0	0	4	0	0	0	0	0	0	0	47
46	4	3	2	1	3	2	1	0	0	0	0	0	4	0	0	0	0	0	0	0	46
45	3	3	2	1	3	2	1	0	0	0	0	0	4	0	0	0	0	0	0	0	45
44	3	3	1	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	44
43	3	2	1	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43
42	3	2	1	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42
41	3	2	1	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	41
40	3	2	1	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40
39	3	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	39
38	3	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38
37	3	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37
36	2	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36
35	2	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	35
34	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34
33	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33
32	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32
31	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31
30	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30
29	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	29
28	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28
27	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27
26	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26
25	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25
24	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24
23	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23
22	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22
21	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21
20	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20

8.45



MORNING STAR

Weight: 4-8 pounds

Fumble: 1-8

Type: One-hand

Range: -

Length: 2½-4 feet

8.46



WHIP

Weight: 2-5 pounds

Fumble: 1-6

Type: One-hand
Range: –
Length: 6-9 feet

	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
150	2AK	4CK	6DK	8EK	8DK	8EK	11EK	11EK	7EK	9EK	13EK	13EK	10EK	10EK	15EK	18EK	19EK	22EK	25EK	27EK	150
149	2	4BK	6CK	8EK	8CK	8DK	11DK	11EK	7EK	9EK	13EK	13EK	10EK	10EK	15EK	18EK	19EK	22EK	25EK	27EK	149
148	2	4AK	6CK	8DK	8CK	8DK	11DK	11EK	7EK	9EK	13EK	13EK	10EK	10EK	15EK	18EK	19EK	22EK	25EK	27EK	148
147	2	4AK	6CK	8DK	8CK	8CK	11CK	11DK	7DK	9EK	13EK	13EK	10EK	10EK	15EK	18EK	19EK	22EK	25EK	27EK	147
146	2	4AK	6BK	8CK	8BK	8CK	11CK	11DK	7DK	9DK	13DK	13EK	10EK	10EK	15EK	18EK	19EK	22EK	25EK	27EK	146
145	2	4AK	6BK	8CK	8BK	8CK	11CK	11DK	7DK	9DK	13DK	13EK	10EK	10EK	15EK	18EK	19EK	22EK	25EK	26EK	145
144	2	4	6BK	8CK	8BK	8CK	11CK	11DK	7CK	9DK	13DK	13EK	10DK	10EK	15EK	18EK	18EK	21EK	24EK	26EK	144
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142	2	4	6AK	8CK	8AK	8BK	11CK	11CK	7CK	9CK	13DK	12DK	10DK	10DK	15DK	17EK	18DK	21EK	24EK	26EK	142
141	2	4	6AK	8BK	8AK	8BK	11CK	11CK	7CK	9CK	12DK	12DK	10DK	10DK	14DK	17EK	18DK	21EK	24EK	25EK	141
140	2	4	6AK	8BK	8AK	8BK	11BK	10CK	7CK	9CK	12CK	12DK	10DK	10DK	14DK	17DK	18DK	21DK	24EK	25EK	140
139	2	4	6AK	8BK	8AK	8BK	10BK	10CK	7CK	9CK	12CK	12DK	10DK	10DK	14DK	17DK	17DK	20DK	23EK	25EK	139
138	2	4	6AK	8BK	8AK	8BK	10BK	10CK	7CK	8CK	12CK	12DK	10CK	10DK	14DK	17DK	17DK	20DK	23EK	25EK	138
137	2	4	6AK	8BK	8AK	8AK	10BK	10CK	7CK	8CK	12CK	12DK	10CK	10DK	14DK	16DK	17DK	20DK	23EK	24EK	137
136	2	4	6AK	7BK	8AK	8AK	10BK	10CK	7CK	8CK	12CK	12DK	10CK	9DK	14DK	16DK	17DK	20DK	23EK	24DK	136
135	2	4	6AK	7AK	8AK	7AK	10BK	10BK	7CK	8CK	12CK	12CK	9CK	9DK	14DK	16DK	17CK	20DK	23EK	24DK	135
134	2	4	6	7AK	7	7AK	10AK	10BK	7CK	8CK	12CK	11CK	9CK	9CK	14DK	16DK	17CK	19DK	22DK	24DK	134
133	2	4	6	7AK	7	7AK	10AK	10BK	7BK	8CK	11CK	11CK	9CK	9CK	13CK	16DK	16CK	19DK	22DK	24DK	133
132	2	4	6	7AK	7	7AK	10AK	10BK	6BK	8CK	11CK	11CK	9CK	9CK	13CK	16DK	16CK	19CK	22DK	23DK	132
131	2	4	6	7AK	7	7AK	10AK	10BK	6BK	8CK	11CK	11CK	9CK	9CK	13CK	15DK	16CK	19CK	22DK	23DK	131
130	2	4	5	7AK	7	7AK	10AK	9BK	6BK	8CK	11CK	11CK	9CK	9CK	13CK	15DK	16CK	19CK	22DK	23DK	130
129	2	4	5	7AK	7	7	9AK	9BK	6BK	8BK	11CK	11CK	9CK	9CK	13CK	15CK	16CK	18CK	22DK	23DK	129
128	2	4	5	7AK	7	7	9AK	9BK	6BK	8BK	11CK	11CK	9CK	9CK	13CK	15CK	15CK	18CK	21DK	22DK	128
127	2	4	5	7AK	7	7	9AK	9BK	6BK	8BK	11CK	11CK	9CK	9CK	13CK	15CK	15CK	18CK	21DK	22CK	127
126	2	4	5	7AK	7	7	9AK	9AK	6BK	7BK	11BK	10CK	9CK	9CK	13CK	15CK	15CK	18CK	21DK	22CK	126
125	2	4	5	7AK	7	7	9AK	9AK	6BK	7BK	11BK	10CK	9CK	9CK	12CK	15CK	15CK	18CK	21DK	22CK	125
124	2	4	5	7	7	7	9	9AK	6BK	7BK	10BK	10CK	9BK	9CK	12CK	14CK	15BK	17CK	21DK	21CK	124
123	2	4	5	7	7	7	9	9AK	6BK	7BK	10BK	10CK	9BK	9CK	12CK	14CK	14BK	17CK	20CK	21CK	123
122	2	4	5	6	7	7	9	9AK	6AK	7BK	10BK	10CK	9BK	8CK	12CK	14CK	14BK	17CK	20CK	21CK	122
121	2	4	5	6	7	6	9	8AK	6AK	7BK	10BK	10CK	8BK	8CK	12CK	14CK	14BK	17BK	20CK	21CK	121
120	2	4	5	6	7	6	9	8AK	6AK	7BK	10BK	10BK	8BK	8CK	12CK	14CK	14BK	17BK	20CK	21CK	120
119	2	4	5	6	6	6	8	8AK	6AK	7BK	10BK	10BK	8BK	8CK	12CK	14CK	14BK	16BK	20CK	20CK	119
118	2	3	5	6	6	6	8	8AK	6AK	7AK	10BK	9BK	8BK	8BK	12BK	13CK	14BK	16BK	19CK	20CK	118
117	2	3	5	6	6	6	8	8AK	6AK	7AK	10BK	9BK	8BK	8BK	11BK	13CK	13BK	16BK	19CK	20CK	117
116	2	3	5	6	6	6	8	8AK	6AK	7AK	9BK	9BK	8BK	8BK	11BK	13CK	13BK	16BK	19CK	20BK	116
115	2	3	5	6	6	6	8	8AK	6AK	7AK	9BK	9BK	8BK	8BK	11BK	13BK	13AK	16BK	19CK	19BK	115
114	2	3	5	6	6	6	8	8	5AK	6AK	9BK	9BK	8BK	8BK	11BK	13BK	13AK	15BK	19CK	19BK	114
113	2	3	5	6	6	6	8	8	5AK	6AK	9AK	9BK	8BK	8BK	11BK	13BK	13AK	15BK	19CK	19BK	113
112	2	3	5	6	6	6	8	8	5AK	6AK	9AK	9BK	8BK	8BK	11BK	12BK	12AK	15BK	18CK	19BK	112
111	2	3	4	6	6	6	8	7	5AK	6AK	9AK	9BK	8BK	8BK	11BK	12BK	12AK	15AK	18CK	18BK	111
110	2	3	4	6	6	6	8	7	5AK	6AK	9AK	8BK	8AK	8BK	11BK	12BK	12AK	15AK	18BK	18BK	110
109	2	3	4	6	6	6	7	7	5	6AK	9AK	8BK	8AK	8BK	10BK	12BK	12AK	14AK	18BK	18BK	109
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107	2	3	4	5	6	6	7	7	5	6AK	8AK	8BK	8AK	7BK	10BK	12BK	11AK	14AK	17BK	17BK	107
106	2	3	4	5	6	5	7	7	5	6AK	8AK	8BK	7AK	7BK	10BK	12BK	11AK	14AK	17BK	17AK	106
105	2	3	4	5	6	5	7	7	5	6AK	8AK	8AK	7AK	7BK	10BK	11BK	11AK	14AK	17BK	17AK	105
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103	2	3	4	5	5	5	7	7	5	6	8AK	8AK	7AK	7AK	10BK	11BK	11	13AK	17BK	17AK	103
102	2	3	4	5	5	5	7	7	5	5	8AK	7AK	7AK	7AK	10AK	11BK	11	13AK	18BK	16AK	102
101	2	3	4	5	5	5	7	6	5	5	8AK	7AK	7AK	7AK	9AK	11BK	10	13AK	16BK	16AK	101
100	2	3	4	5	5	5	7	6	5	5	8AK	7AK	7AK	7AK	9AK	11BK	10	13AK	16BK	16AK	100
99	2	3	4	5	5	5	6	6	5	5	7	7AK	7AK	7AK	9AK	10BK	10	12AK	16BK	16AK	99
98	2	3	4	5	5	5	6	6	5	5	7	7AK	7AK	7AK	9AK	10AK	10	12	16AK	15AK	98
97	2	3	4	5	5	5	6	6	4	5	7	7AK	7AK	7AK	9AK	10AK	10	12	16AK	15AK	97
96	2	3	4	5	5	5	6	6	4	5	7	7AK	7AK	7AK	9AK	10AK	9	12	15AK	15AK	96
95	2	3	4	5	5	5	6	6	4	5	7	7AK	7AK	7AK	9AK	10AK	9	12	15AK	15AK	95
94	2	3	4	4	5	5	6	6	4	5	7	6AK	7	6AK	9AK	10AK	9	11	15AK	14AK	94
93	2	3	4	4	5	5	6	6	4	5	7	6AK	7	6AK	9AK	9AK	9	11	15AK	14	93
92	2	3	3	4	5	4	6	5	4	5	7	6AK	6	6AK	8AK	9AK	9	11	15AK	14	92
91	2	3	3	4	5	4	6	5	4	5	6	6AK	6	6AK	8AK	9AK	8	11	14AK	14	91
90	2	3	3	4	5	4	6	5	4	4	6	6AK	6	6AK	8AK	9AK	8	11	14AK	14	90
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87	2	2	3	4	4	4	5	5	4	4	6	6	6	6	8AK	9AK	8	10	14AK	13	87
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85	2	2	3	4	4	4	5	5	4	4	6	5	6	6	8AK	8AK	7	10	13AK	12	85
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82	1	2	3	4	4	4	5	4	4	4	5	5	6	6	7	8AK	7	9	13	12	82
81	1	2	3	4	4	4	5	4	4	4	5	5	6	6	7	8AK	7	9	13	11	81
80	1	2	3	3	4	4	5	4	4	4	5	5	6	5	7	7AK	6	9	12	11	80
79	1	2	3	3	4	4	4	4	3	4	5	5	6	5	7	7	6	8	12	11	79
78	1	2	3	3	4	4	4	4	3	3	5	4	6	5	7	7	6	8	12	11	78
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71	1	2	2	3	3	3	4	3	3	3	4	4	5	5	6	6	5	7	11	9	71
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69	1	2	2	3	3	3	3	3	3	3	4	3	5	5	6	6	4	6	10	9	69
68	1	2	2	3	3	3	3	3	3	3	4	3	5	5	5	6	4	6	10	8	68
67	1	2	2	3	3	3	3	3	3	3	4	3	5	5	5	5	4	6	10	8	67
66	1	2	2	2	3	3	3	3	3	2	4	3	5	4	5	5	4	6	10	8	66
65	1	2	2	2	3	3	3	3	3	2	3	3	5	4	5	5	4	6	10	8	65
64	1	2	2	2	3	3	3	3	3	2	3	3	5	4	5	5	3	0	9	0	64
63	1	2	2	2	3	2	3	2	3	2	3	3	4	4	5	5	3	0	9	0	63
62	1	2	2	2	3	2	3	2	3	2	3	2	4	4	5	5	3	0	9	0	62
61	1	2	2	2	3	2	3	2	2	2	3	2	4	4	5	4	3	0	9	0	61
60	1	2	2	2	3	2	3	2	2	2	3	2	4	4	4	4	3	0	9	0	60
59	1	2	2	2	2	2	2	2	2	2	3	2	4	4	4	4	0	0	8	0	59
58	1	2	2	2	2	2	2	2	2	2	3	2	4	4	4	4	0	0	8	0	58
57	1	2	2	2	2	2	2	2	2	2	2	2	4	4	4	4	0	0	8	0	57
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54	1	1	2	2	2	2	2	2	2	0	2	0	4	4	4	3	0	0	0	0	54
53	1	1	1	2	2	2	2	1	2	0	2	0	4	4	4	3	0	0	0	0	53
52	1	1	1	1	2	2	2	1	2	0	2	0	4	3	3	3	0	0	0	0	52
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49	1	1	1	1	2	2	1	1	2	0	0	0	4	3	3	0	0	0	0	0	49
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47	1	1	1	1	2	1	1	1	2	0	0	0	3	3	3	0	0	0	0	0	47
46	1	1	1	1	2	1	1	1	2	0	0	0	3	3	3	0	0	0	0	0	46
45	1	1	1	1	2	1	1	1	2	0	0	0	3	3	3	0	0	0	0	0	45
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41	1	1	1	1	1	1	1	0	0	0	0	0	3	3	0	0	0	0	0	0	41
40	1	1	1	1	1	1	1	0	0	0	0	0	3	3	0	0	0	0	0	0	40
39	1	1	1	0	1	1	0	0	0	0	0	0	3	0	0	0	0	0	0	0	39
38	1	1	1	0	1	1	0	0	0	0	0	0	3	0	0	0	0	0	0	0	38
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36	1	1	1	0	1	1	0	0	0	0	0	0	3	0	0	0	0	0	0	0	36
35	1	1	1	0	1	1	0	0	0	0	0	0	3	0	0	0	0	0	0	0	35
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27	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27
26	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26
25	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25
24	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24
23	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23
22	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22
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18	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18
17	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17
16	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16
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	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
150	8CK	10CK	12EK	14EK	15EK	15EK	18EK	18EK	16EK	18EK	22EK	22EK	10EK	10EK	15EK	18EK	12EK	15EK	18EK	20EK	150
149	8CK	10CK	12DK	14EK	15EK	15EK	18EK	18EK	16EK	18EK	22EK	22EK	10EK	10EK	15EK	18EK	12EK	15EK	18EK	20EK	149
148	8BK	10CK	12DK	14EK	15EK	15EK	18EK	18EK	16EK	18EK	22EK	22EK	10EK	10EK	15EK	18EK	12EK	15EK	18EK	20EK	148
147	8BK	10BK	12CK	14DK	15DK	15DK	18DK	18EK	16EK	18EK	22EK	22EK	10EK	10EK	15EK	18EK	12EK	15EK	18EK	20EK	147
146	8BK	10BK	12CK	14DK	15DK	15DK	18DK	18EK	16EK	18EK	21EK	21EK	10EK	10EK	15EK	18EK	12EK	15EK	18EK	20EK	146
145	8AK	10BK	12CK	14DK	15DK	15DK	18DK	17EK	16DK	17EK	21EK	21EK	10EK	10EK	15EK	18EK	12EK	15EK	18EK	20EK	145
144	8AK	10BK	12CK	14DK	15DK	15DK	17DK	17EK	15DK	17EK	21EK	21EK	10EK	10EK	15EK	17EK	12EK	15EK	18EK	19EK	144
143	8AK	10AK	12CK	13DK	14DK	14DK	17DK	17DK	15DK	17DK	21DK	21EK	10EK	10EK	15EK	17EK	12EK	14EK	18EK	19EK	143
142	8AK	10AK	12BK	13CK	14CK	14DK	17DK	17DK	15DK	17DK	20DK	20EK	10EK	10EK	14EK	17EK	11EK	14EK	17EK	19EK	142
141	8AK	10AK	11BK	13CK	14CK	14CK	17CK	17DK	15DK	16DK	20DK	20EK	10EK	10EK	14EK	17EK	11EK	14EK	17EK	19EK	141
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139	8	9AK	11BK	13CK	14CK	14CK	16CK	16DK	15CK	16DK	20DK	19DK	10DK	10EK	14EK	17EK	11EK	14EK	17EK	18EK	139
138	8	9AK	11BK	13CK	14CK	14CK	16CK	16DK	14CK	16DK	19DK	19DK	10DK	10EK	14EK	16EK	11EK	14EK	17EK	18EK	138
137	8	9AK	11BK	13CK	14CK	13CK	16CK	16DK	14CK	16DK	19DK	19DK	10DK	9DK	14EK	16EK	11EK	14EK	17EK	18EK	137
136	8	9AK	11AK	12BK	13BK	13CK	16CK	16DK	14CK	15DK	19DK	19DK	9DK	9DK	14EK	16EK	11EK	13EK	17EK	18EK	136
135	7	9	11AK	12BK	13BK	13CK	16CK	15DK	14CK	15CK	19DK	18DK	9DK	9DK	13DK	16EK	10DK	13EK	16EK	18EK	135
134	7	9	11AK	12BK	13BK	13BK	15CK	15DK	14CK	15CK	18DK	18DK	9DK	9DK	13DK	16EK	10DK	13EK	16EK	18EK	134
133	7	9	10AK	12BK	13BK	13BK	15CK	15CK	13CK	15CK	18CK	18DK	9DK	9DK	13DK	16EK	10DK	13EK	16EK	17EK	133
132	7	9	10AK	12BK	13BK	13BK	15CK	15CK	13CK	14CK	18CK	17DK	9DK	9DK	13DK	15DK	10DK	13DK	16EK	17EK	132
131	7	9	10AK	12BK	13BK	13BK	15CK	15CK	13CK	14CK	18CK	17DK	9DK	9DK	13DK	15DK	10DK	13DK	16EK	17EK	131
130	7	9	10AK	12BK	13AK	12BK	15BK	14CK	13CK	14CK	17CK	17DK	9DK	9DK	13DK	15DK	10DK	13DK	16EK	17EK	130
129	7	9	10AK	11BK	12AK	12BK	14BK	14CK	13CK	14CK	17CK	17DK	9CK	9DK	13DK	15DK	10DK	12DK	16EK	17EK	129
128	7	8	10AK	11AK	12AK	12BK	14BK	14CK	13CK	14CK	17CK	16DK	9CK	9DK	13DK	15DK	10DK	12DK	16EK	16EK	128
127	7	8	10AK	11AK	12AK	12BK	14BK	14CK	12BK	13CK	16CK	16DK	9CK	9DK	12DK	14DK	9DK	12DK	15EK	16EK	127
126	7	8	10AK	11AK	12AK	12AK	14BK	14CK	12BK	13CK	16CK	16CK	9CK	9DK	12DK	14DK	9DK	12DK	15EK	16DK	126
125	7	8	9	11AK	12AK	12AK	14BK	13CK	12BK	13CK	16CK	15CK	9CK	9DK	12DK	14DK	9DK	12DK	15EK	16DK	125
124	7	8	9	11AK	12AK	11AK	13BK	13CK	12BK	13CK	16CK	15CK	9CK	8DK	12DK	14DK	9DK	12DK	15DK	16DK	124
123	7	8	9	10AK	12AK	11AK	13BK	13BK	12BK	12DK	15CK	15CK	8CK	8DK	12DK	14DK	9DK	12DK	15DK	16DK	123
122	7	8	9	10AK	11AK	11AK	13AK	13BK	12BK	12BK	15CK	15CK	8CK	8CK	12DK	14DK	9CK	11DK	15DK	15DK	122
121	7	8	9	10AK	11AK	11AK	13AK	12BK	11BK	12BK	15CK	14CK	8CK	8CK	12DK	13DK	9CK	11DK	14DK	15DK	121
120	6	8	9	10AK	11AK	11AK	13AK	12BK	11BK	12BK	15CK	14CK	8CK	8CK	11CK	13DK	8CK	11DK	14DK	15DK	120
119	6	8	9	10AK	11	11AK	12AK	12BK	11BK	11BK	14CK	14CK	8CK	8CK	11CK	13DK	8CK	11DK	14DK	15DK	119
118	6	8	9	10AK	11	11AK	12AK	12BK	11BK	11BK	14BK	14CK	8CK	8CK	11CK	13DK	8CK	11CK	14DK	15DK	118
117	6	7	8	10AK	11	10AK	12AK	12BK	11BK	11BK	14BK	13CK	8CK	8CK	11CK	13DK	8CK	11CK	14DK	14DK	117
116	6	7	8	9AK	10	10AK	12AK	11BK	10BK	11BK	14BK	13CK	8CK	8CK	11CK	13DK	8CK	11CK	14DK	14DK	116
115	6	7	8	9	10	10AK	12AK	11BK	10AK	11BK	13BK	13CK	8BK	8CK	11CK	12DK	8CK	10CK	14DK	14DK	115
114	6	7	8	9	10	10	11AK	11BK	10AK	10BK	13BK	12CK	8BK	8CK	11CK	12CK	8CK	10CK	14DK	14DK	114
113	6	7	8	9	10	10	11AK	11AK	10AK	10BK	13BK	12CK	8BK	8CK	11CK	12CK	8CK	10CK	13DK	14DK	113
112	6	7	8	9	10	10	11AK	11AK	10AK	10BK	13BK	12CK	8BK	8CK	10CK	12CK	7BK	10CK	13DK	14DK	112
111	6	7	8	9	10	9	11AK	10AK	10AK	10AK	12BK	12CK	8BK	7CK	10CK	12CK	7BK	10CK	13DK	13DK	111
110	6	7	8	9	10	9	11AK	10AK	9AK	9AK	12BK	11BK	8BK	7CK	10CK	12CK	7BK	10CK	13DK	13DK	110
109	6	7	8	8	9	9	10	10AK	9AK	9AK	12BK	11BK	7BK	7CK	10CK	11CK	7BK	10BK	13DK	13CK	109
108	6	7	7	8	9	9	10	10AK	9AK	9AK	11BK	11BK	7BK	7CK	10CK	11CK	7AK	9BK	13DK	13CK	108
107	6	7	7	8	9	9	10	10AK	9AK	9AK	11BK	10BK	7BK	7BK	10CK	11CK	7AK	9BK	13DK	13CK	107
106	6	5	7	8	9	9	10	9AK	9AK	9AK	11AK	10BK	7BK	7BK	10BK	11CK	7AK	9BK	12CK	12CK	106
105	5	6	7	8	9	9	10	9AK	9AK	8AK	11AK	10BK	7BK	7BK	9BK	11CK	6AK	9BK	12CK	12CK	105
104	5	6	7	8	9	8	9	9AK	8	8AK	10AK	10BK	7AK	7BK	9BK	10CK	6	9AK	12CK	12CK	104
103	5	6	7	7	9	8	9	9AK	8	8AK	10AK	9BK	7AK	7BK	9BK	10BK	6	9AK	12CK	12CK	103
102	5	6	7	7	8	8	9	9AK	8	8AK	10AK	9BK	7AK	7BK	9BK	10BK	6	9AK	12CK	12CK	102
101	5	6	7	7	8	8	9	8AK	8	7AK	10AK	9BK	7AK	7BK	9BK	10BK	6	8AK	12CK	12BK	101
100	5	6	6	7	8	8	9	8AK	8	7AK	9AK	8BK	7AK	7BK	9BK	10BK	6	8AK	12CK	11BK	100
99	5	6	6	7	8	8	9	8	7	7	9AK	8BK	7AK	6BK	9BK	10BK	6	8	11CK	11BK	99
98	5	6	6	7	8	7	8	8	7	7	9AK	8BK	7AK	6BK	9BK	9BK	6	8	11CK	11BK	98
97	5	6	6	7	8	7	8	8	7	6	9AK	8BK	7AK	6AK	8BK	9BK	5	8	11CK	11AK	97
96	5	6	6	6	8	7	8	7	7	6	8AK	7AK	6AK	6AK	8BK	9BK	5	8	11CK	11AK	96
95	5	5	6	6	7	7	8	7	7	6	8AK	7AK	6AK	6AK	8BK	9BK	5	8	11BK	10AK	95
94	5	5	6	6	7	7	8	7	7	6	8	7AK	6	6AK	8AK	9BK	5	7	11BK	10	94
93	5	5	6	6	7	7	7	7	6	6	8	7AK	6	6AK	8AK	9BK	5	7	11BK	10	93
92	5	5	5	6	7	7	7	6	6	5	7	6AK	6	6AK	8AK	8BK	5	7	10BK	10	92
91	5	5	5	6	7	6	7	6	6	5	7	6AK	6	6AK	8AK	8AK	5	7	10BK	10	91
90	4	5	5	6	7	6	7	6	6	5	7	6AK	6	6AK	7AK	8AK	4	7	10BK	10	90
89	4	5	5	5	7	6	7	6	6	5	6	5AK	6	6	7AK	8AK	4	7	10AK	9	89
88	4	5	5	5	6	6	6	6	6	4	6	5AK	6	6	7AK	8AK	4	7	10AK	9	88
87	4	5	5	5	6	6	6	5	5	4	6	5AK	6	6	7AK	8AK	4	6	10AK	9	87
86	4	5	5	5	6	6	6	5	5	4	6	5AK	6	5	7AK	7AK	4	6	10AK	9	86
85	4	5	5	5	6	5	6	5	5	4	5	4AK	6	5	7AK	7AK	4	6	10AK	9	85
84	4	4	4	5	6	5	6	5	5	4	5	4	6	5	7	7AK	4	6	9	8	84
83	4	4	4	5	6	5	5	5	5	3	5	4	5	5	7	7AK	4	6	9	8	83
82	4	4	4	4	5	5	5	4	4	3	5	3	5	5	6	7AK	3	6	9	8	82
81	4	4	4	4	5	5	5	4	4	3	4	3	5	5	6	6AK	3	6	9	8	81
80	4	4	4	4	5	5	5	4	4	3	4	3	5	5	6	6AK	3	5	9	8	80
79	4	4	4	4	5	5	5	4	4	2	4	3	5	5	6	6	3	5	9	8	79
78	4	4	4	4	5	4	4	4	4	2	4	2	5	5	6	6	3	5	9	7	78
77	4	4	4	4	5	4	4	3	4	2	3	2	5	5	6	6	3	5	8	7	77
76	4	4	4	3	5	4	4	3	3	2	3	2	5	5	6	6	3	5	8	7	76
75	3	4	3	3	4	4	4	3	3	0	3	0	5	5	5	5	2	5	8	7	75
74	3	4	3	3	4	4	4	3	3	0	3	0	5	5	5	5	2	5	8	7	74
73	3	3	3	3	4	4	3	3	3	0	2	0	5	4	5	5	2	0	8	0	73
72	3	3	3	3	4	3	3	2	3	0	2	0	5	4	5	5	2	0	8	0	72
71	3	3	3	3	4	3	3	2	3	0	2	0	5	4	5	5	2	0	8	0	71
70	3	3	3	3	4	3	3	2	2	0	0	0	5	4	5	5	2	0	7	0	70
69	3	3	3	2	4	3	3	2	2	0	0	0	4	4	5	4	2	0	7	0	69
68	3	3	3	2	3	3	2	2	2	0	0	0	4	4	5	4	0	0	7	0	68
67	3	3	2	2	3	3	2	1	2	0	0	0	4	4	4	4	0	0	7	0	67
66	3	3	2	2	3	3	2	1	2	0	0	0	4	4	4	4	0	0	7	0	66
65	3	3	2	2	3	2	2	1	0	0	0	0	4	4	4	4	0	0	7	0	65
64	3	3	2	2	3	2	2	1	0	0	0	0	4	4	4	4	0	0	7	0	64
63	3	3	2	2	3	2	1	0	0	0	0	0	4	4	4	3	0	0	0	0	63
62	3	2	2	1	3	2	1	0	0	0	0	0	4	4	4	3	0	0	0	0	62
61	3	2	2	1	2	2	1	0	0	0	0	0	4	4	4	3	0	0	0	0	61
60	2	2	2	1	2	2	1	0	0	0	0	0	4	3	3	3	0	0	0	0	60
59	2	2	1	1	2	1	1	0	0	0	0	0	4	3	3	3	0	0	0	0	59
58	2	2	1	1	2	1	0	0	0	0	0	0	4	3	3	0	0	0	0	0	58
57	2	2	1	1	2	1	0	0	0	0	0	0	4	3	3	0	0	0	0	0	57
56	2	2	1	0	2	1	0	0	0	0	0	0	3	3	3	0	0	0	0	0	56
55	2	2	1	0	2	1	0	0	0	0	0	0	3	3	3	0	0	0	0	0	55
54	2	2	1	0	1	1	0	0	0	0	0	0	3	3	3	0	0	0	0	0	54
53	2	2	1	0	1	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	53
52	2	2	1	0	1	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	52
51	2	1	0	0	1	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	51
50	2	1	0	0	1	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	50
49	2	1	0	0	1	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	49
48	2	1	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	48
47	2	1	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	47
46	2	1	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	46
45	1	1	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	45
44	1	1	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	44
43	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43
42	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42
41	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	41
40	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40
39	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	39
38	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38
37	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37
36	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36
35	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	35
34	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34
33	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33
32	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	29
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24

8.51



BOLA

Weight: 2-6 pounds
Length: 3-6 feet

Fumble: 1-7

Type: Two-hand
Range: 50 feet
100 feet (-20%)
150 feet (-40%)

8.52



COMPOSITE BOW

Weight: 2-3 pounds
Length: 2½-4 feet
Fumble: 1-4

Type: Missile
Range: 10 feet (+ 25%)
100 feet
200 feet (– 35%)
300 feet (– 60%)

	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
150	11EP	13EP	15EP	17EP	22EP	22EP	25EP	25EP	20EP	22EP	26EP	26EP	21EP	21EP	26EP	29EP	17EP	20EP	23EP	27EP	150
149	11EP	13EP	15EP	17EP	22EP	22EP	25EP	25EP	20EP	22EP	26EP	26EP	21EP	21EP	26EP	29EP	17EP	20EP	23EP	27EP	149
148	11EP	13EP	15EP	17EP	22EP	22EP	25EP	25EP	20EP	22EP	26EP	26EP	21EP	21EP	26EP	29EP	17EP	20EP	23EP	27EP	148
147	11EP	13EP	15EP	17EP	22EP	22EP	25EP	25EP	20EP	22EP	25EP	25EP	21EP	21EP	26EP	29EP	17EP	20EP	23EP	26EP	147
146	11EP	13EP	15EP	17EP	22EP	21EP	24EP	24EP	19EP	21EP	25EP	25EP	21EP	21EP	25EP	28EP	17EP	19EP	23EP	26EP	146
145	11DP	13DP	15EP	16EP	21EP	21EP	24EP	24EP	19EP	21EP	25EP	25EP	20EP	20EP	25EP	28EP	16EP	19EP	22EP	26EP	145
144	11DP	13DP	14EP	16EP	21EP	21EP	24EP	24EP	19EP	21EP	24EP	24EP	20EP	20EP	25EP	28EP	16EP	19EP	22EP	25EP	144
143	11DP	12DP	14DP	16EP	21EP	21EP	23EP	23EP	19DP	20EP	24EP	24EP	20EP	20EP	24EP	27EP	16EP	19EP	22EP	25EP	143
142	11DP	12DP	14DP	16EP	21DP	20DP	23EP	23EP	18DP	20EP	24EP	24EP	20EP	20EP	24EP	27EP	16EP	18EP	22EP	25EP	142
141	11DP	12DP	14DP	15EP	20DP	20DP	23DP	23EP	18DP	20EP	23EP	23EP	20EP	19EP	24EP	27EP	15EP	18EP	21EP	24EP	141
140	10CP	12CP	14DP	15EP	20DP	20DP	22DP	22EP	18DP	19DP	23DP	23EP	19EP	19EP	24EP	26EP	15EP	18EP	21EP	24EP	140
139	10CP	12CP	13DP	15DP	20DP	20DP	22DP	22EP	18DP	19DP	23DP	23EP	19DP	19EP	23EP	26EP	15EP	18EP	21EP	24EP	139
138	10CP	12CP	13DP	15DP	20DP	19DP	22DP	22EP	17DP	19DP	22DP	22EP	19DP	19EP	23EP	26EP	15EP	17EP	21EP	23EP	138
137	10CP	12CP	13DP	15DP	19DP	19DP	21DP	21DP	17DP	18DP	22DP	22DP	19DP	19EP	23EP	25EP	14DP	17EP	21EP	23EP	137
136	10CP	11CP	13DP	14DP	19DP	19DP	21DP	21DP	17DP	18DP	22DP	22DP	19DP	18DP	22EP	25EP	14DP	17EP	20EP	23EP	136
135	10CP	11CP	13CP	14DP	19DP	19DP	21DP	21DP	17CP	18DP	21DP	21DP	18DP	18DP	22EP	25EP	14DP	16EP	20EP	22EP	135
134	10BP	11CP	13CP	14DP	19DP	18DP	21DP	20DP	16CP	17DP	21DP	21DP	18DP	18DP	22DP	24DP	14DP	16DP	20EP	22EP	134
133	10BP	11BP	12CP	14DP	18DP	18DP	20DP	20DP	16CP	17DP	21DP	21DP	18DP	18DP	22DP	24DP	13DP	16DP	20EP	22EP	133
132	10BP	11BP	12CP	13DP	18DP	18DP	20DP	20DP	16CP	17DP	20DP	20DP	18DP	17DP	21DP	24DP	13DP	16DP	19EP	21EP	132
131	9BP	11BP	12CP	13DP	18CP	18DP	20DP	19DP	16CP	16DP	20DP	20DP	18DP	17DP	21DP	23DP	13DP	15DP	19EP	21EP	131
130	9BP	11BP	12CP	13DP	18CP	17CP	19DP	19DP	15CP	16DP	19DP	20DP	17DP	17DP	21DP	23DP	13DP	15DP	19EP	21EP	130
129	9AP	10BP	12CP	13DP	17CP	17CP	19CP	19DP	15CP	16DP	19DP	19DP	17DP	17DP	20DP	23DP	12DP	15DP	19EP	20DP	129
128	9AP	10BP	11CP	13DP	17CP	17CP	19CP	18DP	15CP	15CP	19DP	19DP	17CP	17DP	20DP	22DP	12DP	15DP	18EP	20DP	128
127	9AP	10BP	11CP	12CP	17CP	17CP	18CP	18DP	15CP	15CP	18DP	19DP	17CP	16DP	20DP	22DP	12DP	14DP	18EP	20DP	127
126	9AP	10AP	11BP	12CP	17CP	16CP	18CP	18DP	14CP	15CP	18CP	18DP	16CP	16DP	20DP	22DP	12DP	14DP	18DP	19DP	126
125	9AP	10AP	11BP	12CP	16CP	16CP	18CP	17DP	14CP	15CP	18CP	18DP	16CP	16DP	19DP	21DP	11CP	14DP	18DP	19DP	125
124	9AP	10AP	11BP	12CP	16CP	16CP	17CP	17DP	14CP	14CP	17CP	17DP	16CP	16DP	19DP	21DP	11CP	14DP	18DP	19DP	124
123	9AP	10AP	10BP	11CP	16CP	16CP	17CP	17DP	14CP	14CP	17CP	17DP	16CP	15DP	19DP	21DP	11CP	13DP	17DP	18DP	123
122	8AP	9AP	10BP	11CP	16CP	15CP	17CP	16DP	13CP	14CP	17CP	17DP	16CP	15DP	18DP	20DP	11CP	13DP	17DP	18DP	122
121	8AP	9AP	10BP	11CP	15CP	15CP	17CP	16CP	13BP	13CP	16CP	16CP	15CP	15DP	18DP	20DP	10CP	13CP	17DP	17DP	121
120	8AK	9AP	10BP	11CP	15BP	15CP	16CP	16CP	13BP	13CP	16CP	16CP	15CP	15DP	18DP	20DP	10CP	12CP	17DP	17DP	120
119	8	9AP	10BP	11CP	15BP	15CP	16CP	15CP	13BP	13CP	16CP	16CP	15CP	15DP	18DP	19DP	10CP	12CP	16DP	17DP	119
118	8	9AP	10BP	10CP	15BP	14BP	16CP	15CP	12BP	12CP	15CP	15CP	15CP	14CP	17DP	19DP	10CP	12CP	16DP	16DP	118
117	8	9AP	9AP	10CP	15BP	14BP	15CP	15CP	12BP	12CP	15CP	15CP	15CP	14CP	17CP	19DP	9CP	12CP	16DP	16DP	117
116	8	9AP	9AP	10BP	14BP	14BP	15CP	14CP	12BP	12CP	15CP	15CP	14CP	14CP	17CP	18DP	9CP	11CP	16DP	16DP	116
115	8	8AK	9AP	10BP	14BP	14BP	15CP	14CP	12BP	11CP	14CP	14CP	14CP	14CP	16CP	18CP	9CP	11CP	15DP	15CP	115
114	8	8	9AP	9BP	14BP	13BP	14CP	14CP	11BP	11BP	14CP	14CP	14CP	13CP	16CP	18CP	9CP	11CP	15DP	15CP	114
113	7	8	9AP	9BP	14BP	13BP	14CP	13CP	11BP	11BP	13CP	14CP	14CP	13CP	16CP	17CP	8BP	11CP	15DP	15CP	113
112	7	8	8AP	9BP	13AP	13BP	14BP	13CP	11BP	10BP	13CP	13CP	14CP	13CP	16CP	17CP	8BP	10CP	15DP	14CP	112
111	7	8	8AP	9BP	13AP	13BP	13BP	13CP	11BP	10BP	13CP	13CP	13BP	13CP	15CP	17CP	8BP	10BP	15DP	14CP	111
110	7	8	8AP	9BP	13AP	12BP	13BP	12CP	10BP	10BP	12CP	13CP	13BP	13CP	15CP	16CP	8BP	10BP	14CP	14CP	110
109	7	8	8AP	8BP	13AP	12BP	13BP	12CP	10BP	9BP	12BP	12CP	13BP	12CP	15CP	16CP	7BP	10BP	14CP	13CP	109
108	7	7	8AP	8BP	12AP	12AP	13BP	12CP	10BP	9BP	12BP	12CP	13BP	12CP	14CP	16CP	7BP	9BP	14CP	13CP	108
107	7	7	8AP	8AP	12AP	11AP	12BP	11CP	10AP	9BP	11BP	12CP	12BP	12CP	14CP	16CP	7BP	9BP	14CP	13BP	107
106	7	7	7AP	8AP	12AP	11AP	12BP	11CP	9AP	8BP	11BP	11CP	12BP	12CP	14CP	15CP	7AP	9BP	13CP	12BP	106
105	7	7	7AK	7AP	12AP	11AP	12BP	11BP	9AP	8BP	11BP	11CP	12BP	11CP	14CP	15CP	6AP	8BP	13CP	12BP	105
104	6	7	7	7AP	11AP	11AP	11BP	10BP	9AP	8BP	10BP	11BP	12BP	11CP	13CP	15CP	6AP	8BP	13CP	12BP	104
103	6	7	7	7AP	11AP	10AP	11BP	10BP	9AP	8BP	10BP	10BP	12BP	11CP	13CP	14BP	6AP	8AP	13CP	11BP	103
102	6	6	7	7AP	11AP	10AP	11BP	10BP	8AP	7BP	10BP	10BP	11BP	11CP	13CP	14BP	6AP	8AP	13CP	11BP	102
101	6	6	6	7AP	11AP	10AP	10AP	9BP	8AP	7BP	9BP	9BP	11BP	11CP	12BP	14BP	5AP	7AP	12CP	11BP	101
100	6	6	6	6AP	10AK	10AP	10AP	9BP	8AP	7AP	9BP	9BP	11BP	10CP	12BP	13BP	5AK	7AP	12CP	10AP	100
99	6	6	6	6AP	10	9AP	10AP	9BP	8AP	6AP	9BP	9BP	11BP	10BP	12BP	13BP	5	7AP	12CP	10AP	99
98	6	6	6	6AP	10	9AP	9AP	8BP	7AP	6AP	8BP	8BP	11BP	10BP	12BP	13BP	5	7AP	12BP	10AP	98
97	6	6	6	6AP	10	9AP	9AP	8BP	7AP	6AP	8BP	8BP	10BP	10BP	11BP	12BP	4	6AP	11BP	9AP	97
96	6	6	5	5AP	9	9AP	9AP	8BP	7AP	5AP	7BP	9BP	10BP	9BP	11BP	12BP	4	6AP	11BP	9AP	96
95	6	6	5	5AK	9	8AK	9AP	7BP	7AK	5AP	7AP	7BP	10AP	9BP	11BP	12BP	4	6AK	11BP	9AP	95
94	5	5	5	5	9	8	8AP	7BP	6	5AP	7AP	7BP	10AP	9BP	10BP	11BP	4	0	11BP	8AK	94
93	5	5	5	5	9	8	8AP	7BP	6	4AP	6AP	7BP	10AP	9BP	10BP	11BP	3	0	10BP	8	93
92	5	5	5	5	8	8	8AP	6AP	6	4AP	6AP	6BP	9AP	9BP	10BP	11BP	3	0	10BP	0	92
91	5	5	5	4	8	7	7AP	6AP	6	4AP	5AP	6BP	9AP	8BP	10BP	10BP	3	0	10BP	0	91
90	5	5	4	4	8	7	7AK	6AP	5	3AK	5AP	6BP	9AP	8BP	9BP	10BP	3	0	10BP	0	90
89	5	5	4	4	8	7	7	5AP	5	3	5AP	5AP	9AP	8BP	9BP	10BP	0	0	10AP	0	89
88	5	5	4	4	8	7	6	5AP	5	3	5AP	5AP	9AP	8BP	9BP	9BP	0	0	9AP	0	88
87	5	4	4	3	7	6	6	5AP	5	2	4AP	5AP	8AP	7BP	8BP	9AP	0	0	9AP	0	87
86	5	4	4	3	7	6	6	4AP	4	2	4AP	4AP	8AP	7BP	8BP	9AP	0	0	9AP	0	86
85	4	4	3	3	7	6	5	4AP	4	2	4AK	4AP	8AP	7BP	8BP	8AP	0	0	9AP	0	85
84	4	4	3	3	7	6	5	4AP	4	0	3	4AP	8AP	7AP	8AP	8AP	0	0	8AP	0	84
83	4	4	3	3	6	5	5	3AP	4	0	3	3AP	7AP	7AP	7AP	8AP	0	0	8AP	0	83
82	4	4	3	2	6	5	5	3AP	3	0	3	3AP	7AP	6AP	7AP	7AP	0	0	8AK	0	82
81	4	4	3	2	6	5	4	3AP	3	0	2	3AP	7AP	6AP	7AP	7AP	0	0	8	0	81
80	4	3	3	2	6	5	4	2AK	3	0	2	2AK	7AK	6AP	6AP	7AP	0	0	0	0	80
79	4	3	2	2	5	4	4	2	3	0	0	2	7	6AP	6AP	6AP	0	0	0	0	79
78	4	3	2	1	5	4	3	2	2	0	0	0	6	5AP	6AP	6AP	0	0	0	0	78
77	4	3	2	1	5	4	3	1	2	0	0	0	6	5AP	6AP	6AP	0	0	0	0	77
76	3	3	2	1	5	4	3	1	2	0	0	0	6	5AP	5AP	5AP	0	0	0	0	76
75	3	3	2	1	4	3	2	1	2	0	0	0	6	5AK	5AP	5AP	0	0	0	0	75
74	3	3	1	0	4	3	2	0	0	0	0	0	6	5	5AP	5AP	0	0	0	0	74
73	3	2	1	0	4	3	2	0	0	0	0	0	5	4	4AP	4AP	0	0	0	0	73
72	3	2	1	0	4	3	1	0	0	0	0	0	5	4	4AK	4AK	0	0	0	0	72
71	3	2	1	0	3	2	1	0	0	0	0	0	5	4	4	4	0	0	0	0	71
70	3	2	1	0	3	2	1	0	0	0	0	0	5	4	0	0	0	0	0	0	70
69	3	2	0	0	3	2	0	0	0	0	0	0	5	0	0	0	0	0	0	0	69
68	3	2	0	0	3	2	0	0	0	0	0	0	4	0	0	0	0	0	0	0	68
67	2	2	0	0	2	1	0	0	0	0	0	0	4	0	0	0	0	0	0	0	67
66	2	1	0	0	2	1	0	0	0	0	0	0	4	0	0	0	0	0	0	0	66
65	2	1	0	0	2	1	0	0	0	0	0	0	4	0	0	0	0	0	0	0	65
64	2	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	64
63	2	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	63
62	2	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	62
61	2	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61
60	2	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60
59	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	59
58	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	58
57	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	57
56	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	56
55	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	55
54	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	54
53	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	53
52	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	52
51	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	51
50	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50



HEAVY CROSSBOW

	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
150	14EP	16EP	18EP	20EP	24EP	24EP	27EP	27EP	23EP	25EP	29EP	29EP	23EP	23EP	28EP	31EP	25EP	28EP	31EP	33EP	150
149	14EP	16EP	18EP	20EP	24EP	24EP	27EP	27EP	23EP	25EP	29EP	29EP	23EP	23EP	28EP	31EP	25EP	28EP	31EP	33EP	149
148	14EP	16EP	18EP	20EP	24EP	24EP	27EP	27EP	23EP	25EP	29EP	29EP	23EP	23EP	28EP	31EP	25EP	28EP	31EP	33EP	148
147	14EP	16EP	18EP	20EP	24EP	24EP	27EP	26EP	23EP	24EP	28EP	28EP	23EP	23EP	28EP	31EP	24EP	27EP	31EP	32EP	147
146	14EP	16EP	18EP	20EP	23EP	23EP	26EP	26EP	22EP	24EP	28EP	28EP	23EP	23EP	27EP	30EP	24EP	27EP	30EP	32EP	146
145	14EP	16EP	18EP	19EP	23EP	23EP	26EP	26EP	22EP	24EP	28EP	28EP	22EP	22EP	27EP	30EP	24EP	27EP	30EP	31EP	145
144	14DP	16DP	17EP	19EP	23EP	23EP	26EP	25EP	22EP	23EP	27EP	27EP	22EP	22EP	27EP	30EP	23EP	26EP	30EP	31EP	144
143	14DP	15DP	17EP	19EP	23EP	23EP	25EP	25EP	22EP	23EP	27EP	27EP	22EP	22EP	26EP	29EP	23EP	26EP	29EP	31EP	143
142	13DP	15DP	17DP	19EP	22EP	22EP	25EP	25EP	21EP	23EP	27EP	27EP	22EP	22EP	26EP	29EP	23EP	25EP	29EP	30EP	142
141	13DP	15DP	17DP	18EP	22EP	22EP	25EP	24EP	21DP	22EP	26EP	26EP	22EP	21EP	26EP	29EP	22EP	25EP	29EP	30EP	141
140	13DP	15DP	17DP	18EP	22EP	22EP	24EP	24EP	21DP	22EP	26EP	26EP	21EP	21EP	26EP	28EP	22EP	25EP	28EP	29EP	140
139	13DP	15DP	16DP	18EP	22EP	22EP	24EP	24EP	21DP	22EP	25EP	25EP	21EP	21EP	25EP	28EP	22EP	24EP	28EP	29EP	139
138	13CP	15CP	16DP	18DP	21DP	21DP	24DP	23EP	20DP	21EP	25EP	25EP	21EP	21EP	25EP	28EP	21EP	24EP	28EP	29EP	138
137	13CP	14CP	16DP	17DP	21DP	21DP	23DP	23EP	20DP	21DP	25DP	25EP	21DP	20EP	25EP	27EP	21EP	24EP	27EP	28EP	137
136	13CP	14CP	16DP	17DP	21DP	21DP	23DP	23EP	20DP	21DP	24DP	24EP	20DP	20EP	24EP	27EP	21EP	23EP	27EP	28EP	136
135	13CP	14CP	16DP	17DP	21DP	21DP	23DP	22DP	19DP	20DP	24DP	24EP	20DP	20EP	24EP	27EP	20EP	23EP	27EP	27EP	135
134	12CP	14CP	15DP	17DP	20DP	20DP	22DP	22DP	19DP	20DP	24DP	24DP	20DP	20DP	24EP	26EP	20EP	22EP	26EP	27EP	134
133	12CP	14CP	15CP	17DP	20DP	20DP	22DP	22DP	19DP	20DP	23DP	23DP	20DP	20DP	23DP	26EP	20DP	22EP	26EP	27EP	133
132	12CP	14CP	15CP	16DP	20DP	20DP	22DP	21DP	19CP	19DP	23DP	23DP	20DP	19DP	23DP	26EP	19DP	22EP	26EP	26EP	132
131	12CP	13CP	15CP	16DP	20DP	19DP	22DP	21DP	18CP	19DP	22DP	23DP	19DP	19DP	23DP	25EP	19DP	21EP	25EP	26EP	131
130	12BP	13BP	15CP	16DP	19DP	19DP	21DP	21DP	18CP	19DP	22DP	22DP	19DP	19DP	23DP	25DP	19DP	21DP	25EP	25EP	130
129	12BP	13BP	14CP	16DP	19DP	19DP	21DP	20DP	18CP	18DP	22DP	22DP	19DP	19DP	22DP	25DP	18DP	21DP	25EP	25EP	129
128	12BP	13BP	14CP	15DP	19DP	19DP	21DP	20DP	18CP	18DP	21DP	21DP	19DP	18DP	22DP	24DP	18DP	20DP	24EP	25EP	128
127	12BP	13BP	14CP	15DP	19DP	18DP	20DP	20DP	17CP	18DP	21DP	21DP	18DP	18DP	22DP	24DP	17DP	20DP	24EP	24EP	127
126	11BP	13BP	14CP	15DP	18DP	18DP	20DP	19DP	17CP	17DP	21DP	21DP	18DP	18DP	21DP	24DP	17DP	19DP	24EP	24EP	126
125	11BP	13BP	14CP	15CP	18CP	18DP	20CP	19DP	17CP	17DP	20DP	20DP	18DP	18DP	21DP	23DP	17DP	19DP	23EP	23EP	125
124	11AP	12BP	13CP	14CP	18CP	18CP	19CP	19DP	16CP	17CP	20DP	20DP	18CP	17DP	21DP	23DP	16DP	19DP	23EP	23EP	124
123	11AP	12BP	13BP	14CP	18CP	17CP	19CP	18DP	16CP	16CP	20DP	20DP	18CP	17DP	21DP	23DP	16DP	18DP	23EP	23DP	123
122	11AP	12AP	13BP	14CP	17CP	17CP	19CP	18DP	16CP	16CP	19CP	19DP	17CP	17DP	20DP	22DP	16DP	18DP	23DP	22DP	122
121	11AP	12AP	13BP	14CP	17CP	17CP	18CP	18DP	16CP	16CP	19CP	19DP	17CP	17DP	20DP	22DP	15DP	18DP	22DP	22DP	121
120	11AP	12AP	13BP	14CP	17CP	17CP	18CP	17DP	15CP	15CP	18CP	19DP	17CP	17DP	20DP	22DP	15DP	17DP	22DP	21DP	120
119	11AP	12AP	12BP	13CP	17CP	16CP	18CP	17DP	15CP	15CP	18CP	18DP	17CP	16DP	19DP	21DP	15CP	17DP	22DP	21DP	119
118	10AP	11AP	12BP	13CP	16CP	16CP	17CP	17CP	15CP	15CP	18CP	18DP	16CP	16DP	19DP	21DP	14CP	16DP	21DP	21DP	118
117	10AP	11AP	12BP	13CP	16CP	16CP	17CP	16CP	15BP	14CP	17CP	17CP	16CP	16DP	19DP	21DP	14CP	16DP	21DP	20DP	117
116	10AP	11AP	12BP	13CP	16CP	16CP	17CP	16CP	14BP	14CP	17CP	17CP	16CP	16DP	18DP	20DP	14CP	16DP	21DP	20DP	116
115	10AK	11AP	12BP	12CP	16CP	15CP	17CP	16CP	14BP	14CP	17CP	17CP	16CP	15DP	18DP	20DP	13CP	15DP	20DP	19DP	115
114	10	11AP	11BP	12CP	15CP	15CP	16CP	15CP	14BP	13CP	16CP	16CP	16CP	15CP	18CP	20DP	13CP	15CP	20DP	19DP	114
113	10	11AP	11AP	12BP	15CP	15CP	16CP	15CP	13BP	13CP	16CP	16CP	15CP	15CP	18CP	19DP	13CP	15CP	20DP	19DP	113
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110	9	10AK	11AP	11BP	14BP	14BP	15CP	14CP	13BP	12CP	15CP	15CP	15CP	14CP	17CP	18DP	12CP	13CP	19DP	17DP	110
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108	9	10	10AP	11BP	14BP	13BP	14CP	13CP	12BP	11BP	14CP	14CP	14CP	14CP	16CP	18CP	11CP	13CP	18DP	17DP	108
107	9	10	10AP	10BP	14BP	13BP	14BP	13CP	12BP	11BP	14CP	14CP	14CP	13CP	16CP	17CP	11BP	12CP	18DP	16DP	107
106	9	10	10AP	10BP	13BP	13BP	14BP	13CP	12BP	11BP	13CP	13CP	14BP	13CP	16CP	17CP	10BP	12CP	17DP	16DP	106
105	9	9	10AP	10BP	13BP	13BP	13BP	12CP	11BP	10BP	13CP	13CP	14BP	13CP	15CP	17CP	10BP	12CP	17DP	15DP	105
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103	9	9	9AP	10AP	13AP	12BP	13BP	12CP	11AP	10BP	12BP	12CP	13BP	13CP	15CP	16CP	9BP	11BP	16CP	15CP	103
102	8	9	9AP	9AP	12AP	12BP	12BP	11CP	10AP	9BP	12BP	12CP	13BP	12CP	14CP	16CP	9BP	10BP	16CP	14CP	102
101	8	9	9AP	9AP	12AP	12BP	12BP	11BP	10AP	9BP	11BP	12CP	13BP	12CP	14CP	15CP	8AP	10BP	16CP	14CP	101
100	8	9	9AK	9AP	12AP	11AP	12BP	11BP	10AP	9BP	11BP	11CP	13BP	12CP	14CP	15CP	8AP	10BP	15CP	13CP	100
99	8	8	8	9AP	12AP	11AP	11BP	10BP	10AP	8BP	11BP	11BP	12BP	12CP	13CP	15CP	8AP	9BP	15CP	13CP	99
98	8	8	8	8AP	11AP	11AP	11BP	10BP	9AP	8BP	10BP	11BP	12BP	11CP	13BP	14CP	7AP	9BP	15CP	13CP	98
97	8	8	8	8AP	11AP	11AP	11AP	10BP	9AP	8BP	10BP	10BP	12BP	11CP	13BP	14BP	7AP	9BP	15CP	12BP	97
96	8	8	8	8AP	11AP	10AP	11AP	9BP	9AP	7BP	10BP	10BP	12BP	11CP	13BP	14BP	7BP	8AP	14CP	12BP	96
95	8	8	8	8AP	11AK	10AP	10AP	9BP	9AP	7BP	9BP	9BP	11BP	11CP	12BP	13BP	6AK	8AP	14CP	11BP	95
94	7	8	7	7AP	10	10AP	10AP	9BP	8AP	7AP	9BP	9BP	11BP	10BP	12BP	13BP	6	7AP	14CP	11BP	94
93	7	7	7	7AP	10	9AP	10AP	8BP	8AP	6AP	8BP	9BP	11BP	10BP	12BP	13BP	6	7AP	13CP	11BP	93
92	7	7	7	7AP	10	9AP	9AP	8BP	8AP	6AP	8BP	8BP	11BP	10BP	11BP	12BP	5	7AP	13CP	10BP	92
91	7	7	7	7AP	10	9AP	9AP	8BP	7AP	6AP	8BP	8BP	11BP	10BP	11BP	12BP	5	6AP	13BP	10AP	91
90	7	7	7	7AK	9	9AK	9AP	7BP	7AK	5AP	7AP	8BP	10BP	10BP	11BP	12BP	5	6AK	12BP	9AP	90
89	7	7	6	6	9	8	8AP	7AP	7	5AP	7AP	7BP	10BP	9BP	11BP	11BP	4	0	12BP	9AP	89
88	7	7	6	6	9	8	8AP	7AP	7	5AP	7AP	7BP	10AP	9BP	10BP	11BP	4	0	12BP	9AP	88
87	7	7	6	6	9	8	8AP	6AP	6	4AP	6AP	7BP	10AP	9BP	10BP	11BP	4	0	11BP	8AK	87
86	6	6	6	6	8	8	7AP	6AP	6	4AP	6AP	6BP	9AP	9BP	10BP	10BP	3	0	11BP	8	86
85	6	6	6	5	8	7	7AK	6AP	6	4AK	6AP	6BP	9AP	8BP	9BP	10BP	3	0	11BP	0	85
84	6	6	5	5	8	7	7	5AP	6	3	5AP	5AP	9AP	8BP	9BP	10BP	0	0	10BP	0	84
83	6	6	5	5	8	7	6	5AP	5	3	5AP	5AP	9AP	8BP	9BP	9BP	0	0	10BP	0	83
82	6	6	5	5	7	7	6	5AP	5	3	4AP	5AP	9AP	8BP	8BP	9BP	0	0	10AP	0	82
81	6	6	5	4	7	6	6	4AP	5	2	4AP	4AP	8AP	7BP	8AP	9BP	0	0	9AP	0	81
80	6	5	5	4	7	6	6	4AP	4	2	4AK	4AP	8AP	7BP	8AP	8AP	0	0	9AP	0	80
79	6	5	4	4	7	6	5	4AP	4	0	3	4AP	8AP	7BP	8AP	8AP	0	0	9AP	0	79
78	5	5	4	4	6	6	5	3AP	4	0	3	3AP	8AP	7AP	7AP	8AP	0	0	8AP	0	78
77	5	5	4	4	6	5	5	3AP	4	0	3	3AP	7AP	7AP	7AP	7AP	0	0	8AK	0	77
76	5	5	4	3	6	5	4	3AP	3	0	2	3AP	7AP	6AP	7AP	7AP	0	0	8	0	76
75	5	5	4	3	6	5	4	2AK	3	0	2	2AK	7AK	6AP	6AP	7AP	0	0	0	0	75
74	5	4	3	3	5	4	4	2	3	0	0	2	7	6AP	6AP	6AP	0	0	0	0	74
73	5	4	3	3	5	4	3	2	3	0	0	0	7	6AP	6AP	6AP	0	0	0	0	73
72	5	4	3	2	5	4	3	1	2	0	0	0	6	5AP	6AP	6AP	0	0	0	0	72
71	5	4	3	2	5	4	3	1	2	0	0	0	6	5AP	5AP	5AP	0	0	0	0	71
70	4	4	3	2	4	3	2	1	2	0	0	0	6	5AK	5AP	5AP	0	0	0	0	70
69	4	4	2	2	4	3	2	0	0	0	0	0	6	5	5AP	5AP	0	0	0	0	69
68	4	4	2	1	4	3	2	0	0	0	0	0	5	4	4AP	4AP	0	0	0	0	68
67	4	3	2	1	4	3	1	0	0	0	0	0	5	4	4AK	4AK	0	0	0	0	67
66	4	3	2	1	3	2	1	0	0	0	0	0	5	4	4	4	0	0	0	0	66
65	4	3	2	1	3	2	1	0	0	0	0	0	5	4	0	0	0	0	0	0	65
64	4	3	1	0	3	2	0	0	0	0	0	0	5	0	0	0	0	0	0	0	64
63	4	3	1	0	3	2	0	0	0	0	0	0	4	0	0	0	0	0	0	0	63
62	3	3	1	0	2	1	0	0	0	0	0	0	4	0	0	0	0	0	0	0	62
61	3	2	1	0	2	1	0	0	0	0	0	0	4	0	0	0	0	0	0	0	61
60	3	2	1	0	2	1	0	0	0	0	0	0	4	0	0	0	0	0	0	0	60
59	3	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	59
58	3	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	58
57	3	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	57
56	3	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	56
55	3	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	55
54	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	54
53	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	53
52	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	52
51	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	51
50	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50
49	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	49
48	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48
47	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	47
46	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46
45	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	45

Weight: 8-12 pounds
Length: 3½-4½ feet

Type: Missile
Range: 20 feet (+ 30%)
100 feet
200 feet (– 25%)
300 feet (– 40%)
360 feet (– 55%)

Fumble: 1-5

8.54



LIGHT CROSSBOW

Weight: 4-8 pounds
Length: 2-4 feet
Fumble: 1-5

Type: Missile
Range: 10 feet (+ 15%)
100 feet
200 feet (− 35%)
300 feet (− 50%)
360 feet (− 75%)

	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
150	10EP	12EP	14EP	16EP	21EP	21EP	24EP	24EP	19EP	21EP	25EP	25EP	20EP	20EP	25EP	28EP	18EP	21EP	24EP	26EP	150
149	10DP	12EP	14EP	16EP	21EP	21EP	24EP	24EP	19EP	21EP	25EP	25EP	20EP	20EP	23EP	28EP	18EP	21EP	24EP	26EP	149
148	10DP	12DP	14EP	16EP	21EP	21EP	24EP	24EP	19EP	21EP	25EP	25EP	20EP	20EP	25EP	28EP	18EP	21EP	24EP	26EP	148
147	10CP	12DP	14EP	16EP	21EP	21EP	24EP	24EP	19EP	21EP	24EP	24EP	20EP	20EP	25EP	28EP	18EP	21EP	24EP	26EP	147
146	10CP	12DP	14DP	16EP	21EP	21EP	23EP	23EP	19EP	20EP	24EP	24EP	20EP	20EP	24EP	27EP	17EP	20EP	24EP	25EP	146
145	10CP	12CP	14DP	15EP	20EP	20EP	23EP	23EP	18EP	20EP	24EP	24EP	20EP	19EP	24EP	27EP	17EP	20EP	23EP	23EP	145
144	10CP	12CP	13DP	15EP	20EP	20EP	23EP	23EP	18EP	20EP	23EP	23EP	19EP	19EP	24EP	27EP	17EP	20EP	23EP	25EP	144
143	10BP	12CP	13DP	15DP	20DP	20DP	22DP	22EP	18DP	19EP	23EP	23EP	19EP	19EP	23EP	26EP	17EP	19EP	23EP	24EP	143
142	10BP	11CP	13DP	15DP	20DP	20DP	22DP	22EP	18DP	19EP	23EP	23EP	19EP	19EP	23EP	26EP	16EP	19EP	23EP	24EP	142
141	10BP	11CP	13CP	15DP	19DP	19DP	22DP	22EP	17DP	19EP	22EP	22EP	19EP	19EP	23EP	26EP	16EP	19EP	22EP	24EP	141
140	10BP	11BP	13CP	14DP	19DP	19DP	22DP	21EP	17DP	18DP	22DP	22EP	19EP	18EP	23EP	25EP	16EP	19EP	22EP	23EP	140
139	9BP	11BP	13CP	14DP	19DP	19DP	21DP	21DP	17DP	18DP	22DP	22EP	18DP	18EP	22EP	25EP	16EP	18EP	22EP	23EP	139
138	9BP	11BP	12CP	14DP	19DP	19DP	21DP	21DP	17DP	18DP	21DP	21EP	18DP	18EP	22EP	25EP	15EP	18EP	22EP	23EP	138
137	9AP	11BP	12CP	14DP	18DP	18DP	21DP	20DP	16DP	18DP	21DP	21DP	18DP	18DP	22EP	24EP	15EP	18EP	21EP	22EP	137
136	9AP	11BP	12CP	14DP	18DP	18DP	20DP	20DP	16DP	17DP	21DP	21DP	18DP	18DP	21EP	24EP	15DP	17EP	21EP	22EP	136
135	9AP	11BP	12CP	13DP	18DP	18DP	20DP	20DP	16CP	17DP	20DP	20DP	18DP	17DP	21DP	24EP	15DP	17EP	21EP	22EP	135
134	9AP	10BP	12BP	13DP	18CP	18DP	20DP	19DP	16CP	17DP	20DP	20DP	17DP	17DP	21DP	23EP	14DP	17EP	21EP	21EP	134
133	9AP	10BP	12BP	13CP	18CP	17CP	19CP	19DP	15CP	16DP	20DP	20DP	17DP	17DP	21DP	23DP	14DP	17DP	20EP	21EP	133
132	9AP	10AP	11BP	13CP	17CP	17CP	19CP	19DP	15CP	16DP	19DP	19DP	17DP	17DP	20DP	23DP	14DP	16DP	20EP	21EP	132
131	9AP	10AP	11BP	13CP	17CP	17CP	19CP	18DP	15CP	16DP	19DP	19DP	17DP	17DP	20DP	22DP	14DP	16DP	20EP	20EP	131
130	9AP	10AP	11BP	12CP	17CP	17CP	19CP	18DP	15CP	15DP	19DP	19DP	17DP	16DP	20DP	22DP	13DP	16DP	20EP	20EP	130
129	8AP	10AP	11BP	12CP	17CP	16CP	18CP	18DP	15CP	15DP	18DP	18DP	16DP	16DP	19DP	22DP	13DP	15DP	19EP	20EP	129
128	8AP	10AP	11BP	12CP	16CP	16CP	18CP	18DP	14CP	15CP	18DP	18DP	16CP	16DP	19DP	21DP	13DP	15DP	19EP	20EP	128
127	8AP	10AP	11BP	12CP	16CP	16CP	18CP	17DP	14CP	15CP	18DP	18DP	16CP	16DP	19DP	21DP	12DP	15DP	19EP	19DP	127
126	8AP	9AP	10BP	12CP	16CP	16CP	17CP	17DP	14CP	14CP	17CP	17DP	16CP	15DP	19DP	21DP	12DP	15DP	19DP	19DP	126
125	8AK	9AP	10BP	11BP	16BP	15CP	17CP	17CP	14CP	14CP	17CP	17DP	16CP	15DP	18DP	20DP	12DP	14DP	18DP	19DP	125
124	8	9AP	10AP	11BP	15BP	15CP	17CP	16CP	13CP	14CP	17CP	17DP	15CP	15DP	18DP	20DP	12CP	14DP	18DP	18DP	124
123	8	9AP	10AP	11BP	14BP	15BP	16CP	16CP	13CP	13CP	16CP	16DP	15CP	15DP	18DP	20DP	11CP	14DP	18DP	18DP	123
122	8	9AP	10AP	11BP	15BP	15BP	16CP	16CP	13CP	13CP	16CP	16DP	15CP	15DP	17DP	19DP	11CP	13DP	18DP	18DP	122
121	8	9AP	10AP	11BP	15BP	14BP	16CP	15CP	13BP	13CP	16CP	16CP	15CP	14DP	17DP	19DP	11CP	13DP	17DP	17DP	121
120	8	9AK	9AP	10BP	15BP	14BP	16CP	15CP	12BP	12CP	15CP	15CP	15CP	14CP	17DP	19DP	11CP	13CP	17DP	17DP	120
119	7	8	9AP	10BP	14BP	14BP	15CP	15CP	12BP	12CP	15CP	15CP	14CP	14CP	17CP	18DP	10CP	13CP	17DP	17DP	119
118	7	8	9AP	10BP	14BP	14BP	15BP	14CP	12BP	12CP	15CP	15CP	14CP	14CP	16CP	18DP	10CP	12CP	17DP	16DP	118
117	7	8	9AP	10BP	14AP	13BP	15BP	14CP	12BP	11CP	14CP	14CP	14CP	14CP	16CP	18DP	10CP	12CP	16DP	16DP	117
116	7	8	9AP	10BP	14AP	13BP	14BP	14CP	11BP	11CP	14CP	14CP	14CP	13CP	16CP	17DP	10CP	12CP	16DP	16DP	116
115	7	8	9AP	9AP	13AP	13BP	14BP	13CP	11BP	11CP	14CP	14CP	14CP	13CP	15CP	17CP	9CP	11CP	16DP	15DP	115
114	7	8	8AP	9AP	13AP	13BP	14BP	13CP	11BP	11BP	13CP	13CP	13CP	13CP	15CP	17CP	9CP	11CP	16DP	15DP	114
113	7	8	8AP	9AP	13AP	12AP	14BP	13CP	11BP	10BP	13CP	13CP	13CP	13CP	15CP	16CP	9BP	11CP	16DP	15DP	113
112	7	8	8AP	9AP	13AP	12AP	13BP	12CP	10BP	10BP	13CP	13CP	13BP	13CP	14CP	16CP	9BP	11CP	15DP	14CP	112
111	7	7	8AP	8AP	12AP	12AP	13BP	12BP	10BP	10BP	12CP	12CP	13BP	12CP	14CP	16CP	8BP	10BP	15DP	14CP	111
110	7	7	8AK	8AP	12AP	12AP	13BP	12BP	10BP	9BP	12CP	12CP	13BP	12CP	14CP	16CP	8BP	10BP	15CP	14CP	110
109	7	7	8	8AP	12AP	11AP	12BP	12BP	10BP	9BP	12BP	12CP	12BP	12CP	14CP	15CP	8BP	10BP	15CP	14CP	109
108	6	7	7	8AP	12AP	11AP	12AP	11BP	10BP	9BP	11BP	11CP	12BP	12CP	13CP	15CP	7BP	9BP	14CP	13CP	108
107	6	7	7	8AP	12AP	11AP	12AP	11BP	9AP	8BP	11BP	11CP	12BP	11CP	13CP	15CP	7BP	9BP	14CP	13CP	107
106	6	7	7	7AP	11AP	11AP	11AP	11BP	9AP	8BP	11BP	11CP	12BP	11CP	13CP	14CP	7AP	9BP	14CP	13CP	106
105	6	7	7	7AP	11AK	11AP	11AP	10BP	9AP	8BP	10BP	10CP	12BP	11CP	12CP	14CP	7AP	9BP	14CP	12CP	105
104	6	7	7	7AP	11	10AP	11AP	10BP	9AP	8BP	10BP	10BP	11BP	11CP	12BP	14BP	6AP	8BP	13CP	12BP	104
103	6	6	7	7AP	11	10AP	11AP	10BP	8AP	7BP	10BP	10BP	11BP	11CP	12BP	13BP	6AP	8AP	13CP	12BP	103
102	6	6	6	7AP	10	10AP	10AP	9BP	8AP	7BP	9BP	9BP	11BP	10BP	12BP	13BP	6AP	8AP	13CP	11BP	102
101	6	6	6	6AP	10	10AP	10AP	9BP	8AP	7BP	9BP	9BP	11BP	10BP	11BP	13BP	6AP	7AP	13CP	11BP	101
100	6	6	6	6AK	10	9AK	10AP	9BP	8AP	6AP	9BP	9BP	11BP	10BP	11BP	12BP	5AK	7AP	12CP	11BP	100
99	6	6	6	6	10	9	9AP	8AP	7AP	6AP	8BP	8BP	10BP	10BP	11BP	12BP	5	7AP	12BP	10BP	99
98	5	6	6	6	9	9	9AP	8AP	7AP	6AP	8BP	8BP	10BP	10BP	10BP	12BP	5	7AP	12BP	10BP	98
97	5	6	6	6	9	9	9AP	8AP	7AP	5AP	8BP	8BP	10AP	9BP	10BP	11BP	5	6AP	12BP	10AP	97
96	5	6	5	5	9	8	8AP	7AP	7AP	5AP	7BP	7BP	10AP	9BP	10BP	11BP	4	6AP	11BP	9AP	96
95	5	5	5	5	9	8	8AK	7AP	6AK	5AP	7AP	7BP	10AP	9BP	10BP	11BP	4	6AK	11BP	9AP	95
94	5	5	5	5	9	8	8	7AP	6	5AP	7AP	7BP	9AP	9BP	9BP	10BP	4	0	11BP	9AP	94
93	5	5	5	5	8	8	8	6AP	6	4AP	6AP	6BP	9AP	9BP	9BP	10BP	4	0	11BP	8AP	93
92	5	5	5	5	8	7	7	6AP	6	4AP	6AP	6BP	9AP	8BP	9BP	10BP	3	0	10BP	8AK	92
91	5	5	5	4	8	7	7	6AP	6	4AP	6AP	6BP	9AP	8BP	8BP	9BP	3	0	10BP	8	91
90	5	5	4	4	8	7	7	6AP	5	3AK	5AP	5BP	9AP	8BP	8BP	9BP	3	0	10AP	0	90
89	5	5	4	4	7	7	6	5AP	5	3	5AP	5AP	8AP	8BP	8BP	9BP	0	0	10AP	0	89
88	4	4	4	4	7	6	6	5AP	5	3	5AP	5AP	8AP	7AP	8AP	8AP	0	0	9AP	0	88
87	4	4	4	4	7	6	6	5AP	5	2	4AP	4AP	8AP	7AP	7AP	8AP	0	0	9AP	0	87
86	4	4	4	3	7	6	6	4AP	4	2	4AP	4AP	8AP	7AP	7AP	8AP	0	0	9AP	0	86
85	4	4	4	3	6	6	5	4AP	4	2	4AK	4AP	8AK	7AP	7AP	7AP	0	0	9AP	0	85
84	4	4	3	3	6	5	5	4	4	0	3	3AP	7	7AP	6AP	7AP	0	0	8AP	0	84
83	4	4	3	3	6	5	5	3	4	0	3	3AP	7	6AP	6AP	7AP	0	0	8AP	0	83
82	4	4	3	3	6	5	4	3	3	0	3	3AP	7	6AP	6AP	6AP	0	0	8AK	0	82
81	4	4	3	2	6	5	4	3	3	0	2	2AP	7	6AP	6AP	6AP	0	0	8	0	81
80	4	3	3	2	5	4	4	2	3	0	2	2AK	7	6AK	5AP	6AP	0	0	0	0	80
79	4	3	3	2	5	4	3	2	3	0	0	2	6	6	5AP	5AP	0	0	0	0	79
78	4	3	2	2	5	4	3	2	2	0	0	0	6	5	5AP	5AP	0	0	0	0	78
77	3	3	2	2	5	4	3	1	2	0	0	0	6	5	4AP	5AP	0	0	0	0	77
76	3	3	2	1	4	3	3	1	2	0	0	0	6	5	4AP	4AP	0	0	0	0	76
75	3	3	2	1	4	3	2	1	2	0	0	0	6	5	4AK	4AK	0	0	0	0	75
74	3	3	2	1	4	3	2	0	0	0	0	0	5	5	0	4	0	0	0	0	74
73	3	3	2	1	4	3	2	0	0	0	0	0	5	4	0	0	0	0	0	0	73
72	3	2	1	0	3	2	1	0	0	0	0	0	5	4	0	0	0	0	0	0	72
71	3	2	1	0	3	2	1	0	0	0	0	0	5	4	0	0	0	0	0	0	71
70	3	2	1	0	3	2	1	0	0	0	0	0	5	4	0	0	0	0	0	0	70
69	3	2	1	0	3	2	0	0	0	0	0	0	4	0	0	0	0	0	0	0	69
68	3	2	1	0	3	1	0	0	0	0	0	0	4	0	0	0	0	0	0	0	68
67	2	2	0	0	2	1	0	0	0	0	0	0	4	0	0	0	0	0	0	0	67
66	2	2	0	0	2	1	0	0	0	0	0	0	4	0	0	0	0	0	0	0	66
65	2	2	0	0	2	1	0	0	0	0	0	0	4	0	0	0	0	0	0	0	65
64	2	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	64
63	2	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	63
62	2	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	62
61	2	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61
60	2	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60
59	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	59
58	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	58
57	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	57
56	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	56
55	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	55
54	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	54
53	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	53
52	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	52
51	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	51
50	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50
49	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	49
48	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48

	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
150	12EP	14EP	16EP	18EP	23EP	23EP	26EP	26EP	21EP	23EP	27EP	27EP	22EP	22EP	27EP	30EP	20EP	23EP	26EP	28EP	150
149	12EP	14EP	16EP	18EP	23EP	23EP	26EP	26EP	21EP	23EP	27EP	27EP	22EP	22EP	27EP	30EP	20EP	23EP	26EP	28EP	149
148	12EP	14EP	16EP	18EP	23EP	23EP	26EP	26EP	21EP	23EP	27EP	27EP	22EP	22EP	27EP	30EP	20EP	23EP	26EP	28EP	148
147	12DP	14DP	16EP	18EP	23EP	23EP	25EP	25EP	21EP	22EP	26EP	26EP	22EP	22EP	27EP	29EP	20EP	23EP	26EP	27EP	147
146	12DP	14DP	16EP	18EP	22EP	22EP	25EP	25EP	20EP	22EP	26EP	26EP	22EP	22EP	26EP	29EP	19EP	22EP	25EP	27EP	146
145	12DP	14DP	15DP	17EP	22EP	22EP	25EP	25EP	20EP	22EP	26EP	26EP	21EP	21EP	26EP	29EP	19EP	22EP	25EP	27EP	145
144	12CP	14CP	15DP	17EP	22EP	22EP	24EP	24EP	20EP	21EP	25EP	25EP	21EP	21EP	26EP	28EP	19EP	22EP	25EP	26EP	144
143	12CP	13CP	15DP	17EP	22EP	22EP	24EP	24EP	20EP	21EP	25EP	25EP	21EP	21EP	25EP	28EP	18EP	21EP	25EP	26EP	143
142	12CP	13CP	15DP	17EP	21EP	21EP	24EP	24EP	19DP	21EP	25EP	25EP	21EP	21EP	25EP	28EP	18EP	21EP	24EP	26EP	142
141	11CP	13CP	15DP	16DP	21EP	21EP	23EP	23EP	19DP	20EP	24EP	24EP	20EP	20EP	25EP	27EP	18EP	21EP	24EP	25EP	141
140	11CP	13CP	14DP	16DP	21EP	21EP	23EP	23EP	19DP	20EP	24EP	24EP	20EP	20EP	24EP	27EP	17EP	20EP	24EP	25EP	140
139	11CP	13CP	14CP	16DP	21EP	20EP	23EP	23EP	18DP	20DP	23DP	24EP	20EP	20EP	24EP	27EP	17EP	20EP	24EP	25EP	139
138	11CP	13CP	14CP	16DP	20EP	20EP	22EP	22EP	18DP	19DP	23DP	23EP	20DP	20EP	24EP	26EP	17EP	20EP	23EP	24EP	138
137	11BP	12BP	14CP	15DP	20EP	20EP	22EP	22EP	18DP	19DP	23DP	23DP	20DP	19EP	24EP	26EP	16EP	20EP	23EP	24EP	137
136	11BP	12BP	14CP	15DP	20EP	20EP	22EP	22EP	18DP	19DP	22DP	22DP	19DP	19EP	23EP	26EP	16EP	19EP	23EP	24EP	136
135	11BP	12BP	13CP	15DP	20EP	19EP	21EP	21EP	17DP	18DP	22DP	22DP	19DP	19DP	23EP	25EP	16DP	19EP	23EP	23EP	135
134	11BP	12BP	13CP	15DP	19EP	19EP	21EP	21EP	17DP	18DP	22DP	22DP	19DP	19DP	23DP	25EP	16DP	19EP	22EP	23EP	134
133	10BP	12BP	13CP	14DP	19EP	19EP	21EP	21EP	17CP	18DP	21DP	21DP	19DP	18DP	22DP	25DP	15DP	18DP	22EP	23EP	133
132	10BP	12BP	13CP	14DP	19DP	19EP	20EP	20EP	17CP	17DP	21DP	21DP	18DP	18DP	22DP	24DP	15DP	18DP	22EP	22EP	132
131	10BP	11BP	13CP	14DP	19DP	18DP	20DP	20EP	16CP	17DP	20DP	21DP	18DP	18DP	22DP	24DP	15DP	18DP	21EP	22EP	131
130	10BP	11BP	12BP	14CP	18DP	18DP	20DP	20EP	16CP	17DP	20DP	20DP	18DP	18DP	21DP	24DP	14DP	17DP	21EP	22EP	130
129	10AP	11BP	12BP	13CP	18DP	18DP	19DP	19EP	16CP	16DP	20DP	20DP	18DP	18DP	21DP	23DP	14DP	17DP	21EP	21EP	129
128	10AP	11AP	12BP	13CP	18DP	17DP	19DP	19DP	15CP	16DP	19DP	20DP	17DP	17DP	21DP	23DP	14DP	17DP	21EP	21EP	128
127	10AP	11AP	12BP	13CP	17DP	17DP	19DP	19DP	15CP	16CP	19DP	19DP	17DP	17DP	21DP	23DP	13DP	16DP	20EP	21DP	127
126	10AP	11AP	12BP	13CP	17DP	17DP	18DP	18DP	15CP	15CP	19DP	19DP	17CP	17DP	20DP	22DP	13DP	16DP	20EP	20DP	126
125	9AP	11AP	11BP	12CP	17DP	17DP	18DP	18DP	15CP	15CP	18CP	18DP	17CP	17DP	20DP	22DP	13DP	16DP	20DP	20DP	125
124	9AP	10AP	11BP	12CP	17DP	16DP	18DP	17DP	14CP	15CP	18CP	18DP	17CP	16DP	20DP	22DP	12DP	16DP	20DP	20DP	124
123	9AP	10AP	11BP	12CP	16DP	16DP	17DP	17DP	14CP	14CP	17CP	18DP	16CP	16DP	19DP	21DP	12DP	15DP	19DP	19DP	123
122	9AP	10AP	11BP	12CP	16DP	16DP	17DP	17DP	14CP	14CP	17CP	17DP	16CP	16DP	19DP	21DP	12CP	15DP	19DP	19DP	122
121	9AP	10AP	11BP	11CP	16DP	15DP	17DP	16DP	14CP	14CP	17CP	17CP	16CP	16DP	19DP	21DP	11CP	15DP	19DP	19DP	121
120	9AP	10AP	10BP	11BP	16DP	15DP	16DP	16DP	13CP	13CP	16CP	17CP	16CP	15DP	18DP	20DP	11CP	14DP	19DP	18DP	120
119	9AP	10AP	10AP	11BP	15DP	15DP	16DP	16DP	13CP	13CP	16CP	16CP	15CP	15DP	18DP	20DP	11CP	14CP	18DP	18DP	119
118	9AP	9AP	10AP	11BP	15DP	15DP	16DP	15DP	13BP	13CP	16CP	16CP	15CP	15CP	18DP	20DP	11CP	14CP	18DP	18DP	118
117	8AK	9AP	10AP	10BP	15CP	14DP	15DP	15DP	12BP	12CP	15CP	16CP	15CP	15DP	18CP	19DP	10CP	13CP	18DP	17DP	117
116	8	9AP	10AP	10BP	15CP	14DP	15DP	15DP	12BP	12CP	15CP	15CP	15CP	14CP	17CP	19DP	10CP	13CP	18DP	17DP	116
115	8	9AP	9AP	10BP	14CP	14CP	15DP	14DP	12BP	12CP	14CP	15CP	14CP	14CP	17CP	19CP	10CP	13CP	17DP	17DP	115
114	8	9AP	9AP	10BP	14CP	14CP	14CP	14DP	12BP	11CP	14CP	14CP	14CP	14CP	17CP	18CP	9CP	13CP	17DP	16DF	114
113	8	9AP	9AP	9BP	14CP	13CP	14CP	14DP	11BP	11CP	14CP	14CP	14CP	14CP	16CP	18CP	9CP	12CP	17DP	16DP	113
112	8	8AK	9AP	9BP	14CP	13CP	14CP	13DP	11BP	11BP	13CP	14CP	14CP	13CP	16CP	18CP	9CP	12CP	16DP	16CP	112
111	8	8	8AP	9BP	13CP	13CP	13CP	13DP	11BP	10BP	13CP	13CP	14CP	13CP	16CP	17CP	8CP	12CP	16DP	15CP	111
110	8	8	8AP	9BP	13CP	12CP	13CP	13DP	11BP	10BP	13CP	13CP	13CP	13CP	15CP	17CP	8CP	11CP	16DP	15CP	110
109	7	8	8AP	8AP	13CP	12CP	13CP	12DP	10BP	10BP	12CP	13CP	13CP	13CP	15CP	17CP	8BP	11BP	16DP	15CP	109
108	7	8	8AP	8AP	13CP	12CP	12CP	12DP	10BP	9BP	12CP	12CP	13BP	13CP	15CP	16CP	7BP	11BP	15CP	14CP	108
107	7	8	8AP	8AP	12CP	12CP	12CP	12CP	10BP	9BP	12BP	12CP	13BP	12CP	15CP	16CP	7BP	10BP	15CP	14CP	107
106	7	7	7AP	8AP	12CP	11CP	12CP	11CP	9BP	9BP	11BP	12CP	12BP	12CP	14CP	16CP	7BP	10BP	15CP	14CP	106
105	7	7	7AP	7AP	12CP	11CP	11CP	11CP	9BP	8BP	11BP	11CP	12BP	12CP	14CP	15CP	7BP	10BP	15CP	13CP	105
104	7	7	7AP	7AP	11BP	11CP	11CP	11CP	9BP	8BP	10BP	11BP	12BP	12CP	14CP	15CP	6BP	9BP	14CP	13CP	104
103	7	7	7AP	7AP	11BP	10CP	11CP	10CP	9AP	8BP	10BP	11BP	12BP	11CP	13CP	15BP	6BP	9BP	14CP	13BP	103
102	7	7	7AK	7AP	11BP	10CP	10CP	10CP	8AP	7BP	10BP	10BP	12BP	11CP	13CP	14BP	6BP	9BP	14CP	12BP	102
101	6	7	6	6AP	11AP	10CP	10CP	10CP	8AP	7BP	9BP	10BP	11BP	11CP	13BP	14BP	5AP	9BP	14CP	12BP	101
100	6	7	6	6AP	10AP	10BP	10CP	9CP	8AP	7BP	9BP	9BP	11BP	11CP	12BP	14BP	5AP	8AP	13CP	12BP	100
99	6	6	6	6AP	10AP	9BP	9CP	9CP	8AP	6BP	9BP	9BP	11BP	10CP	12BP	13BP	5AP	8AP	13CP	11BP	99
98	6	6	6	6AP	10AP	9BP	9CP	8CP	7AP	6BP	8BP	9BP	11BP	10CP	12BP	13BP	4AP	8AP	13CP	11BP	98
97	6	6	6	5AP	10AK	9AP	9BP	8CP	7AP	6AP	8BP	8BP	10BP	10CP	12BP	13BP	4AP	7AP	13CP	11BP	97
96	6	6	5	5AP	9	9AP	8BP	8CP	7AP	5AP	7BP	8BP	10BP	10BP	11BP	12BP	4AP	7AP	12BP	10AP	96
95	6	6	5	5AP	9	8AP	8BP	7CP	6AP	5AP	7BP	8BP	10BP	9BP	11BP	12BP	3AP	7AP	12BP	10AP	95
94	6	6	5	5AP	9	8AP	8BP	7CP	6AP	5AP	7BP	7BP	10BP	9BP	11BP	12BP	3AP	6AP	12BP	10AP	94
93	6	5	5	4AP	9	8AP	7AP	7CP	6AP	4AP	6AP	7BP	9BP	9BP	10BP	11BP	3AK	6AK	11BP	9AP	93
92	5	5	5	4AK	8	7AK	7AP	6CP	6AK	4AP	6AP	7BP	9BP	9BP	10BP	11BP	0	6	11BP	9AP	92
91	5	5	4	4	8	7	7AP	6CP	5	4AP	6AP	6BP	9AP	8BP	10BP	11BP	0	0	11BP	9AP	91
90	5	5	4	4	8	7	6AP	6CP	5	3AP	5AP	6BP	9AP	8BP	9BP	10BP	0	0	11BP	8AK	90
89	5	5	4	3	8	7	6AP	5BP	5	3AP	5AP	5AP	9AP	8BP	9BP	10BP	0	0	10BP	8	89
88	5	5	4	3	7	6	6AP	5BP	5	3AP	4AP	5AP	8AP	8BP	9BP	10BP	0	0	10BP	0	88
87	5	4	4	3	7	6	5AK	5BP	4	2AK	4AP	5AP	8AP	8BP	9BP	9AP	0	0	10AP	0	87
86	5	4	3	3	7	6	5	4BP	4	2	4AP	4AP	8AP	7BP	8BP	9AP	0	0	10AP	0	86
85	5	4	3	2	7	5	5	4BP	4	0	3AP	4AP	8AP	7BP	8BP	9AP	0	0	9AP	0	85
84	4	4	3	2	6	5	4	4AP	3	0	3AP	4AP	7AP	7BP	8AP	8AP	0	0	9AP	0	84
83	4	4	3	2	6	5	4	3AP	3	0	3AP	3AP	7AP	7BP	7AP	8AP	0	0	9AP	0	83
82	4	4	3	2	6	5	4	3AP	3	0	2AK	3AP	7AP	6BP	7AP	8AP	0	0	9AP	0	82
81	4	4	2	1	5	4	3	3AP	3	0	2	3AP	7AP	6BP	7AP	7AP	0	0	8AP	0	81
80	4	3	2	1	5	4	3	2AP	2	0	0	2AK	6AP	6AP	6AP	7AP	0	0	8AK	0	80
79	4	3	2	1	5	4	3	2AP	2	0	0	2	6AP	6AP	6AP	7AP	0	0	8	0	79
78	4	3	2	1	5	4	2	2AP	2	0	0	0	6AP	5AP	6AP	6AP	0	0	0	0	78
77	4	3	2	0	4	3	2	1AK	0	0	0	0	6AK	5AP	6AP	6AP	0	0	0	0	77
76	3	3	1	0	4	3	2	1	0	0	0	0	6	5AP	5AP	6AP	0	0	0	0	76
75	3	3	1	0	4	3	1	0	0	0	0	0	5	5AP	5AP	5AP	0	0	0	0	75
74	3	2	1	0	4	2	1	0	0	0	0	0	5	4AP	5AP	5AP	0	0	0	0	74
73	3	2	1	0	3	2	1	0	0	0	0	0	5	4AP	4AP	5AP	0	0	0	0	73
72	3	2	0	0	3	2	0	0	0	0	0	0	5	4AK	4AK	4AK	0	0	0	0	72
71	3	2	0	0	3	2	0	0	0	0	0	0	4	4	4	4	0	0	0	0	71
70	3	2	0	0	3	1	0	0	0	0	0	0	4	0	0	0	0	0	0	0	70
69	3	2	0	0	2	1	0	0	0	0	0	0	4	0	0	0	0	0	0	0	69
68	2	1	0	0	2	1	0	0	0	0	0	0	4	0	0	0	0	0	0	0	68
67	2	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	67
66	2	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	66
65	2	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	65
64	2	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	64
63	2	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	63
62	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	62
61	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61
60	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60
59	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	59
58	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	58
57	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	57
56	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	56
55	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	55
54	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	54
53	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	53



LONG BOW

Weight: 2-3 pounds
Length: 5-7 feet

Fumble: 1-5

Type: Missile
Range: 10 feet (+ 20%)
100 feet
200 feet (− 30%)
300 feet (− 40%)
400 feet (− 50%)

8.56



SHORT BOW

Weight: 1½–2 pounds
Length: 2½–3½ feet
Fumble: 1–4

Type: Missile
Range: 10 feet (+10%)
100 feet
180 feet (-40%)
240 feet (-70%)

	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
150	6DP	8EP	10EP	12EP	17EP	17EP	20EP	20EP	15EP	17EP	21EP	21EP	15EP	15EP	20EP	23EP	14EP	17EP	20EP	22EP	150
149	6CP	8DP	10EP	12EP	17EP	17EP	20EP	20EP	15EP	17EP	21EP	21EP	15EP	15EP	20EP	23EP	14EP	17EP	20EP	22EP	149
148	6CP	8DP	10EP	12EP	17EP	17EP	20EP	20EP	15EP	17EP	21EP	21EP	15EP	15EP	20EP	23EP	14EP	17EP	20EP	22EP	148
147	6CP	8CP	10DP	12EP	17EP	17EP	20EP	20EP	15EP	17EP	21EP	21EP	15EP	15EP	20EP	23EP	14EP	17EP	20EP	22EP	147
146	6CP	8CP	10DP	12EP	17DP	17DP	19EP	19EP	15EP	16EP	20EP	20EP	15EP	15EP	20EP	22EP	14EP	17EP	20EP	21EP	146
145	6CP	8CP	10DP	12EP	16DP	16DP	19DP	19EP	15EP	16EP	20EP	20EP	15EP	15EP	19EP	22EP	13EP	16EP	19EP	21EP	145
144	6BP	8CP	10DP	11DP	16DP	16DP	19DP	19EP	14DP	16EP	20EP	20EP	15EP	15EP	19EP	22EP	13EP	16EP	19EP	21EP	144
143	6BP	8CP	10CP	11DP	16DP	16DP	19DP	18EP	14DP	16EP	19EP	19EP	14EP	14EP	19EP	22EP	13EP	16EP	19EP	21EP	143
142	6BP	8CP	9CP	11DP	16DP	16DP	18DP	18EP	14DP	15EP	19EP	19EP	14EP	14EP	19EP	21EP	13EP	16EP	19EP	20EP	142
141	6BP	8BP	9CP	11DP	16DP	15DP	18DP	18DP	14DP	15DP	19DP	19EP	14EP	14EP	18EP	21EP	13EP	15EP	19EP	20EP	141
140	6BP	8BP	9CP	11DP	15DP	15DP	18DP	17DP	14DP	15DP	18DP	18EP	14DP	14EP	18EP	21EP	12EP	15EP	18EP	20EP	140
139	6BP	7BP	9CP	11DP	15CP	15DP	17DP	17DP	13DP	15DP	18DP	18EP	14DP	14EP	18EP	21EP	12DP	15EP	18EP	19EP	139
138	6BP	7BP	9CP	10DP	15CP	15CP	17DP	17DP	13DP	14DP	18DP	18DP	14DP	14DP	18EP	20EP	12DP	15EP	18EP	19EP	138
137	6AP	7BP	9CP	10DP	15CP	15CP	17DP	17DP	13CP	14DP	18DP	17DP	14DP	13DP	18DP	20EP	12DP	14EP	18EP	19EP	137
136	6AP	7BP	9CP	10DP	15CP	14CP	17CP	16DP	13CP	14DP	17DP	17DP	13DP	13DP	17DP	20EP	11DP	14DP	18EP	19EP	136
135	6AP	7BP	9BP	10CP	14CP	14CP	16CP	16DP	13CP	14DP	17DP	17DP	13DP	13DP	17DP	19DP	11DP	14DP	17EP	18EP	135
134	5AP	7BP	8BP	10CP	14CP	14CP	16CP	16DP	12CP	13DP	17DP	17DP	13DP	13DP	17DP	19DP	11DP	14DP	17EP	18EP	134
133	5AP	7AP	8BP	10CP	14CP	14CP	16CP	15DP	12CP	13DP	16DP	16DP	13DP	13DP	17DP	19DP	11DP	13DP	17EP	18EP	133
132	5AP	7AP	8BP	9CP	14BP	13CP	15CP	15DP	12CP	13DP	16DP	16DP	13DP	13DP	16DP	19DP	11DP	13DP	17EP	18EP	132
131	5AP	7AP	8BP	9CP	14BP	13CP	15CP	15DP	12CP	13CP	16DP	16DP	13DP	12DP	16DP	18DP	10DP	13DP	17EP	17DP	131
130	5AP	7AP	8BP	9CP	13BP	13BP	15CP	14DP	12CP	12CP	15DP	15DP	13CP	12DP	16DP	18DP	10CP	13DP	16EP	17DP	130
129	5AP	7AP	8BP	9CP	13BP	13BP	15CP	14DP	11CP	12CP	15CP	15DP	12CP	12DP	16DP	18DP	10CP	13DP	16DP	17DP	129
128	5AP	6AP	8BP	9CP	13BP	13BP	14CP	14CP	11CP	12CP	15CP	15DP	12CP	12DP	16DP	18DP	10CP	12DP	16DP	16DP	128
127	5AP	6AP	7BP	9CP	13BP	12BP	14CP	14CP	11CP	11CP	15CP	14DP	12CP	12DP	15DP	17DP	10CP	12DP	16DP	16DP	127
126	5AP	6AP	7BP	8BP	12BP	12BP	14CP	13CP	11BP	11CP	14CP	14DP	12CP	12DP	15DP	17DP	9CP	12DP	16DP	16DP	126
125	5AK	6AP	7AP	8BP	12BP	12BP	13CP	13CP	11BP	11CP	14CP	14DP	12CP	12DP	15DP	17DP	9CP	12CP	15DP	16DP	125
124	5	6AP	7AP	8BP	12BP	12BP	13CP	13CP	10BP	11CP	14CP	13CP	12CP	11DP	15DP	17DP	9CP	11CP	15DP	15DP	124
123	5	6AP	7AP	8BP	12AP	11BP	13CP	12CP	10BP	10CP	13CP	13CP	11CP	11CP	14CP	16DP	9CP	11CP	15DP	15DP	123
122	5	6AP	7AP	8BP	12AP	11BP	13BP	12CP	10BP	10CP	13CP	13CP	11CP	11CP	14CP	16DP	8CP	11CP	15DP	15DP	122
121	5	6AP	7AP	8BP	11AP	11BP	12BP	12CP	10BP	10CP	13CP	13CP	11CP	11CP	14CP	16DP	8CP	11CP	15DP	15DP	121
120	5	6AK	7AP	7BP	11AP	11BP	12BP	11CP	10BP	10CP	12CP	12CP	11CP	11CP	14CP	15DP	8BP	10CP	14DP	14DP	120
119	5	6	6AP	7BP	11AP	11AP	12BP	11CP	9BP	9BP	12CP	12CP	11CP	11CP	13CP	15CP	8BP	10CP	14DP	14DP	119
118	4	6	6AP	7BP	11AP	10AP	11BP	11CP	9BP	9BP	12CP	12CP	11CP	10CP	13CP	15CP	8BP	10CP	14DP	14CP	118
117	4	5	6AP	7BP	11AP	10AP	11BP	10CP	9BP	9BP	11CP	11CP	11CP	10CP	13CP	15CP	7BP	10CP	14DP	13CP	117
116	4	5	6AP	7BP	10AP	10AP	11BP	10CP	9BP	9BP	11CP	11CP	10CP	10CP	13CP	14CP	7BP	9BP	14DP	13CP	116
115	4	5	6AP	7AP	10AP	10AP	11BP	10BP	9AP	8BP	11CP	11CP	10CP	10CP	13CP	14CP	7BP	9BP	13CP	13CP	115
114	4	5	6AP	6AP	10AP	9AP	10BP	10BP	8AP	8BP	11BP	10CP	10BP	10CP	12CP	14CP	7BP	9BP	13CP	13CP	114
113	4	5	6AP	6AP	10AP	9AP	10BP	9BP	8AP	8BP	10BP	10CP	10BP	10CP	12CP	14CP	7AP	9BP	13CP	12CP	113
112	4	5	5AP	6AP	10AP	9AP	10BP	9BP	8AP	8BP	10BP	10CP	10BP	9CP	12CP	13CP	6AP	9BP	13CP	12CP	112
111	4	5	5AP	6AP	9AP	9AP	10AP	9BP	8AP	7BP	10BP	9CP	10BP	9CP	12CP	13CP	6AP	8BP	13CP	12CP	111
110	4	5	5AK	6AP	9AK	9AP	9AP	8BP	8AP	7BP	9BP	9CP	10BP	9CP	11CP	13CP	6AP	8BP	12CP	12BP	110
109	4	5	5	6AP	9	8AP	9AP	8BP	7AP	7BP	9BP	9BP	9BP	9CP	11CP	13CP	6AP	8BP	12CP	11BP	109
108	4	5	5	5AP	9	8AP	9AP	8BP	7AP	6BP	9BP	9BP	9BP	9CP	11BP	12CP	5AP	8AP	12CP	11BP	108
107	4	4	5	5AP	8	8AP	8AP	7BP	7AP	6AP	8BP	8BP	9BP	9CP	11BP	12BP	5AP	7AP	12CP	11BP	107
106	4	4	5	5AP	8	8AP	8AP	7BP	7AP	6AP	8BP	8BP	9BP	9CP	11BP	12BP	5AP	7AP	12CP	10BP	106
105	4	4	5	5AP	8	7AK	8AP	7BP	7AK	6AP	8BP	8BP	9BP	8BP	10BP	11BP	5AK	7AP	11CP	10BP	105
104	4	4	4	5AP	8	7	8AP	7BP	6	5AP	8BP	7BP	9BP	8BP	10BP	11BP	5	7AP	11BP	10BP	104
103	4	4	4	5AP	8	7	7AP	6BP	6	5AP	7BP	7BP	9BP	8BP	10BP	11BP	4	6AP	11BP	10AP	103
102	3	4	4	4AP	7	7	7AP	6AP	6	5AP	7AP	7BP	8BP	8BP	10BP	11BP	4	6AP	11BP	9AP	102
101	3	4	4	4AP	7	7	7AP	6AP	6	5AP	7AP	6BP	8BP	8BP	9BP	10BP	4	6AP	11BP	9AP	101
100	3	4	4	4AK	7	6	6AK	5AP	6	4AK	6AP	6BP	8BP	8BP	9BP	10BP	4	6AK	10BP	9AP	100
99	3	4	4	4	7	6	6	5AP	5	4	6AP	6BP	8BP	7BP	9BP	10BP	4	0	10BP	9AP	99
98	3	4	4	4	7	6	6	5AP	5	4	6AP	5BP	8AP	7BP	9BP	10BP	3	0	10BP	8AP	98
97	3	4	4	4	6	6	6	4AP	5	4	5AP	5BP	8AP	7BP	8BP	9BP	3	0	10BP	8AK	97
96	3	3	3	3	6	5	5	4AP	5	3	5AP	5AP	7AP	7BP	8BP	9BP	3	0	10BP	8	96
95	3	3	3	3	6	5	5	4AP	5	3	5AK	5AP	7AP	7BP	8BP	9BP	3	0	9AP	0	95
94	3	3	3	3	6	5	5	4AP	4	3	5	4AP	7AP	7BP	8BP	9BP	0	0	9AP	0	94
93	3	3	3	3	6	5	4	3AP	4	3	4	4AP	7AP	6BP	8BP	8BP	0	0	9AP	0	93
92	3	3	3	3	5	5	4	3AP	4	2	4	4AP	7AP	6BP	7AP	8BP	0	0	9AP	0	92
91	3	3	3	3	5	4	4	3AP	4	2	4	3AP	7AP	6BP	7AP	8AP	0	0	9AP	0	91
90	3	3	3	2	5	4	4	2AK	4	2	3	3AP	7AP	6AP	7AP	7AP	0	0	8AP	0	90
89	3	3	2	2	5	4	3	2	3	0	3	3AP	6AP	6AP	7AP	7AP	0	0	8AP	0	89
88	3	3	2	2	4	4	3	2	3	0	3	2AP	6AP	6AP	6AP	7AP	0	0	8AP	0	88
87	3	3	2	2	4	3	3	1	3	0	2	2AK	6AP	6AP	6AP	7AP	0	0	8AK	0	87
86	2	3	2	2	4	3	2	1	3	0	2	2	6AP	5AP	6AP	6AP	0	0	8	0	86
85	2	2	2	2	4	3	2	1	3	0	2	0	6AK	5AP	6AP	6AP	0	0	0	0	85
84	2	2	2	1	4	3	2	0	2	0	0	0	6	5AP	6AP	6AP	0	0	0	0	84
83	2	2	2	1	3	3	2	0	2	0	0	0	6	5AP	5AP	6AP	0	0	0	0	83
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81	2	2	1	1	3	2	1	0	2	0	0	0	5	5AP	5AP	5AP	0	0	0	0	81
80	2	2	1	1	3	2	1	0	2	0	0	0	5	4AK	5AP	5AP	0	0	0	0	80
79	2	2	1	0	3	2	0	0	0	0	0	0	5	4	4AP	5AP	0	0	0	0	79
78	2	2	1	0	2	1	0	0	0	0	0	0	5	4	4AP	4AP	0	0	0	0	78
77	2	2	1	0	2	1	0	0	0	0	0	0	5	4	4AK	4AK	0	0	0	0	77
76	2	2	1	0	2	1	0	0	0	0	0	0	5	4	4	4	0	0	0	0	76
75	2	2	1	0	2	1	0	0	0	0	0	0	4	4	0	0	0	0	0	0	75
74	2	1	0	0	2	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	74
73	2	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73
72	2	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	72
71	2	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	71
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62	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	62
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57	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	57
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	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
150	10EK	12EK	14EK	16EK	17EK	17EK	20EK	20EK	18EK	20EK	24EK	24EK	18EK	18EK	23EK	26EK	20EK	23EK	26EK	28EK	150
149	10EK	12EK	14EK	16EK	17EK	17EK	20EK	20EK	18EK	20EK	24EK	24EK	18EK	18EK	23EK	26EK	20EK	23EK	26EK	28EK	149
148	10EK	12EK	14EK	16EK	17EK	17EK	20EK	20EK	18EK	20EK	24EK	24EK	18EK	18EK	23EK	26EK	20EK	23EK	26EK	28EK	148
147	10DK	12EK	14EK	16EK	17EK	17EK	20EK	20EK	18EK	20EK	24EK	24EK	18EK	18EK	23EK	26EK	20EK	23EK	26EK	27EK	147
146	10DK	12DK	14EK	16EK	17EK	17EK	19EK	19EK	18EK	19EK	23EK	23EK	18EK	18EK	22EK	25EK	19EK	22EK	25EK	27EK	146
145	10DK	12DK	14DK	15EK	17EK	16EK	19EK	19EK	17EK	19EK	23EK	23EK	18EK	18EK	22EK	25EK	19EK	22EK	25EK	27EK	145
144	10CK	12DK	13DK	15EK	16EK	16EK	19EK	19EK	17EK	19EK	23EK	23EK	17EK	17EK	22EK	25EK	19EK	22EK	25EK	26EK	144
143	10CK	12DK	13DK	15EK	16DK	16DK	19DK	19EK	17EK	19EK	22EK	22EK	17EK	17EK	22EK	24EK	18EK	21EK	25EK	26EK	143
142	10CK	11CK	13DK	15EK	16DK	16DK	18DK	18EK	17DK	18EK	22EK	22EK	17DK	17EK	21EK	24EK	18EK	21EK	24EK	25EK	142
141	10CK	11CK	13DK	15DK	16DK	16DK	18DK	18EK	17DK	18EK	22EK	22EK	17DK	17EK	21EK	24EK	18EK	21EK	24EK	25EK	141
140	9CK	11CK	13DK	14DK	16DK	15DK	18DK	18EK	16DK	18EK	21EK	21EK	17DK	17DK	21EK	23EK	18EK	20EK	24EK	25EK	140
139	9BK	11CK	13CK	14DK	15DK	15DK	18DK	17DK	16DK	17DK	21DK	21EK	17DK	17DK	21DK	23EK	17DK	20EK	23EK	25EK	139
138	9BK	11CK	12CK	14DK	15DK	15DK	17DK	17DK	16DK	17DK	21DK	21EK	16DK	16DK	20DK	23EK	17DK	20EK	23EK	24EK	138
137	9BK	11CK	12CK	14DK	15DK	15DK	17DK	17DK	16DK	17DK	20DK	20EK	16DK	16DK	20DK	22EK	17DK	19EK	23EK	24EK	137
136	9BK	11BK	12CK	13DK	15DK	15DK	17DK	17DK	15DK	17DK	20DK	20EK	16DK	16DK	20DK	22DK	16DK	19DK	23EK	23EK	136
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134	9AK	10BK	12CK	13DK	14CK	14CK	16CK	16DK	15CK	16DK	19DK	19DK	16CK	16DK	19DK	21DK	16DK	19DK	22EK	23EK	134
133	9AK	10BK	11CK	13DK	14CK	14CK	16CK	16DK	15CK	16DK	19DK	19DK	16CK	15DK	19DK	21DK	16DK	18DK	22EK	22EK	133
132	9AK	10BK	11CK	13DK	14CK	14CK	16CK	16DK	15CK	15DK	19DK	19DK	15CK	15DK	19DK	21DK	15DK	18DK	21EK	22EK	132
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130	8AK	10AK	11BK	12CK	14CK	13CK	15CK	15DK	14CK	15DK	19DK	18DK	15CK	15DK	18DK	20DK	15DK	17DK	21EK	21DK	130
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127	8AK	9AK	10BK	11CK	13BK	13CK	15CK	14DK	13CK	14CK	17DK	17DK	15CK	14CK	18CK	19DK	14CK	16DK	20DK	20DK	127
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125	8AK	9AK	10BK	11CK	13BK	12BK	14CK	14CK	13CK	14CK	17CK	16DK	14CK	14CK	17CK	19DK	13CK	16CK	20DK	19DK	125
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123	8	9AK	10AK	11CK	12AK	12BK	14CK	13CK	13CK	13CK	16CK	16DK	14CK	14CK	17CK	18DK	13CK	15CK	19DK	19DK	123
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117	7	8	9AK	9BK	11AK	11AK	12BK	11CK	11BK	11CK	14CK	14CK	13BK	13CK	15CK	16CK	11BK	13BK	17DK	17CK	117
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115	7	8	8AK	9BK	11AK	10AK	12AK	11CK	11BK	11BK	13CK	13CK	13BK	12CK	15BK	15CK	10BK	13BK	17DK	16CK	115
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112	7	7	8AK	8AK	10	10AK	11AK	10BK	10BK	10BK	13CK	12CK	12BK	12BK	14BK	15CK	10AK	12BK	16CK	15CK	112
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107	6	7	7	7AK	9	9	9AK	9BK	9AK	8BK	11BK	11CK	11AK	11BK	12BK	13BK	8AK	10AK	14CK	13BK	107
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103	6	6	6	6AK	8	8	8	8AK	8AK	7AK	10BK	9CK	10AK	10AK	11BK	12BK	7	9AK	13CK	11BK	103
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97	5	5	5	5	7	7	7	6AK	7	6AK	8AK	7BK	9	9AK	10AK	10AK	5	7	12BK	9AK	97
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88	4	4	3	3	6	5	5	4	5	3	5	4AK	8	7	8	7AK	3	0	9AK	0	88
87	4	4	3	3	5	5	4	3	5	3	5	4AK	8	7	7	7AK	0	0	9AK	0	87
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85	4	4	3	2	5	4	4	3	4	2	4	3AK	7	7	7	6AK	0	0	8	0	85
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83	4	3	2	2	5	4	3	2	4	2	3	3AK	7	6	6	5	0	0	8	0	83
82	4	3	2	2	4	4	3	2	4	0	3	2AK	7	6	6	5	0	0	0	0	82
81	3	3	2	1	4	3	3	2	3	0	3	2AK	7	6	6	5	0	0	0	0	81
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79	3	3	2	1	4	3	2	1	3	0	2	0	6	6	5	4	0	0	0	0	79
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76	3	2	1	0	3	2	2	0	2	0	0	0	6	5	5	0	0	0	0	0	76
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73	3	2	1	0	3	2	1	0	2	0	0	0	5	5	4	0	0	0	0	0	73
72	3	2	0	0	2	2	0	0	0	0	0	0	5	4	0	0	0	0	0	0	72
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66	2	1	0	0	1	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	66
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63	2	1	0	0	1	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	63
62	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	62
61	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61
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58	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	58
57	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	57
56	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	56
55	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	55
54	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	54
53	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	53

8.57



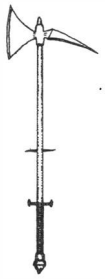
SLING

Weight: ½-1 pound
Length: 1½-3 feet

Fumble: 1-6

Type: Missile
Range: 10 feet (+15%)
60 feet
120 feet (−40%)
180 feet (−65%)

8.61



BATTLE AXE

Weight: 5-9 pounds

Fumble: 1-5

Type: Two-hand

Range: -

Length: 2½-4 feet

	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
150	19EK	21EK	23EK	25EK	33ES	33ES	36ES	36ES	34ES	36ES	40ES	40ES	34ES	34ES	39ES	42ES	38ES	41ES	44ES	46ES	150
149	19ES	21EK	23ES	25ES	33ES	33ES	36ES	36ES	34ES	36ES	40ES	40ES	34ES	34ES	39ES	42ES	38ES	41ES	44ES	46ES	149
148	19EK	21EK	23EK	25EK	33ES	33ES	36ES	36ES	34ES	36ES	39ES	40ES	34ES	34ES	39ES	42ES	37ES	40ES	44ES	45ES	148
147	19ES	21ES	23ES	25ES	33ES	32ES	35ES	35ES	33ES	35ES	39ES	39ES	33ES	33ES	38ES	41ES	37ES	40ES	43ES	45ES	147
146	19EK	21EK	23EK	24EK	32ES	32ES	35ES	35ES	33ES	35ES	38ES	39ES	33ES	33ES	38ES	41ES	36ES	39ES	43ES	44ES	146
145	19ES	21ES	22ES	24ES	32ES	32ES	35ES	34ES	33ES	34ES	38ES	38ES	33ES	33ES	37ES	40ES	36ES	39ES	42ES	44ES	145
144	19EK	20EK	22EK	24EK	32ES	31ES	34ES	34ES	32ES	34ES	37ES	38ES	32ES	32ES	37ES	40ES	35ES	38ES	42ES	43ES	144
143	18ES	20ES	22ES	24ES	31ES	31ES	34ES	34ES	32ES	33ES	37ES	37ES	32ES	32ES	37ES	39ES	34ES	38ES	41ES	42ES	143
142	18EK	20EK	22EK	23EK	31ES	31ES	33ES	33ES	31ES	33ES	36ES	37ES	32ES	32ES	36ES	39ES	34ES	37ES	41ES	42ES	142
141	18ES	20ES	21ES	23ES	31ES	30ES	33ES	33ES	31ES	32ES	36ES	36ES	31ES	31ES	36ES	38ES	33ES	36ES	40ES	41ES	141
140	18DK	20DK	21EK	23EK	30ES	30ES	33ES	32ES	31ES	32ES	35ES	36ES	31ES	31ES	35ES	38ES	33ES	36ES	40ES	41ES	140
139	18DS	19DS	21ES	22ES	30EK	30ES	32ES	32ES	30ES	31ES	35ES	35ES	31ES	31ES	35ES	37ES	32ES	35ES	39ES	40ES	139
138	18DK	19DK	21DK	22EK	30ES	29EK	32ES	31ES	30ES	31ES	34ES	35ES	30ES	30ES	34ES	37ES	32ES	35ES	39ES	39ES	138
137	17DS	19DS	20DS	22ES	29EK	29ES	31EK	31ES	29ES	30ES	34ES	34ES	30ES	30ES	34ES	36ES	31ES	34ES	38ES	39ES	137
136	17DK	19DK	20DK	22EK	29DS	29DK	31DS	31ES	29ES	30ES	33ES	34ES	30ES	29ES	34ES	36ES	30ES	34ES	38ES	38ES	136
135	17DS	19DS	20DS	21DS	29DK	28DS	31DK	30EK	29DS	29ES	33ES	33ES	29ES	29ES	33ES	36ES	30ES	33ES	37ES	38ES	135
134	17DK	18DK	20DK	21DK	28DS	28DK	30DS	30ES	28DS	29ES	32ES	33ES	29DS	29ES	33ES	35ES	29ES	32ES	37ES	37ES	134
133	17DS	18DS	19DS	21DS	28DK	28DS	30DK	29EK	28DS	28ES	32ES	32ES	29DS	28ES	32ES	35ES	29ES	32ES	36ES	37ES	133
132	17CK	18DK	19DK	21DK	28DS	27DK	29DS	29DS	27DS	28DS	31DS	32ES	28DS	28ES	32ES	34ES	28ES	31ES	36ES	36ES	132
131	16CS	18CS	19DS	20DS	27DK	27DS	29DK	28DK	27DS	27DS	31DS	31ES	28DS	28DS	31ES	34ES	28ES	31ES	35ES	35ES	131
130	16CK	18CK	19DK	20DK	27DS	27DK	29DS	28DS	27DS	27DS	30DS	31DS	28DS	27DS	31ES	33ES	27ES	30ES	35ES	35ES	130
129	16CS	17CS	19DS	20DS	27DK	26DS	28DK	28DK	26DS	26DS	30DS	30DS	27DS	27DS	31DS	33ES	26ES	30ES	34ES	34ES	129
128	16CK	17CK	18DK	19DK	26DS	26DK	28DS	27DS	26DS	26DS	29DS	30DS	27DS	27DS	30DS	32ES	26DS	29DS	34ES	34ES	128
127	16CS	17CS	18CS	19DS	26DK	26DS	27DK	27DK	25DS	25DS	29DS	29DS	27DS	26DS	30DS	32DS	25DS	29DS	33ES	33ES	127
126	16CK	17CK	18CK	19DK	26DS	25DK	27DS	26DS	25DS	25DS	28DS	29DS	26DS	26DS	29DS	31DS	25DS	28DS	33ES	32ES	126
125	16CS	17CS	18CS	19DS	25DK	25DS	27DK	26DK	25DK	25DS	28DS	28DS	26DS	26DS	29DS	31DS	24DS	27DS	32ES	32ES	125
124	15CK	16CK	17CK	18DK	25DS	25DK	26DS	26DS	24DS	24DS	27DS	28DS	26DS	25DS	28DS	30DS	24DS	27DS	32ES	31ES	124
123	15BS	16CS	17CS	18DS	25DK	24DS	26DK	25DK	24DK	24DS	27DS	28DS	25DS	25DS	28DS	30DS	23DS	26DS	32ES	31ES	123
122	15BK	16CK	17CK	18DK	24CS	24DK	25DS	25DS	23CS	23DK	26DS	27DS	25DS	24DS	28DS	30DS	22DS	26DS	31ES	30DS	122
121	15BS	16BS	17CS	18DS	24CK	24CS	25CK	24DK	23CK	23DS	26DK	27DS	25DS	24DS	27DS	29DS	22DS	25DS	31ES	30DS	121
120	15BK	16BK	16CK	17CK	24CS	23CK	25CS	24DS	23CS	22DK	25DS	26DS	24CS	24DS	27DS	29DS	21DS	25DS	30DS	29DS	120
119	15AS	15BS	16CS	17CS	23CK	23CS	24CK	23DK	22CK	22DS	25DK	26DK	24CS	23DS	26DS	28DS	21DS	24DS	30DS	28DS	119
118	14AK	15BK	16CK	17CK	23CS	22CK	24CS	23DS	22CS	21DK	24DS	25DS	24CS	23DS	26DS	28DS	20DS	23DS	29DS	28DS	118
117	14AS	15BS	16CS	16CS	23CK	22CS	23CK	23DK	21CK	21DS	24DK	25DK	23CS	23DS	25DS	27DS	20DS	23DS	29DS	27DS	117
116	14AK	15BK	15CK	16CK	22CS	22CK	23CS	22DS	21CS	20DK	23DS	24DS	23CS	22DS	25DS	27DS	19DS	22DS	28DS	27DS	116
115	14AS	15AS	15BS	16CS	22CK	21CS	23CK	22DK	21CK	20CS	23DK	24DK	23CS	22DS	25DS	26DS	18DS	22DS	28DS	26DS	115
114	14AK	15AK	15BK	16CK	22CS	21CK	22CS	21CS	20CS	19CK	22CS	23DS	22CS	22DS	24DS	26DS	18DS	21DS	27DS	25DS	114
113	14AS	14AS	15BS	15CS	21CK	21CS	22CK	21CK	20CK	19CS	22CK	23DK	22CS	21DS	24DS	25DS	17DS	21DS	27DS	25DS	113
112	13AK	14AK	15BK	15CK	21CS	20CK	21CS	20CS	19CS	18CK	21CS	22DS	22CS	21DS	23DS	25DS	15DS	20DS	26DS	24DS	112
111	13	14AS	14BS	15CS	21CK	20CS	21CK	20CK	19CK	18CS	21CK	22CK	21CS	21CS	23DS	24DS	16DS	19DS	26DS	24DS	111
110	13	14AK	14BK	15CK	20BS	20CK	21CS	20CS	19CS	17CK	20CS	21CS	21CS	20CS	22DS	24DS	16CS	19CS	25DS	23DS	110
109	13	14AS	14BS	14CS	20BK	19CS	20CK	19CK	18CK	17CS	20CK	21CK	21CS	20CS	22CS	23DS	15CS	18CS	25DS	23DS	109
108	13	13AK	14AK	14CK	20BS	19BK	20CS	19CS	18CS	16CK	19CS	20CS	20CS	19CS	22CS	23DS	14CS	18CS	24DS	22DS	108
107	13	13AS	13AS	14BS	19BK	19BS	19CK	18CK	18CK	16CS	19CK	20CK	20CK	19CS	21CS	23DS	14CS	17CS	24DS	21DS	107
106	12	13	13AK	13BK	19BS	18BK	19CS	18CS	17BS	15CK	18CS	19CS	20CS	19CS	21CS	22CS	13CS	17CS	23DS	21DS	106
105	12	13	13AS	13BS	19AK	18BS	19CK	18CK	17BK	15CS	18CK	19CK	19CK	18CS	20CS	22CS	13CS	16CS	23DS	20DS	105
104	12	13	13AK	13BK	18AS	18BK	18BS	17CS	16BS	14CK	17CS	18CS	19CS	18CK	20CS	21CS	12CS	16CS	22DS	20DS	104
103	12	12	12AS	13BS	18AK	17BS	18BK	17CK	16BK	14CS	17CK	18CK	19CK	18CS	19CS	21CS	12CS	15CS	22DS	19CS	103
102	12	12	12AK	12BK	18AS	17BK	17BS	16CS	16BS	14CK	16CS	17CS	18BS	17CK	19CK	20CK	11CK	14CK	21DS	18CS	102
101	12	12	12AS	12BS	17AK	17AS	17BK	16CK	15BK	13CS	16CK	17CK	18BK	17CS	19CS	20CS	10CS	14CS	21DS	18CS	101
100	12	12	12AK	12BK	17AS	16AK	17BS	15CS	15BS	13CK	15CS	16CS	18BS	17CK	18CK	19CK	10CK	13CK	20DS	17CS	100
99	11	12	11AS	12AS	17AK	16AS	16BK	15CK	14BK	12CS	15CK	16CK	17BK	16CS	18CS	19CS	9CS	13BS	20CS	17CK	99
98	11	11	11AK	11AK	17AS	16AK	16BS	15CS	14BS	12BK	14CS	15CS	17BS	16CK	17CK	18CK	9CK	12BK	20CS	16CS	98
97	11	11	11AS	11AS	16AK	15AS	15AK	14BK	14BK	11BS	14CK	15CK	17BK	16CS	17CS	18CS	8CS	12BS	19CS	16CK	97
96	11	11	11	11AK	16	15AK	15AS	14BS	13AS	11BK	13CS	15CS	16BS	15CK	16CK	17CK	8BK	11BK	19CS	15CS	96
95	11	11	10	10AS	16	15AS	15AK	13BK	13AK	10BS	13CK	14CK	16BK	15CS	16CS	17CS	7BS	10BS	18CS	14CK	95
94	11	11	10	10AK	15	14AK	14AS	13BS	12AS	10BK	12BS	14CS	16BS	14CK	16CK	17CK	6BK	10AK	18CS	14CS	94
93	10	10	10	10AS	15	14AS	14AK	12BK	12AK	9BS	12BK	13CK	15BK	14CS	15CS	16CS	6BS	9AS	17CS	13CK	93
92	10	10	10	10AK	15	14AK	13AS	12BS	12AS	9BK	11BS	13BS	15BS	14BK	15BK	16BK	5AK	9AK	17CS	13BS	92
91	10	10	10	9AS	14	13	13AK	12BK	11AK	8BS	11BK	12BK	15BK	13BS	14BS	15BS	5AS	8AS	16CK	12BK	91
90	10	10	9	9AK	14	13	13AS	11BS	11AS	8BK	10BS	12BS	14AS	13BK	14BK	16BK	4AK	8AK	16CS	11BS	90
89	10	10	9	9AS	14	13	12AK	11BK	10AK	7AS	10BK	11BK	14AK	13BS	13BS	14BS	0	7	15CK	11AK	89
88	10	9	9	9AK	13	12	12AS	10AS	10AS	7AK	9BS	11BS	14AS	12BK	13BK	14BK	0	0	15CS	10AS	88
87	9	9	9	8AS	13	12	11AK	10AK	10AK	6AS	9BK	10BK	13AK	12BS	13BS	13BS	0	0	14CK	10AK	87
86	9	9	8	8	13	11	11	10AS	9	6AK	8BS	10BS	13AS	12BK	12BK	13BK	0	0	14CS	9	86
85	9	9	8	8	12	11	11	9AK	9	5AS	8BK	9BK	13AK	11BS	12BS	12BS	0	0	13BK	0	85
84	9	9	8	7	12	11	10	9AS	8	5AK	7AS	9BS	12AS	11BK	11BK	12BK	0	0	13BS	0	84
83	9	8	8	7	12	10	10	8AK	8	4AS	7AK	8BK	12AK	11BS	11BS	11BS	0	0	12BK	0	83
82	9	8	7	7	11	10	9	8AS	8	4AK	6AS	8BS	12AS	10BK	10BK	11BK	0	0	12BS	0	82
81	9	8	7	7	11	10	9	7AK	7	3	6AK	7AK	11AK	10AS	10BS	11BS	0	0	11BK	0	81
80	8	8	7	6	11	9	9	7AS	7	3	5AS	7AS	11AS	9AK	10AK	10AK	0	0	11BS	0	80
79	8	8	7	6	10	9	8	7AK	6	0	5AK	6AK	11AK	9AS	9AS	10AS	0	0	10AK	0	79
78	8	8	6	6	10	9	8	6AS	6	0	4AS	6AS	10	9AK	9AK	9AK	0	0	10AS	0	78
77	8	7	6	6	10	8	7	6AK	6	0	4AK	5AK	10	8AS	8AS	9AS	0	0	9AK	0	77
76	8	7	6	5	9	8	7	5	5	0	3	5AS	10	8AK	8AK	8AK	0	0	9	0	76
75	8	7	6	5	9	8	7	5	5	0	3	4AK	9	8AS	7AS	8AS	0	0	0	0	75
74	7	7	6	5	9	7	6	4	4	0	0	4AS	9	7AK	7AK	7AK	0	0	0	0	74
73	7	7	5	4	8	7	6	4	4	0	0	3AK	9	7	7AS	7AS	0	0	0	0	73
72	7	6	5	4	8	7	5	4	4	0	0	3	8	7	6AK	6AK	0	0	0	0	72
71	7	6	5	4	8	6	5	3	3	0	0	0	8	6	6AS	6AS	0	0	0	0	71
70	7	6	5	4	7	6	5	3	3	0	0	0	8	6	5AK	5AK	0	0	0	0	70
69	7	6	4	3	7	6	4	2	0	0	0	0	7	6	5	5	0	0	0	0	69
68	6	6	4	3	7	5	4	2	0	0	0	0	7	5	0	0	0	0	0	0	68
67	6	5	4	3	6	5	3	0	0	0	0	0	7	5	0	0	0	0	0	0	67
66	6	5	4	3	6	5	3	0	0	0	0	0	6	0	0	0	0	0	0	0	66
65	6	5	3	2	6	4	3	0	0	0	0	0	6	0	0	0	0	0	0	0	65
64	6	5	3	2	5	4	2	0	0	0	0	0	6	0	0	0	0	0	0	0	64
63	6	5	3	2	5	4	2	0	0	0	0	0	5	0	0	0	0	0	0	0	63
62	5	4	3	0	5	3	0	0	0	0	0	0	5	0	0	0	0	0	0	0	62
61	5	4	2	0	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61
60	5	4	2	0	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60
59	5	4	2	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	59
58	5	4	2	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	58
57	5	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	57
56	5	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	56
55	4	3	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	55
54	4	3	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	54
53	4	3	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	53
52	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	52
51	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	51
50	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50
49	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	49
48	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48
47	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	47
46	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46
45	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	45
44	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	44
43	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43
42	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42
41	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	41
40	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40
39	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	39
38	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38



FLAIL

Type: Two-hand
Range: –
Length: 2½-4 feet

Weight: 4-8 pounds
Fumble: 1-8

	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
150	21EK	23EK	25EK	27EK	28EK	28EK	31EK	31EK	29EK	31EK	35EK	35EK	34EK	34EK	39EK	42EK	36EK	39EK	42EK	44EK	150
149	21EK	23EK	25EK	27EK	28EK	28EK	31EK	31EK	29EK	31EK	35EK	35EK	34EK	34EK	39EK	42EK	36EK	39EK	42EK	44EK	149
148	21EK	23EK	25EK	27EK	28EK	28EK	31EK	31EK	29EK	31EK	35EK	35EK	34EK	34EK	39EK	42EK	36EK	39EK	42EK	43EK	148
147	21EK	23EK	25EK	27EK	28EK	28EK	31EK	31EK	29EK	30EK	34EK	34EK	34EK	34EK	38EK	41EK	35EK	38EK	41EK	43EK	147
146	21EK	23EK	25EK	26EK	27EK	27EK	30EK	30EK	28EK	30EK	34EK	34EK	33EK	33EK	38EK	41EK	35EK	38EK	41EK	42EK	146
145	21EK	23EK	24EK	26EK	27EK	27EK	30EK	30EK	28EK	30EK	34EK	34EK	33EK	33EK	37EK	40EK	34EK	37EK	40EK	42EK	145
144	21EK	22EK	24EK	26EK	27EK	27EK	30EK	30EK	28EK	29EK	33EK	33EK	33EK	33EK	37EK	40EK	34EK	37EK	40EK	41EK	144
143	20EK	22EK	24EK	26EK	27EK	27EK	29EK	29EK	27EK	29EK	33EK	33EK	32EK	32EK	37EK	39EK	33EK	36EK	40EK	41EK	143
142	20EK	22EK	24EK	25EK	26EK	26EK	29EK	29EK	27EK	29EK	32EK	32EK	32EK	32EK	36EK	39EK	33EK	36EK	39EK	40EK	142
141	20EK	22EK	23EK	25EK	26EK	26EK	29EK	29EK	27EK	28EK	32EK	32EK	32EK	32EK	36EK	39EK	32EK	35EK	39EK	40EK	141
140	20DK	22DK	23EK	25EK	26EK	26EK	28EK	28EK	27EK	28EK	32EK	32EK	31EK	31EK	35EK	38EK	32EK	35EK	38EK	39EK	140
139	20DK	21DK	23EK	25EK	26EK	26EK	28EK	28EK	26EK	28EK	31EK	31EK	31EK	31EK	35EK	38EK	31EK	34EK	38EK	39EK	139
138	20DK	21DK	23DK	24EK	25EK	25EK	28EK	28EK	26EK	27EK	31EK	31EK	31EK	31EK	35EK	37EK	31EK	34EK	37EK	38EK	138
137	19DK	21DK	22DK	24EK	25EK	25EK	27EK	27EK	26EK	27EK	31EK	30EK	30EK	30EK	34EK	37EK	30EK	33EK	37EK	38EK	137
136	19DK	21DK	22DK	24EK	25DK	25DK	27EK	27EK	25EK	26EK	30EK	30EK	30EK	30EK	34EK	36EK	30EK	33EK	37EK	37EK	136
135	19DK	21DK	22DK	23EK	25DK	24DK	27DK	27EK	25EK	26EK	30EK	30EK	30EK	30EK	33EK	36EK	30EK	32EK	36EK	37EK	135
134	19DK	20DK	22DK	23DK	24DK	24DK	26DK	26EK	25DK	26EK	29EK	29EK	29DK	29EK	33EK	35EK	29EK	32EK	36EK	36EK	134
133	19DK	20DK	21DK	23DK	24DK	24DK	26DK	26EK	24DK	25EK	29EK	29EK	29DK	29EK	33EK	35EK	29EK	31EK	35EK	36EK	133
132	19CK	20DK	21DK	23DK	24DK	24DK	26DK	26DK	24DK	25EK	29EK	29EK	29DK	29EK	32EK	35EK	28EK	31EK	35EK	35EK	132
131	18CK	20CK	21DK	22DK	24DK	23DK	26DK	25DK	24DK	25DK	28DK	28EK	29DK	28DK	32EK	34EK	28EK	30EK	35EK	35EK	131
130	18CK	20CK	21DK	22DK	23DK	23DK	25DK	25DK	24DK	24DK	28DK	28EK	28DK	28DK	31EK	34EK	27EK	30EK	34EK	34EK	130
129	18CK	19CK	21DK	22DK	23DK	23DK	25DK	25DK	23DK	24DK	27DK	27EK	28DK	28DK	31DK	33EK	27EK	29EK	34EK	34EK	129
128	18CK	19CK	20DK	22DK	23DK	23DK	25DK	24DK	23DK	24DK	27DK	27DK	28DK	27DK	31DK	33EK	26DK	29EK	33EK	33EK	128
127	18CK	19CK	20CK	21DK	23DK	22DK	24DK	24DK	23DK	23DK	27DK	27DK	27DK	27DK	30DK	32DK	26DK	28EK	33EK	33EK	127
126	18CK	19CK	20CK	21DK	22DK	22DK	24DK	24DK	22DK	23DK	26DK	26DK	27DK	27DK	30DK	32DK	25DK	28DK	32EK	32EK	126
125	17CK	19CK	20CK	21DK	22DK	22DK	24DK	23DK	22DK	23DK	26DK	26DK	27DK	26DK	29DK	31DK	25DK	28DK	32EK	32EK	125
124	17CK	18CK	19CK	20DK	22DK	22DK	23DK	23DK	22DK	22DK	26DK	25DK	26DK	26DK	29DK	31DK	24DK	27DK	32EK	31EK	124
123	17BK	18CK	19CK	20DK	22CK	21DK	23DK	23DK	21DK	22DK	25DK	25DK	26DK	26DK	29DK	31DK	24DK	27DK	31EK	31EK	123
122	17BK	18CK	19CK	20DK	21CK	21CK	23DK	22DK	21DK	21DK	25DK	25DK	26DK	25DK	28DK	30DK	23DK	26DK	31EK	30EK	122
121	17BK	18BK	19CK	20DK	21CK	21CK	22DK	22DK	21DK	21DK	24DK	24DK	25DK	25DK	28DK	30DK	23DK	26DK	30EK	30EK	121
120	17BK	18BK	18CK	19DK	21CK	20CK	22CK	22DK	21CK	21DK	24DK	24DK	25CK	25DK	27DK	29DK	23DK	25DK	30EK	29DK	120
119	16AK	17BK	18CK	19CK	21CK	20CK	22CK	21DK	20CK	20DK	24DK	23DK	25CK	24DK	27DK	29DK	22DK	25DK	29EK	29DK	119
118	16AK	17BK	18CK	19CK	20CK	20CK	21CK	21DK	20CK	20DK	23DK	23DK	24CK	24DK	26DK	28DK	22DK	24DK	29DK	28DK	118
117	16AP	17BK	18CK	19CK	20CK	20CK	21CK	21DK	20CK	20DK	23DK	23DK	24CK	24DK	26DK	28DK	21DP	24DK	29DK	28DK	117
116	16AK	17AK	17CK	18CK	20CK	19CK	21CK	20DK	19CK	19DK	22DK	22DK	24CK	23DK	26DK	27DK	21DK	23DK	28DK	27DK	116
115	16AP	17AK	17BK	18CK	20CK	19CK	21CK	20DK	19CK	19DK	22DK	22DK	24CK	23DK	25DK	27DK	20DP	23DP	28DK	27DK	115
114	16AK	16AP	17BK	18CK	19CK	19CK	20CK	20CK	19CK	19CK	22DK	22DK	23CK	23DK	25DK	27DK	20DK	22DK	27DK	26DP	114
113	15AP	16AK	17BK	17CK	19CK	19CK	20CK	19CK	19CK	18CK	21DK	21DK	23CK	22DK	24DK	26DK	19DP	22DP	27DK	26DK	113
112	15AK	16AP	16BK	17CK	19CK	18CK	20CK	19CK	18CK	18CK	21CK	21DK	23CK	22DK	24DK	26DK	19DK	21DK	27DK	25DP	112
111	15	16AK	16BK	17CK	19CK	18CK	19CK	19CK	18CK	18CK	21CK	20DK	22CK	22CK	24DK	25DK	18DP	21DP	26DK	25DK	111
110	15	16AP	16BK	17CK	18BK	18CK	19CK	18CK	18CK	17CK	20CK	20DK	22CK	21CK	23CK	25DK	18CK	20DK	26DK	24DP	110
109	15	15AK	16BK	16 K	18BK	18CK	19CK	18CK	17CK	17CK	20CK	20DK	22CK	21CK	23CK	24DK	17CP	20DP	25DP	24DK	109
108	15	15AP	16AK	16CK	18BK	17BK	18CK	18CK	17CK	16CK	19CK	19DK	21CK	21CK	22CK	24DK	17CK	19DK	25DK	23DP	108
107	14	15AK	15AK	16CK	18BK	17BK	18CK	17CK	17CK	16CK	19CK	19CK	21CK	20CK	22CK	23DK	17CP	19CP	24DP	23DK	107
106	14	15	15AP	16CK	17BP	17BK	18CK	17CK	16CK	16CK	19CK	18CK	21CK	20CK	22CK	23DK	16CK	18CK	24DK	22DP	106
105	14	15	15AK	15BK	17AK	16BK	17CK	17CK	16CK	15CK	18CK	18CK	20CK	20CK	21CK	23CK	16CP	18CP	24DP	22DK	105
104	14	14	15AP	15BK	17AP	16BK	17CK	16CK	16CK	15CK	18CK	18CK	20CP	19CK	21CK	22CK	15CK	17CK	23DK	21DP	104
103	14	14	14AK	15BK	17AK	16BK	17BK	16CK	16BP	15CK	17CK	17CK	20CK	19CK	20CK	22CK	15CP	17CP	23DP	21DK	103
102	14	14	14AP	14BK	16AP	16BK	16BK	16CK	15BK	14CK	17CK	17CK	19CP	19CK	20CK	21CK	14CK	17CK	22DK	20DP	102
101	13	14	14AK	14BK	16AK	15AP	16BK	15CK	15BP	14CK	17CK	16CK	19BK	18CP	20CK	21CK	14CP	16CP	22DP	20DK	101
100	13	14	14AP	14BK	16AP	15AK	16BK	15CK	15BK	14CK	16CK	16CK	19BP	18CK	19CK	20CK	13CK	16CK	22DK	19DP	100
99	13	13	13AK	14BK	16AK	15AP	16BK	15CK	14BP	13CK	16CK	16CK	19BK	18CP	19CK	20CK	13CP	15CP	21DP	19CK	99
98	13	13	13AP	13AP	15AP	15AK	15BP	14CK	14BK	13CP	16 K	15CK	18BP	17CK	18CP	20 P	12CK	15CK	21DK	18CP	98
97	13	13	13AK	13AK	15AK	14AP	15BK	14BK	14BP	13CK	15CK	15CK	18BK	17CP	18CK	19CK	12CP	14CP	20DP	18CK	97
96	13	13	13	13AP	15	14AK	15AP	14BK	13BK	12BP	15CK	15CK	18BP	17CK	18CP	19CP	11CK	14CK	20CK	17CP	96
95	12	13	12	13AK	14	14AP	14AK	13BK	13BP	12BK	14CP	14CK	17BK	16CP	17CK	18CK	11BP	13CP	19CP	17CK	95
94	12	12	12	12AP	14	14AK	14AP	13BK	13BK	11BP	14CK	14CK	17BP	16CK	17CP	18CP	10BK	13BK	19CK	16CP	94
93	12	12	12	12AK	14	13AP	14AK	13BK	13AP	11BK	14CP	13CK	17BK	16CP	16CK	17CK	10BP	12BP	19CP	16CK	93
92	12	12	12	12AP	14	13AK	13AP	12BK	12AK	11BP	13CK	13CK	16BP	15CK	16CP	17CP	10BK	12BK	18CK	15CP	92
91	12	12	11	12AK	13	13	13AK	12BK	12AP	10BK	13BP	13CK	16BK	15BP	15BK	16CK	9AP	11BP	18CP	15CK	91
90	12	12	11	11AP	13	12	13AP	12BP	12AK	10BP	12BK	12CP	16BP	15BK	15BP	16BP	9AK	11BK	17CK	14CP	90
89	11	11	11	11AK	13	12	12AK	11BK	11AP	10BK	12BP	12CK	15BK	14BP	15BK	16BK	8AP	10BP	17CP	14CK	89
88	11	11	11	11AP	13	12	12AP	11AP	11AK	9BP	12BK	11CP	15BP	14BK	14BP	15BP	8AK	10AK	16CK	13CP	88
87	11	11	11	10AK	12	12	12AK	11AK	11AP	9BK	11BP	11CK	15AK	14BP	14BK	15BK	7AS	9AP	16CP	13BK	87
86	11	11	10	10	12	11	11	10AP	11AK	9AP	11BK	11BP	14AP	13BK	13BP	14BP	7	9AK	16CK	12BP	86
85	11	11	10	10	12	11	11	10AK	10AP	8AK	11BP	11BK	14AK	13BP	13BK	14BK	6	8AP	15CP	12BK	85
84	11	10	10	10	12	11	11	10AP	10AK	8AP	10BK	10BP	14AP	13BK	13BP	13BP	6	8AK	15CK	11BP	84
83	10	10	10	9	11	11	11	9AK	10	8AK	10BP	9BK	14AK	12BP	12BK	13BK	5	7AS	14CP	11AK	83
82	10	10	9	9	11	10	10	9AP	9	7AP	9BK	9BP	13AP	12BK	12BP	12BP	5	7	14CK	10AP	82
81	10	10	9	9	11	10	10	9AK	9	7AK	9AP	9BK	13AK	12BP	11BK	12BK	4	0	14BP	10AK	81
80	10	10	9	9	11	10	10	8AP	9	6AP	9AK	8BP	13AP	11BK	11BP	12BP	4	0	13BK	9	80
79	10	9	9	8	10	10	9	8AK	8	6AK	8AP	8BK	12AK	11AP	11BK	11BK	0	0	13BP	0	79
78	10	9	8	8	10	9	9	8AP	8	6	8AK	8BP	12AP	11AK	10AP	11BP	0	0	12BK	0	78
77	9	9	8	8	10	9	9	7AK	8	5	7AP	7BK	12AK	10AP	10AK	10AK	0	0	12BP	0	77
76	9	9	8	7	10	9	8	7	8	5	7AK	7BP	11	10AK	9AP	10AP	0	0	11BK	0	76
75	9	9	8	7	9	8	8	7	7	5	7AP	6AK	11	10AP	9AK	9AK	0	0	11BP	0	75
74	9	8	7	7	9	8	8	6	7	4	6AK	6AP	11	9AK	9AP	9AP	0	0	11AK	0	74
73	9	8	7	7	9	8	7	6	7	4	6	6AK	10	9AP	8AK	8AK	0	0	10AP	0	73
72	9	8	7	6	9	8	7	6	6	4	6	5AP	10	9AK	8AP	8AP	0	0	10AK	0	72
71	8	8	7	6	8	7	7	5	6	3	5	5AK	10	8	7AK	8AK	0	0	9AP	0	71
70	8	8	6	6	8	7	6	5	6	3	5	4AP	9	8	7AP	7AP	0	0	9	0	70
69	8	7	6	6	8	7	6	5	5	0	4	4AK	9	8	7AK	7AK	0	0	0	0	69
68	8	7	6	5	8	7	6	4	5	0	4	4AP	9	7	6AP	6AP	0	0	0	0	68
67	8	7	6	5	7	6	6	4	5	0	4	3AK	9	7	6AK	6AK	0	0	0	0	67
66	8	7	6	5	7	6	5	4	5	0	3	3	8	7	5	5AP	0	0	0	0	66
65	7	7	5	4	7	6	5	3	4	0	3	0	8	6	5	5	0	0	0	0	65
64	7	6	5	4	7	6	5	3	4	0	0	0	8	6	0	0	0	0	0	0	64
63	7	6	5	4	6	5	4	3	4	0	0	0	7	6	0	0	0	0	0	0	63
62	7	6	5	4	6	5	4	2	3	0	0	0	7	5	0	0	0	0	0	0	62
61	7	6	4	3	6	5	4	2	3	0	0	0	7	5	0	0	0	0	0	0	61
60	7	6	4	3	6	4	3	2	3	0	0	0	6	5	0	0	0	0	0	0	60
59	6	5	4	3	5	4	3	0	0	0	0	0	6	0	0	0	0	0	0	0	59
58	6	5	4	3	5	4	3	0	0	0	0	0	6	0	0	0	0	0	0	0	58
57	6	5	3	2	5	4	2	0	0	0	0	0	5	0	0	0	0	0	0	0	57
56	6	5	3	2	5	3	2	0	0	0	0	0	5	0	0	0	0	0	0	0	56
55	6	5	3	2	4	3	2	0	0	0	0	0	5	0	0	0	0	0	0	0	55
54	6	4	3	0	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	54
53	5	4	2	0	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	53
52	5	4	2	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	52
51	5	4	2	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	51
50	5	4	2	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50
49	5	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	49
48	5	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48
47	4	3	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	47
46	4	3	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46
45	4	3	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	45
44	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	44
43	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43
42	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42
41	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	41
40	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40
39	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	39
38	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38
37	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37
36	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36
35	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	35
34	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34
33	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33
32	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32
31	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31
30	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30

8.63



WAR MATTOCK

Type: Two-hand
Range: –
Length: 3½–5 feet

Weight: 4–8 pounds
Fumble: 1–6

	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
150	23EK	25EK	27EK	29EK	30EK	30EK	33EK	33EK	30EK	32EK	36EK	36EK	33EK	33EK	38EK	41EK	34EK	37EK	40EK	42EK	150
149	23EK	25EK	27EK	29EK	30EK	30EK	33EK	33EK	30EK	32EK	36EK	36EK	33EK	33EK	38EK	41EK	34EK	37EK	40EK	42EK	149
148	23EK	25EK	27EK	29EK	30EK	30EK	33EK	33EK	30EK	32EK	36EK	36EK	33EK	33EK	38EK	41EK	33EK	36EK	40EK	41EK	148
147	23EK	25EK	27EK	28EK	30EK	29EK	32EK	32EK	29EK	31EK	35EK	35EK	32EK	32EK	37EK	40EK	33EK	36EK	39EK	41EK	147
146	23EK	25EK	26EK	28EK	29EK	29EK	32EK	32EK	29EK	31EK	35EK	35EK	32EK	32EK	37EK	40EK	32EK	35EK	39EK	40EK	146
145	22EK	24EK	26EK	28EK	29EK	29EK	32EK	31EK	29EK	30EK	34EK	34EK	32EK	32EK	36EK	39EK	32EK	35EK	38EK	40EK	145
144	22EK	24EK	26EK	27EK	29EK	28EK	31EK	31EK	28EK	30EK	34EK	34EK	31EK	31EK	36EK	39EK	31EK	34EK	38EK	39EK	144
143	22EK	24EK	25EK	27EK	28EK	28EK	31EK	31EK	28EK	29EK	33EK	33EK	31EK	31EK	36EK	38EK	31EK	34EK	38EK	39EK	143
142	22EK	24EK	25EK	26EK	28EK	28EK	30EK	30EK	28EK	29EK	33EK	33EK	31EK	31EK	35EK	38EK	30EK	33EK	37EK	38EK	142
141	22EK	23EK	25EK	26EK	28EK	27EK	30EK	30EK	27EK	29EK	32EK	33EK	30EK	30EK	35EK	37EK	30EK	33EK	37EK	38EK	141
140	21EK	23EK	25EK	26EK	27EK	27EK	30EK	29EK	27EK	28EK	32EK	32EK	30EK	30EK	34EK	37EK	29EK	32EK	36EK	37EK	140
139	21DK	23DK	24EK	26EK	27EK	27EK	29EK	29EK	26EK	28EK	31EK	32EK	30EK	30EK	34EK	36EK	29EK	32EK	36EK	37EK	139
138	21DK	23DK	24EK	25EK	27EK	26EK	29EK	29EK	26EK	27EK	31EK	31EK	29EK	29EK	33EK	36EK	28EK	31EK	35EK	36EK	138
137	21DK	22DK	24EK	25EK	26EK	26EK	28EK	28EK	26DK	27EK	31EK	31EK	29EK	29EK	33EK	35EK	28EK	31EK	35EK	36EK	137
136	21DK	22DK	23DK	25EK	26EK	26EK	28EK	28EK	25DK	26EK	30EK	30EK	29EK	28EK	33EK	35EK	27EK	30EK	35EK	35EK	136
135	20DK	22DK	23DK	24EK	26DK	25DK	28DK	27EK	25DK	26EK	30EK	30EK	28EK	28EK	32EK	35EK	27EK	30EK	34EK	35EK	135
134	20DK	22DK	23DK	24EK	25DK	25DK	27DK	27EK	25DK	26DK	29DK	29EK	28DK	28EK	32EK	34EK	26EK	29EK	34EK	34EK	134
133	20DK	21DK	22DK	24DK	25DK	25DK	27DK	26EK	24DK	25DK	29DK	29EK	28DK	27EK	31EK	34EK	26EK	29EK	33EK	33EK	133
132	20DK	21DK	22DK	23DK	25DK	24DK	26DK	26EK	24DK	25DK	28DK	29DK	27DK	27EK	31EK	33EK	25EK	28EK	33EK	33EK	132
131	20DK	21DK	22DK	23DK	25DK	24DK	26DK	26DK	23DK	24DK	28DK	28DK	27DK	27DK	30EK	33EK	25EK	28EK	32EK	33EK	131
130	19CK	21DK	22DK	23DK	24DK	24DK	26DK	25DK	23DK	24DK	27DK	28DK	27DK	26DK	30DK	32EK	24EK	27EK	32EK	32EK	130
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128	19CK	20CK	21DK	22DK	24DK	23DK	25DK	24DK	22DK	23DK	26DK	27DK	26DK	26DK	29DK	31DK	23DK	26DK	31EK	31EK	128
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69	7	5	3	2	5	3	2	0	0	0	0	0	5	0	0	0	0	0	0	0	69
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66	6	5	2	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	66
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54	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	54
53	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	53
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50	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50
49	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	49
48	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48
47	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	47
46	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46
45	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	45
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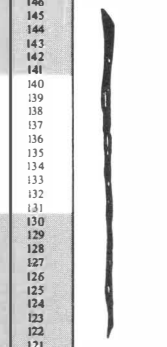

QUARTERSTAFF

Weight: 3-5 pounds

Fumble: 1-3

Type: Two-hand

Range: –

Length: 5-7 feet

	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
150	11CK	13CK	15EK	17EK	18EK	18EK	21EK	21EK	20EK	22EK	26EK	26EK	28EK	28EK	33EK	36EK	30EK	33EK	36EK	38EK	150
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147	11BK	13BK	15CK	17DK	18CK	18DK	21DK	21EK	20DK	22EK	26EK	26EK	28EK	28EK	33EK	36EK	30EK	33EK	36EK	37EK	147
146	11BK	13BK	15CK	17DK	18CK	18CK	21DK	21DK	20DK	22EK	26EK	26EK	28EK	28EK	32EK	35EK	29EK	32EK	35EK	37EK	146
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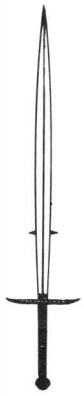

TWO-HAND SWORD

Weight: 5-12 pounds

Fumble: 1-5

Type: Two-hand

Range: –

Length: 3½-6½ feet

	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
150	18EK	20EK	22EK	24EK	30EK	30EK	33EK	33EK	34ES	36ES	40ES	40ES	38ES	38ES	43ES	46ES	40ES	43ES	46ES	48ES	150
149	18EK	20EK	22EK	24EK	30EK	30EK	33EK	33EK	34ES	36ES	40ES	40ES	38ES	38ES	43ES	46ES	40ES	43ES	46ES	48ES	149
148	18EK	20EK	22EK	24EK	30EK	30EK	33EK	33EK	34ES	36ES	39ES	40ES	38ES	38ES	43ES	46ES	39ES	42ES	46ES	47ES	148
147	18EK	20EK	22EK	24EK	30EK	30EK	32EK	32EK	33ES	35ES	39ES	39ES	37ES	37ES	42ES	45ES	39ES	42ES	45ES	47ES	147
146	18EK	20EK	22EK	23EK	29EK	29EK	32EK	32EK	33ES	35ES	38ES	39ES	37ES	37ES	42ES	45ES	38ES	41ES	45ES	46ES	146
145	18EK	20EK	21EK	23EK	29EK	29EK	32EK	32EK	33ES	34ES	38ES	38ES	37ES	37ES	41ES	44ES	38ES	41ES	44ES	46ES	145
144	18EK	19EK	21EK	23EK	29EK	29EK	31EK	31EK	32ES	34ES	37ES	38ES	36ES	36ES	41ES	44ES	37ES	40ES	44ES	45ES	144
143	17EK	19EK	21EK	23EK	28EK	28EK	31EK	31EK	32ES	33ES	37ES	37ES	36ES	36ES	40ES	43ES	37ES	40ES	43ES	44ES	143
142	17DK	19EK	21EK	22EK	28EK	28EK	31EK	30EK	31ES	33ES	36ES	37ES	36ES	35ES	40ES	43ES	36ES	39ES	43ES	44ES	142
141	17DK	19DK	20EK	22EK	28EK	28EK	30EK	30EK	31ES	32ES	36ES	36ES	35ES	35ES	39ES	42ES	35ES	39ES	42ES	43ES	141
140	17DK	19DK	20EK	22EK	27EK	27EK	30EK	30EK	31ES	32ES	35ES	36ES	35ES	35ES	39ES	42ES	35ES	38ES	42ES	43ES	140
139	17DK	18DK	20DK	22EK	27ES	27EK	29EK	29EK	30ES	31ES	35ES	36ES	34ES	34ES	38ES	41ES	34ES	37ES	41ES	42ES	139
138	17DK	18DK	20DK	21EK	27DK	27ES	29EK	29EK	30ES	31ES	34ES	35ES	34ES	34ES	38ES	41ES	34ES	37ES	41ES	42ES	138
137	17DK	18DK	19DK	21EK	27DS	26DK	29DS	28EK	29ES	30ES	34ES	34ES	34ES	33ES	38ES	40ES	33ES	36ES	40ES	41ES	137
136	16DK	18DK	19DK	21DK	26DK	26DS	28DK	28EK	29ES	30ES	33ES	34ES	33ES	33ES	37ES	40ES	33ES	36ES	40ES	40ES	136
135	16CK	18DK	19DK	20DK	26DS	26DK	28DS	28ES	29DS	29ES	33ES	33ES	33ES	33ES	37ES	39ES	32ES	35ES	39ES	40ES	135
134	16CS	17CK	19DK	20DK	26DK	25DS	28DK	27DK	28DK	29ES	32ES	33ES	33ES	32ES	36ES	39ES	32ES	35ES	39ES	39ES	134
133	16CK	17CS	19DK	20DK	25DS	25DK	27DS	27DS	28DS	28ES	32ES	32ES	32ES	32ES	36ES	38ES	31ES	34ES	38ES	39ES	133
132	16CS	17CK	18DK	20DK	25DK	25DS	27DK	26DK	27DS	28ES	31DS	32ES	32DS	31ES	35ES	38ES	30ES	34ES	38ES	38ES	132
131	16CK	17CS	18DK	19DK	25DS	24DK	26DS	26DS	27DS	27DS	31DS	31ES	31DS	31ES	35ES	37ES	30ES	33ES	37ES	38ES	131
130	15CS	17CK	18DK	19DK	24DK	24DS	26DK	26DK	27DS	27DS	30DS	31DS	31DS	31ES	34ES	37ES	29ES	32ES	37ES	37ES	130
129	15CK	17CS	18CS	19DK	24DS	24DK	26DS	25DS	26DS	26DS	30DS	31DS	31DS	30DS	34ES	36ES	29ES	32ES	37ES	36ES	129
128	15CS	16CK	17CK	19DK	24DK	23DS	25DK	25DK	26DS	26DS	29DS	30DS	30DS	30DS	33ES	36ES	28ES	31ES	36ES	36ES	128
127	15BK	16CS	17CS	18DK	24DS	23DK	25DS	24DS	25DS	25DS	29DS	30DS	30DS	29DS	33DS	35ES	28DS	31ES	36ES	35ES	127
126	15BS	16CK	17CK	18DK	23CK	23DS	25DK	24DK	25DS	25DS	28DS	29DS	30DS	29DS	32DS	35DS	27DS	30DS	35ES	35ES	126
125	15BK	16BS	17CS	18DS	23CS	22DK	24DS	24DS	25DS	25DS	28DS	29DS	29DS	29DS	32DS	34DS	26DS	30DS	35ES	34ES	125
124	15BS	16BK	16CK	18DK	23CK	22CS	24CK	23DK	24DS	24DS	27DS	28DS	29DS	28DS	32DS	34DS	26DS	29DS	34ES	34ES	124
123	14AK	15BS	16CS	17DS	22CS	22CK	23CS	23DS	24DK	24DS	27DS	28DS	28DS	28DS	31DS	33DS	25DS	29DS	34ES	33ES	123
122	14AS	15BK	16CK	17CK	22CK	22CS	23CK	22DK	23DS	23DK	26DS	27DS	28DS	27DS	31DS	33DS	25DS	28DS	33ES	32ES	122
121	14AK	15BS	16CS	17CS	22CS	21CK	23CS	22DS	23CK	23DS	26DS	27DS	28DS	27DS	30DS	32DS	24DS	27DS	33ES	32ES	121
120	14AS	15BK	16CK	16CK	21CK	21CS	22CK	22DK	23CS	22DK	25DS	26DS	27DS	27DS	30DS	32DS	24DS	27DS	32ES	31DS	120
119	14AK	15AS	15CS	16CS	21CS	21CK	22CS	21DS	22CK	22DS	25DK	26DS	27DS	26DS	29DS	31DS	23DS	26DS	32ES	31DS	119
118	14AS	14AK	15BK	16CK	21CK	20CS	22CK	21DK	22CS	21DK	24DS	25DK	27DS	26DS	29DS	31DS	23DS	26DS	31DS	30DS	118
117	13AK	14AS	15BS	16CS	21CS	20CK	21CS	20CS	21CK	21DS	24DK	25DS	26DS	25DS	28DS	30DS	22DS	25DS	31DS	30DS	117
116	13AS	14AK	15BK	15CK	20CK	20CS	21CK	20CK	21CS	20DK	23DS	24DK	26CS	25DS	28DS	30DS	21DS	25DS	30DS	29DS	116
115	13AK	14AS	14BS	15CS	20CS	19CK	20CS	20CS	21CK	20DS	23DK	24DS	25CS	25DS	27DS	29DS	21DS	24DS	30DS	28DS	115
114	13	14AK	14BK	15CK	20BK	19CS	20CK	19CK	20CS	19CK	22CS	23DK	25CS	24DS	27DS	29DS	20DS	24DS	29DS	28DS	114
113	13	14AS	14BS	15CS	19BS	19CK	20CS	19CS	20CK	19CS	22CK	23DS	25CS	24DS	27DS	28DS	20DS	23DS	29DS	27DS	113
112	13	13AK	14BK	14CK	19BK	19CS	19CK	18CK	19CS	18CK	21CS	22DK	24CS	23DS	26DS	28DS	19DS	23DS	28DS	27DS	112
111	13	13AS	13AS	14CS	19BS	18BK	19CS	18CS	19CK	18CS	21CK	22DS	24CS	23DS	26DS	27DS	19DS	22DS	28DS	26DS	111
110	12	13AK	13AK	14CK	18BK	18BS	19CK	18CK	19CS	17CK	20CS	21CK	24CS	23DS	25DS	27DS	18DS	21DS	27DS	26DS	110
109	12	13	13AS	14BS	18BS	17BK	18CS	17CS	18CK	17CS	20CK	21CS	23CS	22DS	25DS	26DS	18DS	21DS	27DS	25DS	109
108	12	13	13AK	13BK	18AK	17BS	18BK	17CK	18CS	16CK	19CS	21CK	23CS	22CS	24DS	26DS	17CS	20DS	27DS	24DS	108
107	12	12	13AS	13BS	18AS	17BK	17BS	17CS	18CK	16CS	19CK	20CS	22CS	21CS	24DS	25DS	16CS	20CS	26DS	24DS	107
106	12	12	12AK	13BK	17AK	16BS	17BK	16CK	17CS	16CK	18CS	20CK	22CS	21CS	23CS	25DS	16CS	19CS	26DS	23DS	106
105	12	12	12AS	12BS	17AS	16BK	17BS	16CS	17CK	15CS	18CK	19CS	22CK	21CS	23CS	24DS	15CS	19CS	25DS	23DS	105
104	11	12	12AK	12BK	17AK	16AS	16BK	15CK	16BS	14CK	17CS	19CK	21CS	20CS	22CS	24CS	15CS	18CS	25DS	22DS	104
103	11	12	12AS	12BS	16AS	16AK	16BS	15CS	16BK	14CS	17CK	18CS	21CK	20CS	22CS	23CS	14CS	18CS	24DS	22DS	103
102	11	11	11AK	12BK	16AK	15AS	16BK	15CK	16BS	14CK	16CS	18CK	21CS	20CK	21CS	23CS	14CS	17CS	24DS	21DS	102
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99	11	11	11	11AS	15	14AK	15AS	13BS	14BK	12CS	15CK	16CS	19CK	18CS	20CK	21CK	12CS	15CS	22DS	19CS	99
98	11	11	10	11AK	15	14AS	14AK	13BK	14BS	12CK	14CS	16CK	19CS	18CK	20CS	21CS	11CS	15CS	22DS	19CS	98
97	10	11	10	10AS	14	14AK	14AS	13BS	14BK	11CS	14CK	15CS	19BK	18CS	19CK	20CK	11CK	14CK	21DS	18CS	97
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95	10	10	10	10AS	14	13AK	13AS	12BS	13BK	10BS	13CK	14CS	18BK	17CS	18CK	19CK	10CK	13CK	20CS	17CS	95
94	10	10	10	10AK	14	13	13AK	11BK	12AS	10BK	12BS	14CK	18BS	16CK	18CS	19CS	9CS	13BS	20CS	16CK	94
93	10	10	9	9AS	13	12	12AS	11BS	12AK	9BS	12BK	13CS	17BK	16CS	17CK	18CK	9CK	12BK	19CS	16CS	93
92	10	10	9	9AK	13	12	12AK	11AK	12AS	9BK	11BS	13CK	17BS	16CK	17CS	18CS	8BS	11BS	19CS	15CK	92
91	9	9	9	9AS	13	12	12AS	10AS	11AK	8BS	11BK	12CS	16BK	15CS	16CK	17CK	7BK	11BK	18CS	15CS	91
90	9	9	9	8AK	12	11	11AK	10AK	11AS	8BK	10BS	12BK	16BS	15CK	16CS	17CS	7BS	10BS	18CS	14CK	90
89	9	9	8	8	12	11	11	9AS	10AK	7BS	10BK	12BS	16BK	14CS	16CK	16BK	6BK	10AK	18CS	14CS	89
88	9	9	8	8	12	11	10	9AK	10AS	7BK	9BS	11BK	15BS	14CK	15BS	16BS	6AS	9AS	17CS	13CK	88
87	9	9	8	8	11	10	10	9AS	10AK	6BS	9BK	11BS	15BK	14BS	15BK	15BK	5AK	9AK	17CS	12BS	87
86	9	8	8	7	11	10	10	8AK	9AS	6AK	8BS	10BK	15BS	13BK	14BS	15BS	5AS	8AS	16CK	12BK	86
85	9	8	7	7	11	10	9	8AS	9AK	5AS	8BK	10BS	14AK	13BS	14BK	14BK	4AK	8AK	16CS	11BS	85
84	8	8	7	7	11	9	9	7AK	8	5AK	7AS	9BK	14AS	12BK	13BS	14BS	0	7	15CK	11AK	84
83	8	8	7	7	10	9	9	7AS	8	4AS	7AK	9BS	13AK	12BS	13BK	13BK	0	0	15CS	10AS	83
82	8	8	7	6	10	9	8	7AK	8	4AK	6AS	8BK	13AS	12BK	12BS	13BS	0	0	14CK	10AK	82
81	8	8	7	6	10	9	8	6AS	7	3AS	6AK	8BS	13AK	11BS	12BK	12BK	0	0	14BS	9	81
80	8	7	6	6	9	8	7	6AK	7	3AK	5AS	7BK	12AS	11BK	11BS	12BS	0	0	13BK	0	80
79	8	7	6	6	9	8	7	5	6	0	5AK	7AS	12AK	10BS	11BK	11BK	0	0	13BS	0	79
78	7	7	6	5	9	8	7	5	6	0	4AS	6AK	12AS	10BK	10BS	11BS	0	0	12BK	0	78
77	7	7	6	5	8	7	6	5	6	0	4AK	6AS	11AK	10BS	10BK	10AK	0	0	12BS	0	77
76	7	7	5	5	8	7	6	4	5	0	3AS	5AK	11AS	9AK	10AS	10AS	0	0	11BK	0	76
75	7	6	5	4	8	7	6	4	5	0	3AK	5AS	10AK	9AS	9AK	9AK	0	0	11AS	0	75
74	7	6	5	4	8	6	5	3	4	0	0	4AK	0	8AK	9AS	9AS	0	0	10AK	0	74
73	7	6	5	4	7	6	5	3	4	0	0	4AS	10	8AS	8AK	8AK	0	0	10AS	0	73
72	7	6	4	4	7	6	4	3	4	0	0	3AK	9	8AK	8AS	8AS	0	0	9AK	0	72
71	6	6	4	3	7	5	4	2	3	0	0	3	9	7AS	7AK	7AK	0	0	9	0	71
70	6	5	4	3	6	5	4	2	3	0	0	0	9	7AK	7AS	7AS	0	0	0	0	70
69	6	5	4	3	6	5	3	0	0	0	0	0	8	6	6AK	6AK	0	0	0	0	69
68	6	5	4	3	6	4	3	0	0	0	0	0	8	6	6AS	6AS	0	0	0	0	68
67	6	5	3	2	5	4	3	0	0	0	0	0	7	6	5AK	5AK	0	0	0	0	67
66	6	5	3	2	5	4	2	0	0	0	0	0	7	5	5	5	0	0	0	0	66
65	5	5	3	2	5	3	2	0	0	0	0	0	7	5	0	0	0	0	0	0	65
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46	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46
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41	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	41
40	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40

8.71

	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
150	6EP	8EP	10EP	12EP	15EP	15EP	18EP	18EP	16EP	18EP	22EP	22EP	16EP	16EP	21EP	24EP	18EP	21EP	24EP	26EP	150
149	6EP	8EP	10EP	12EP	15EP	15EP	18EP	18EP	16EP	18EP	22EP	22EP	16EP	16EP	21EP	24EP	18EP	21EP	24EP	26EP	149
148	6DP	8DP	10EP	12EP	15EP	15EP	18EP	18EP	16EP	18EP	22EP	22EP	16EP	16EP	21EP	24EP	18EP	21EP	24EP	26EP	148
147	6DP	8DP	10EP	12EP	15EP	15EP	18EP	18EP	16EP	18EP	22EP	22EP	16EP	16EP	21EP	24EP	18EP	21EP	24EP	26EP	147
146	6CP	8CP	10DP	12EP	15EP	15EP	18EP	18EP	16EP	17EP	21EP	21EP	16EP	16EP	21EP	23EP	17EP	20EP	24EP	25EP	146
145	6CP	8CP	10DP	12EP	15EP	15EP	17EP	17EP	16EP	17EP	21EP	21EP	16EP	16EP	20EP	23EP	17EP	20EP	23EP	25EP	145
144	6CP	8CP	10DP	12EP	15EP	14EP	17EP	17EP	15EP	17EP	21EP	21EP	16EP	16EP	20EP	23EP	17EP	20EP	23EP	25EP	144
143	6BP	8CP	10DP	11DP	14DP	14DP	17EP	17EP	15DP	17EP	20EP	20EP	15EP	15EP	20EP	23EP	17EP	20EP	23EP	24EP	143
142	6BP	8BP	10CP	11DP	14DP	14DP	17DP	17EP	15DP	16EP	20EP	20EP	15EP	15EP	20EP	EP	16EP	19EP	23EP	24EP	142
141	6BP	8BP	9CP	11DP	14DP	14DP	17DP	16EP	15DP	16EP	20EP	20EP	15EP	15EP	19EP	22EP	16EP	19EP	22EP	24EP	141
140	6AP	8BP	9CP	11DP	14DP	14DP	16DP	16EP	15DP	16DP	20DP	20EP	15DP	15EP	19EP	22EP	16EP	19EP	22EP	23EP	140
139	6AP	8BP	9CP	11DP	14DP	14DP	16DP	16DP	14DP	16DP	19DP	19EP	15DP	15EP	19EP	21EP	16EP	18EP	22EP	23EP	139
138	6AP	8AP	9CP	11DP	14DP	13DP	16DP	16DP	14DP	15DP	19DP	19EP	15DP	15DP	19EP	21EP	15EP	18EP	22EP	23EP	138
137	6AP	7AP	9CP	11DP	13DP	13DP	16DP	14DP	14DP	15DP	19DP	19EP	15DP	14DP	18EP	21EP	15DP	18EP	21EP	22EP	137
136	6AP	7AP	9BP	10DP	13CP	13DP	15DP	15DP	14DP	15DP	18DP	18DP	14DP	14DP	18DP	21EP	15DP	18EP	21EP	22EP	136
135	6AK	7AP	9BP	10CP	13CP	13CP	15DP	15DP	14CP	15DP	18DP	18DP	14DP	14DP	18DP	20EP	15DP	17EP	21EP	22EP	135
134	6	7AP	9BP	10CP	13CP	13CP	15DP	15DP	13CP	14DP	18DP	18DP	14DP	14DP	18DP	20EP	14DP	17DP	21EP	22EP	134
133	6	7AP	9BP	10CP	13CP	13CP	15CP	15DP	13CP	14DP	18DP	17DP	14DP	14DP	18DP	20DP	14DP	17DP	20EP	21EP	133
132	5	7AP	9BP	10CP	13CP	12CP	15CP	14DP	13CP	14DP	17DP	17DP	14DP	14DP	17DP	20DP	14DP	17DP	20EP	21EP	132
131	5	7AP	9BP	10CP	12CP	12CP	14CP	14DP	13CP	14DP	17DP	17DP	14DP	14DP	17DP	19DP	14DP	16DP	20EP	21EP	131
130	5	7AK	8BP	10CP	12CP	12CP	14CP	14DP	13CP	13DP	17DP	17DP	14CP	13DP	17DP	19DP	13DP	16DP	20EP	20EP	130
129	5	7	8AP	9CP	12BP	12CP	14CP	14DP	12CP	13CP	16DP	16DP	13CP	13DP	17DP	19DP	13DP	16DP	19EP	20EP	129
128	5	7	8AP	9BP	12BP	12CP	14CP	13DP	12CP	13CP	16DP	16DP	13CP	13DP	16DP	18DP	13DP	15DP	19EP	20EP	128
127	5	7	8AP	9BP	12BP	12BP	14CP	13CP	12CP	13CP	16CP	16DP	13CP	13DP	16DP	18DP	13DP	15DP	19EP	19DP	127
126	5	7	8AP	9BP	12BP	11BP	13CP	13CP	12CP	12CP	16CP	15DP	13CP	13DP	16DP	18DP	12DP	15DP	19DP	19DP	126
125	5	6	8AP	9BP	11AP	11BP	13CP	13CP	12CP	12CP	15CP	15DP	13CP	13DP	16DP	18DP	12CP	15DP	19DP	19DP	125
124	5	6	8AP	9BP	11AP	11BP	13CP	12CP	11CP	12CP	15CP	15DP	13CP	12DP	15DP	17DP	12CP	14DP	18DP	18DP	124
123	5	6	7AP	9BP	11AP	11BP	13CP	12CP	11CP	12CP	15CP	15DP	13CP	12DP	15DP	17DP	12CP	14DP	18DP	18DP	123
122	5	6	7AP	8BP	11AP	11BP	12CP	12CP	11BP	11CP	14CP	14DP	12CP	12CP	15DP	17DP	11CP	14DP	18DP	18DP	122
121	5	6	7AP	8AP	11AP	11AP	12BP	12CP	11BP	11CP	14CP	14DP	12CP	12CP	15CP	16DP	11CP	13CP	18DP	17DP	121
120	5	6	7AK	8AP	11AP	10AP	12BP	12CP	11BP	11CP	14CP	14CP	12CP	12CP	15CP	16DP	11CP	13CP	17DP	17DP	120
119	5	6	7	8AP	10AP	10AP	12BP	11CP	11BP	11CP	14CP	13CP	12CP	12CP	14CP	16DP	11CP	13CP	17DP	17DP	119
118	5	6	7	8AP	10AP	10AP	12BP	11CP	10BP	10CP	13CP	13CP	12CP	11CP	14CP	16DP	10CP	13CP	17DP	17DP	118
117	5	6	7	8AP	10AK	10AP	11BP	11CP	10BP	10CP	13CP	13CP	12CP	11CP	14CP	15DP	10CP	12CP	17DP	16DP	117
116	5	6	7	8AP	10	10AP	11BP	11CP	10BP	10BP	13CP	12CP	11CP	11CP	14CP	15DP	10CP	12CP	16DP	16DP	116
115	5	6	7	7AP	10	10AP	11AP	10BP	10BP	10BP	12CP	12CP	11BP	11CP	13CP	15CP	10CP	12CP	16DP	16DP	115
114	4	6	6	7AP	10	9AP	11AP	10BP	10BP	9BP	12CP	12CP	11BP	11CP	13CP	15CP	9CP	12CP	16DP	15DP	114
113	4	5	6	7AP	10	9AP	10AP	10BP	9BP	9BP	12CP	12CP	11BP	11CP	13CP	14CP	9BP	11CP	16DP	15DP	113
112	4	5	6	7AP	9	9AK	10AP	10BP	9BP	9BP	12CP	11CP	11BP	11CP	13CP	14CP	9BP	11CP	15DP	15CP	112
111	4	5	6	7AP	9	9	10AP	9BP	9BP	9BP	11BP	11CP	11BP	10CP	12CP	14CP	9BP	11BP	15DP	14CP	111
110	4	5	6	7AK	9	9	10AP	9BP	9AP	8BP	11BP	11CP	11BP	10CP	12CP	13CP	8BP	10BP	15CP	14CP	110
109	4	5	6	7	9	9	10AP	9BP	9AP	8BP	11BP	10CP	10BP	10CP	12CP	13CP	8BP	10BP	15CP	14CP	109
108	4	5	6	6	9	8	9AP	9BP	8AP	8BP	10BP	10CP	10BP	10CP	12CP	13CP	8BP	10BP	14CP	13CP	108
107	4	5	6	6	9	8	9AK	9AP	8AP	8BP	10BP	10CP	10BP	10CP	12BP	13CP	8BP	10BP	14CP	13CP	107
106	4	5	5	6	8	8	9	8AP	8AP	7BP	10BP	9CP	10BP	10BP	11BP	12CP	7AP	9BP	14CP	13CP	106
105	4	5	5	6	8	8	9	8AP	8AP	7BP	10BP	9CP	10BP	9BP	11BP	12CP	7AP	9BP	14CP	12CP	105
104	4	5	5	6	8	8	9	8AP	8AP	7AP	9BP	9CP	10BP	9BP	11BP	12BP	7AP	9BP	13CP	12CP	104
103	4	5	5	6	8	7	8	8AP	7AP	7AP	9BP	9BP	10BP	9BP	11BP	12BP	7AP	9AP	13CP	12BP	103
102	4	5	5	6	8	7	8	7AP	7AP	6AP	9BP	8BP	9BP	9BP	10BP	11BP	6AP	8AP	13CP	12BP	102
101	4	4	5	5	8	7	8	7AP	7AP	6AP	8BP	8BP	9AP	9BP	10BP	11BP	6AP	8AP	13CP	11BP	101
100	4	4	5	5	7	7	8	7AP	7AK	6AP	8BP	8BP	9AP	9BP	10BP	11BP	6AK	8AP	13CP	11BP	100
99	4	4	5	5	7	7	7	7AP	7	6AP	8AP	7BP	9AP	9BP	10BP	10BP	6	7AP	12CP	11BP	99
98	4	4	5	5	7	7	7	6AP	6	5AP	8AP	7BP	9AP	8BP	9BP	10BP	5	7AP	12BP	10BP	98
97	4	4	4	5	7	6	7	6AK	6	5AP	7AP	7BP	9AP	8BP	9BP	10BP	5	7AP	12BP	10BP	97
96	3	4	4	5	7	6	7	6	6	5AP	7AP	7BP	9AP	8BP	9BP	10BP	5	7AP	12BP	10AP	96
95	3	4	4	5	7	6	7	6	6	5AK	7AP	6BP	8AP	8BP	9BP	9BP	5	6AK	11BP	9AP	95
94	3	4	4	4	6	6	6	6	6	4	6AP	6BP	8AP	8BP	9BP	9BP	4	6	11BP	9AP	94
93	3	4	4	4	6	6	6	5	6	4	6AP	6BP	8AP	8AP	8BP	9BP	4	6	11BP	9AP	93
92	3	4	4	4	6	6	6	5	5	4	6AP	5BP	8AP	7AP	8AP	8BP	4	0	11BP	8AP	92
91	3	4	4	4	6	5	6	5	5	4	6AP	5BP	8AP	7AP	8AP	8BP	4	0	10BP	8AP	91
90	3	4	4	4	6	5	5	5	5	3	5AK	5BP	8AK	7AP	8AP	8BP	3	0	10BP	8	90
89	3	4	4	4	6	5	5	4	5	3	5	4AP	7	7AP	7AP	8BP	3	0	10AP	0	89
88	3	3	3	4	5	5	5	4	5	3	5	4AP	7	7AP	7AP	7AP	3	0	10AP	0	88
87	3	3	3	3	5	5	5	4	4	3	4	4AP	7	7AP	7AP	7AP	0	0	9AP	0	87
86	3	3	3	3	5	5	5	4	4	2	4	4AP	7	6AP	7AP	7AP	0	0	9AP	0	86
85	3	3	3	3	5	4	4	3	4	2	4	3AP	7	6AK	6AP	7AP	0	0	9AP	0	85
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83	3	3	3	3	5	4	4	3	4	2	3	3AP	7	6	6AP	6AP	0	0	8AP	0	83
82	3	3	3	3	5	4	3	3	3	0	3	2AP	6	6	6AP	6AP	0	0	8AP	0	82
81	3	3	3	3	4	4	4	3	3	0	3	2AP	6	6	6AP	5AP	0	0	8AP	0	81
80	3	3	3	2	4	4	3	2	3	0	2	2	6	6	5AK	5AP	0	0	8	0	80
79	3	3	2	2	4	3	3	2	3	0	2	0	6	5	5	5AP	0	0	0	0	79
78	2	3	2	2	4	3	3	2	3	0	2	0	6	5	5	5AP	0	0	0	0	78
77	2	3	2	2	4	3	3	2	2	0	0	0	6	5	5	4AP	0	0	0	0	77
76	2	2	2	2	4	3	2	1	2	0	0	0	6	5	4	4AP	0	0	0	0	76
75	2	2	2	2	3	3	2	1	2	0	0	0	5	5	4	4	0	0	0	0	75
74	2	2	2	2	3	3	2	1	2	0	0	0	5	5	4	0	0	0	0	0	74
73	2	2	2	1	3	2	2	1	2	0	0	0	5	4	4	0	0	0	0	0	73
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71	2	2	2	1	3	2	1	0	0	0	0	0	5	4	0	0	0	0	0	0	71
70	2	2	1	1	3	2	1	0	0	0	0	0	5	4	0	0	0	0	0	0	70
69	2	2	1	1	2	2	1	0	0	0	0	0	5	4	0	0	0	0	0	0	69
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52	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	52
51	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	51
50	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50
49	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	49
48	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48
47	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	47
46	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46
45	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	45
44	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	44
43	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43

JAVELIN

Weight: 3-5 pounds
Length: 4-7 feet

Fumble: 1-4

Type: Pole Arm
Range: 10 feet
50 feet (-20%)
100 feet (-40%)



LANCE
(mounted)

Type:
Range:
Length:

Pole Arm
–
9–15 feet

Weight: 8–15 pounds

Fumble: 1–7

	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
150	25EP	27EP	29EP	31EP	32EP	32EP	35EP	35EP	36EP	38EP	42EP	42EP	40EP	40EP	45EP	48EP	42EP	45EP	48EP	50EP	150
149	25EP	27EP	29EP	31EP	32EP	32EP	35EP	35EP	36EP	38EP	42EP	42EP	40EP	40EP	45EP	48EP	42EP	45EP	48EP	50EP	149
148	25EP	27EP	29EP	31EP	32EP	32EP	35EP	35EP	36EP	37EP	41EP	41EP	40EP	40EP	44EP	47EP	41EP	44EP	47EP	49EP	148
147	25EP	27EP	28EP	30EP	31EP	31EP	34EP	34EP	35EP	37EP	41EP	41EP	39EP	39EP	44EP	47EP	41EP	44EP	47EP	49EP	147
146	24EP	26EP	28EP	30EP	31EP	31EP	34EP	34EP	35EP	36EP	40EP	40EP	39EP	39EP	43EP	46EP	40EP	43EP	46EP	48EP	146
145	24EP	26EP	28EP	29EP	30EP	30EP	33EP	33EP	34EP	36EP	40EP	40EP	38EP	38EP	43EP	46EP	39EP	42EP	46EP	47EP	145
144	24EP	26EP	27EP	29EP	30EP	30EP	33EP	33EP	34EP	35EP	39EP	39EP	38EP	38EP	42EP	45EP	39EP	42EP	45EP	47EP	144
143	24EP	25EP	27EP	28EP	30EP	29EP	32EP	32EP	33EP	35EP	39EP	39EP	37EP	37EP	42EP	45EP	38EP	41EP	45EP	46EP	143
142	23EP	25EP	26EP	28EP	29EP	29EP	32EP	32EP	33EP	34EP	38EP	38EP	37EP	37EP	41EP	44EP	38EP	41EP	44EP	45EP	142
141	23EK	25EP	26EP	28EP	29EP	29EP	31EP	31EP	32EP	34EP	38EP	38EP	37EP	37EP	41EP	44EP	37EP	40EP	44EP	45EP	141
140	23EP	24EK	26EP	27EP	28EP	28EP	31EP	31EP	32EP	33EP	37EP	37EP	36EP	36EP	40EP	43EP	36EP	39EP	43EP	44EP	140
139	23EK	24EP	25EP	27EP	28EP	28EP	30EP	30EP	31EP	33EP	37EP	37EP	36EP	36EP	40EP	43EP	36EP	39EP	43EP	44EP	139
138	22EP	24EK	25EK	26EP	28EP	27EP	30EP	30EP	31EP	32EP	36EP	36EP	35EP	35EP	39EP	42EP	35EP	38EP	42EP	43EP	138
137	22DK	23DP	24EP	26EP	27EP	27EP	29EP	29EP	30EP	32EP	35EP	36EP	35EP	35EP	39EP	42EP	35EP	38EP	42EP	42EP	137
136	22DP	23DK	24EK	25EK	27EP	26EP	29EP	29EP	30EP	31EP	35EP	35EP	34EP	34EP	38EP	41EP	34EP	37EP	41EP	42EP	136
135	22DK	23DP	24DP	25EP	26EP	26EP	28EP	28EP	29EP	31EP	34EP	35EP	34EP	34EP	38EP	40EP	33EP	36EP	41EP	41EP	135
134	21DP	22DK	23DK	25EK	26EP	26EP	28EP	28EP	29EP	30EP	34EP	34EP	33EP	33EP	37EP	40EP	33EP	36EP	40EP	40EP	134
133	21DK	22DP	23DP	24EP	26DP	25EP	27DP	27EP	28EP	30EP	33EP	34EP	33EP	33EP	37EP	39EP	32EP	35EP	40EP	40EP	133
132	21DP	22DK	22DK	24DK	25DP	25DP	27DP	27EP	28EP	29EP	33EP	33EP	33EP	33EP	36EP	39EP	31EP	34EP	39EP	39EP	132
131	20DK	21DP	22DP	23DP	25DP	24DP	26DP	27DP	28DP	29DP	32EP	33EP	32EP	32EP	36EP	38EP	31EP	34EP	39EP	39EP	131
130	20DP	21DK	22DK	23DK	24DP	24DP	26DP	26DP	27DP	28DP	32DP	32EP	32EP	32EP	35EP	38EP	30EP	33EP	38EP	38EP	130
129	20DK	21DP	21DP	22DP	24DP	23DP	25DP	26DP	27DP	28DP	31DP	32DP	31DP	31EP	35EP	37EP	30EP	33EP	38EP	37EP	129
128	20DP	20DK	21DK	22DK	24DP	23DP	25DP	25DP	26DP	27DP	31DP	31DP	31DP	31DP	34EP	37EP	29DP	32EP	37EP	37EP	128
127	19DK	20DP	20DP	22DP	23DP	22DP	24DP	25DP	26DP	26DP	30DP	31DP	30DP	30DP	34DP	36EP	28DP	31DP	37EP	36EP	127
126	19CP	20CK	20DK	21DK	23DP	22DP	24DP	24DP	25DP	26DP	29DP	30DP	30DP	30DP	33DP	36DP	28DP	31DP	36DP	35DP	126
125	19CK	19CP	20DP	21DP	22DP	22DP	23DP	24DP	25DP	25DP	29DP	29DP	30DP	30DP	33DP	35DP	27DP	30DP	35EP	35EP	125
124	19CP	19CK	19DK	20DK	22DP	21DP	23DP	23DP	24DP	25DP	28DP	29DP	29DP	29DP	32DP	35DP	27DP	30DP	35EP	34EP	125
123	18CK	19CP	19DP	20DP	21DP	21DP	22DP	23DP	24DP	24DP	28DP	28DP	29DP	29DP	32DP	34DP	26DP	29DP	34EP	33EP	123
122	18CP	19CK	18DK	19DK	21DP	20DP	22DP	22DP	23DP	24DP	27DP	28DP	28DP	28DP	31DP	33DP	25DP	28DP	34EP	33DP	122
121	18CK	18CP	18CP	19DP	21DP	20DP	21DP	22DP	23DP	23DP	27DP	27DP	28DP	28DP	31DP	33DP	25DP	28DP	33EP	32DP	121
120	18CP	18CK	18CK	19DK	20DK	19DP	21DP	21DP	22DP	23DP	26DP	27DP	27DP	27DP	30DP	32DP	24DP	27DP	33DP	32DP	120
119	17CK	18CP	17CP	18DP	20DP	19DP	20DP	21DP	22DP	22DP	26DP	26DP	27DP	27DP	30DP	32DP	23DP	26DP	32DP	31DP	119
118	17CP	17CK	17CK	18DK	19DK	19DP	20DP	20DP	21DP	22DP	25DP	26DP	26DP	26DP	29DP	31DP	23DP	26DP	32DP	30DP	118
117	17CK	17CP	16CP	17DP	19CP	18DK	19DP	20DP	21DP	21DP	25DP	25DP	26DP	26DP	29DP	31DP	22DP	25DP	31DP	30DP	117
116	17CP	17CK	16CK	17DK	19CK	18DP	19CK	19DP	20DP	21DP	24DP	25DP*	26DP	26DP	28DP	30DP	22DP	25DP	31DP	29DP	116
115	16BK	16CP	16CP	16CP	18CP	17CK	18CP	19DP	20CP	20DP	24DP	24DP	25DP	25DP	28DP	30DP	21DP	24DP	30DP	28DP	115
114	16BP	16BK	15CK	16CK	18CK	17CP	18CK	18DK	20CP	20CP	23DP	24DP	25DP	25DP	27DP	29DP	20DP	23DP	30DP	28DP	114
113	16BK	16BP	15CP	16CP	17CP	16CK	18CP	18CP	19CP	19CP	22DP	23DP	24DP	24DP	27DP	29DP	20DP	23DP	29DP	27DP	113
112	15BP	15BK	15CK	15CK	17CK	16CP	17CK	18CK	19CP	19CP	22CP	23DP	24DP	24DP	26DP	28DP	19DP	22DP	29DP	27DP	112
111	15AK	15BP	14CP	15CP	17CP	15CK	17CP	17CP	18CP	18CK	21CP	22DP	23CP	23DP	26DP	28DP	19DP	22DP	28DP	26DP	111
110	15AP	15BK	14CK	14CK	16CK	15CP	16CK	17CK	18CP	18CP	21CP	22CP	23CP	23DP	25DP	27DP	18CP	21DP	28DP	25DP	110
109	15AK	14AP	13CP	14CP	16CP	15CK	16CP	16CP	17CP	17CK	20CP	21CP	23CP	23DP	25DP	26DP	17CP	20CP	27DP	25DP	109
108	14AP	14AK	13CK	13CK	15CK	14CP	15CK	16CK	17CK	17CP	20CK	21CP	22CP	22DP	24DP	26DP	17CP	20CP	27DP	24DP	108
107	14AK	14AP	13BP	13CP	15CP	14CK	15CP	15CP	16CP	16CK	19CP	20CP	22CP	22DP	24DP	25DP	16CP	19CP	26DP	23DP	107
106	14AP	13AK	12BK	13CK	15CK	13CP	14CK	15CK	16CK	16CP	19CK	20CP	21CP	21CP	23CP	25DP	16CP	19CP	26DP	23DP	106
105	14AK	13AP	12BP	12CP	14CP	13CK	14CP	14CP	15CP	15CK	18CP	19CK	21CP	21CP	23CP	24DP	15CK	18CK	25DP	22DP	105
104	13	13AK	11BK	12CK	14CK	12CP	13CK	14CK	15CK	14CP	18CK	19CP	20CP	20CP	22CP	24CP	14CP	17CP	25DP	21DP	104
103	13	12AP	11BP	11CP	13BP	12CK	13CP	13CP	14CP	14CK	17CP	18CK	20CP	20CP	22CP	23CP	14CK	17CK	24DP	21CP	103
102	13	12AK	11BK	11CK	13BK	12CP	12CK	13CK	14CK	13CP	16CK	18CP	19CP	19CP	21CP	23CP	13CP	16CP	24DP	20CK	102
101	13	12AP	10BP	10CP	13BP	11CK	12CP	12CP	13CP	13CK	16CP	17CK	19CP	19CP	21CP	22CP	12CK	15CK	23DP	20CP	101
100	12	11AK	10AK	10BK	12BK	11BP	11CK	12CK	13CK	12CP	15CK	16CP	19CP	19CP	20CP	22CP	12CP	15CP	22DP	19CK	100
99	12	11	9AP	10BP	12BP	10BK	11CP	11CP	12CP	12CK	15CP	16CK	18CP	18CP	20CP	21CP	11CK	14CK	22CP	18CP	99
98	12	11	9AK	9BK	11AK	10BP	10CK	11CK	12CK	11CP	14CK	15CP	18CP	18CP	19CP	21CP	11CP	14CP	21CP	18CK	98
97	12	10	9AP	9BP	11AP	9BK	10BP	10CP	12BP	11BK	14CP	15CK	17CP	17CP	19CP	20CP	10CK	13CK	21CP	17CP	97
96	11	10	8AK	8BK	10AK	9BP	9BK	10BK	11BK	10BP	13CK	14CP	17CP	17CP	18CP	19CP	9CP	12BP	20CP	16CK	96
95	11	10	8AP	8BP	10AP	8BK	9BP	10BP	11BP	10BK	13CP	14CK	16CP	16CP	18CP	19CP	9BK	12BK	20CK	16CP	95
94	11	10	7AK	7BK	10AK	8AP	8BK	9BK	10BK	9BP	12CK	13CP	16CK	16CK	17CK	18CK	8BP	11BP	19CP	15CK	94
93	10	9	7AP	7AP	9AP	8AK	8BP	9BP	10BP	9BK	12BP	13CK	16CP	16CP	17CP	18CP	8BK	11BK	19CK	15CP	93
92	10	9	7AK	7AK	9AK	7AP	7BK	8BK	9BK	8BP	11BK	12CP	15CK	15CK	16CK	17CK	7AS	10AS	18CP	14BK	92
91	10	9	6AP	6AP	8AP	7AK	7BP	8BP	9BP	8BK	11BP	12BK	15BP	15CP	16CP	17CP	6AP	9AP	18CK	13BP	91
90	10	8	6AK	6AK	8AK	6AP	6AK	7BK	8BK	7AP	10BK	11BP	14BK	14CK	15CK	16CK	6AK	9AK	17CP	13AK	90
89	9	8	5	5AP	8	6AK	6AP	7BP	8AP	7AK	9BP	11BK	14BP	14CP	15CP	16CP	5	8	17CK	12AS	89
88	9	8	5	5AK	7	5AP	5AK	6AK	7AK	6AP	9BK	10BP	13BK	13CK	14BK	15BK	0	0	16CP	11AP	88
87	9	7	5	4AP	7	5AK	5AP	6AP	7AP	6AK	8BP	10BK	13BP	13CP	14BP	15BP	0	0	16CK	11AK	87
86	9	7	4	4AK	6	5AP	4AK	5AK	6AK	5AP	8AK	9BP	12BK	12BK	13BK	14BK	0	0	15CP	10	86
85	8	7	4	4AP	6	4AK	4AP	5AP	6AP	5AK	7AP	9BK	12BS	12BS	13BS	14BS	0	0	15CK	0	85
84	8	6	3	3AK	6	4	3AK	4AK	5AK	4	7AK	8BP	12BP	12BP	12BP	13BP	0	0	14BP	0	84
83	8	6	3	3AP	5	3	3AP	4AP	5AP	0	6AP	8AK	11BK	11BK	12BK	12BK	0	0	14BK	0	83
82	8	6	3	2AK	5	3	2AK	3AK	4AK	0	6AK	7AP	11BS	11BS	11BS	12BS	0	0	13BP	0	82
81	7	5	2	2	4	2	2	3AP	4	0	5AP	7AK	10BP	10BP	11BP	11BP	0	0	13BK	0	81
80	7	5	2	0	4	2	0	2AK	0	0	5AK	6AP	10AK	10BK	10BK	11BK	0	0	12AS	0	80
79	7	5	0	0	4	0	0	2	0	0	4	6AK	9AS	9BS	10AS	10AS	0	0	12AP	0	79
78	7	4	0	0	3	0	0	0	0	0	0	5AP	9AP	9BP	9AP	10AP	0	0	11AK	0	78
77	6	4	0	0	3	0	0	0	0	0	0	5AK	9AK	9AK	9AK	9AK	0	0	11AS	0	77
76	6	4	0	0	2	0	0	0	0	0	0	4	8AS	8AS	8AS	9AS	0	0	10	0	76
75	6	3	0	0	2	0	0	0	0	0	0	0	8AP	8AP	8AP	8AP	0	0	0	0	75
74	5	3	0	0	0	0	0	0	0	0	0	0	7AK	7AK	7AK	8AK	0	0	0	0	74
73	5	3	0	0	0	0	0	0	0	0	0	0	7AS	7AS	7AS	7AS	0	0	0	0	73
72	5	2	0	0	0	0	0	0	0	0	0	0	6AP	6AP	6AP	7AP	0	0	0	0	72
71	5	2	0	0	0	0	0	0	0	0	0	0	6	6	6	6	0	0	0	0	71
70	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	70
69	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	69
68	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	68
67	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	67
66	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	66
65	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	65
64	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	64
63	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	63
62	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	62
61	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61
60	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60

if used unmounted use spear table

	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
150	16EP	18EP	20EP	22EP	25EP	25EP	28EP	28EP	26EK	28EK	32EK	32EK	30EK	30EK	35EK	38EK	32EK	35EK	38EK	40EK	150
149	16EP	18EP	20EP	22EP	25EP	25EP	28EP	28EP	26ES	28ES	32ES	32ES	30ES	30ES	35ES	38ES	32ES	35ES	38ES	40ES	149
148	16EP	18EP	20EP	22EP	25EP	25EP	28EP	28EP	26EK	28EK	32EK	32EK	30EK	30EK	35EK	38EK	32EK	35EK	38EK	39EK	148
147	16DP	18EP	20EP	22EP	25EP	25EP	28EP	27EP	26ES	27ES	31ES	31ES	30ES	30ES	34ES	37ES	31ES	34ES	37ES	39ES	147
146	16DP	18DP	20EP	21EP	24EK	24EP	27EP	27EP	25EK	27EK	31EK	31EK	29EK	29EK	34EK	37EK	31EK	34EK	37EK	38EK	146
145	16DP	18DP	19DP	21EP	24ES	24EK	27EK	27EP	25ES	27ES	30ES	30ES	29ES	29ES	34ES	36ES	30ES	33ES	36ES	38ES	145
144	16CK	17DP	19DP	21EP	24EP	24ES	27ES	26EK	25EK	26EK	30EK	30EK	29EK	29EK	33EK	36EK	30EK	33EK	36EK	37EK	144
143	15CS	17DP	19DP	21EP	24DK	24DP	26DP	26ES	24ES	26ES	30ES	30ES	28ES	28ES	33ES	35ES	29ES	32FS	36ES	37ES	143
142	15CP	17CK	19DP	20EP	23DS	23DK	26DK	26EP	24EP	26EP	29EK	29EK	28EK	28EK	32EK	35EK	29EK	32EK	35EK	36EK	142
141	15CK	17CS	18DP	20DP	23DP	23DS	26DS	25EK	24EK	25EK	29ES	29ES	28ES	28ES	32ES	35ES	28ES	31ES	35ES	36ES	141
140	15CS	17CP	18DK	20DP	23DK	23DP	25DP	25ES	23ES	25ES	28EP	28EP	28EK	27EK	32EK	34EK	28EK	31EK	34EK	35EK	140
139	15BP	17CK	18CS	20DP	23DS	23DK	25DK	25DP	23DP	24EP	28EK	28EK	27ES	27ES	31ES	34ES	28ES	30ES	34ES	35ES	139
138	15BK	16CS	18CP	19DP	22DP	22DS	25DS	24DK	23DK	24EK	28ES	28ES	27EK	27EK	31EK	33EK	27EK	30EK	34EK	34EK	138
137	15BS	16CP	18CK	19DK	22DK	22DP	24DP	24DS	23DS	24ES	27DP	27EP	27ES	27ES	30ES	33ES	27ES	29ES	33ES	34ES	137
136	14BP	16BK	17CS	19DS	22DS	22DK	24DK	24DP	22DP	23DP	27DK	27EK	26DK	26EK	30EK	32EK	26EK	29EK	33EK	33EK	136
135	14BK	16BS	17CP	19DP	22CP	21DS	24DS	23DK	22DK	23DK	26DS	26ES	26DS	26ES	30ES	32ES	26ES	28ES	32ES	33ES	135
134	14AS	16BP	17CK	18DK	21CK	21CP	23DP	23DS	22DS	23DS	26DP	26EP	26DK	26EK	29EK	32EK	25EK	28EK	32EK	32EK	134
133	14AP	15BK	17CS	18DS	21CS	21CK	23CK	23DP	21DP	22DP	26DK	26DK	26DS	25DS	29ES	31ES	25ES	28ES	32ES	32ES	133
132	14AK	15BS	16CP	18DP	21CP	21CS	23CS	22DK	21DK	22DK	25DS	25DS	25DK	25DK	29EK	31EK	24EK	27EK	31EK	31EK	132
131	14AS	15BP	16BK	18CK	21CK	20CP	22CP	22DS	21DS	21DS	25DP	25DP	25DS	25DS	28DS	30ES	24DS	27ES	31ES	31ES	131
130	14AP	15AK	16BS	17CS	20CS	20CK	22CK	22DP	20DP	21DP	24DK	24DK	25DK	24DK	28DK	30EK	24DP	27EP	30EK	30EK	130
129	13AK	15AS	16BP	17CP	20CP	20CS	22CS	21DK	20DK	21DK	24DS	24DS	24DS	24DS	27DS	29DS	23DK	26EK	30ES	30ES	129
128	13AS	15AP	16BK	17CK	20CK	20CP	22CP	21DS	20CS	20DS	24DP	24DP	24DK	24DK	27DK	29DK	23DS	25DS	30EK	29EP	128
127	13AP	14AK	15BS	17CS	20BS	19CK	21CK	21DP	20CP	20DP	23DK	23DK	24DS	23DS	27DS	29DS	22DP	25DP	29ES	29EK	127
126	13AK	14AS	15BP	16CP	19BP	19CS	21CS	20CK	19CK	20DK	23DS	23DS	24DK	23DK	26DK	28DK	22DK	24DK	29EP	28ES	126
125	13AS	14AP	15BK	16CK	19BK	19BP	21CP	20CS	19CS	19DS	22DP	22DP	23DS	23DS	26DS	28DS	21DS	24DS	28EK	28EP	125
124	13	14AK	15BS	16CS	19BS	19BK	20CK	20CP	19CP	19DP	22DK	22DK	23DK	23DK	25DK	27DK	21DP	23DP	28ES	27EK	124
123	13	14AS	14AP	16CP	19BP	18BS	20CS	19CK	18CK	18DK	22DS	22DS	23CS	22DS	25DS	27DS	20DK	23DK	28EP	27DS	123
122	12	13AP	14AK	15CK	18BK	18BP	20CP	19CS	18CS	18CS	21CP	21DP	22CP	22DK	25DK	26DK	20DS	22DS	27EK	26DP	122
121	12	13AK	14AS	15BS	18BS	18BK	19CK	19CP	18CP	18CP	21CK	21DK	22CK	22DS	24DS	26DS	20DP	22DP	27DS	26DK	121
120	12	13AS	14AP	15BP	18AP	17BS	19CS	18CK	17CK	17CK	20CS	20DS	22CS	21DP	24DK	26DK	19DK	21DK	26DP	25DS	120
119	12	13	14AK	14BK	18AK	17BP	19BP	18CS	17CS	17CS	20CP	20DP	22CP	21DK	23DS	25DS	19DS	21DS	26DK	25DP	119
118	12	13	13AS	14BS	17AS	17BK	18BK	18CP	17CP	17CP	20CK	20DK	21CK	21DS	23DP	25DK	18DP	21DP	26DS	24DK	118
117	12	13	13AP	14BP	17AP	17BS	18BS	17CK	17CK	16CK	19CS	19DS	21CS	20DP	23DK	24DS	18DK	20DK	25DP	24DS	117
116	12	12	13AK	14BK	17AK	16AP	18BP	17CS	16CS	16CS	19CP	19DP	21CP	20DK	22DS	24DP	17DS	20DS	25DK	23DP	116
115	11	12	13AS	13BS	17AS	16AK	17BK	17CP	16CP	15CP	18CK	18CK	20CK	20CS	22DP	23DK	17CP	19DP	24DS	23DK	115
114	11	12	12AP	13BP	16AP	16AS	17BS	16CK	16BK	15CK	18CS	18CS	20CS	19CP	22DK	23DS	16CK	19DK	24DP	22DS	114
113	11	12	12AK	13BK	16AK	16AP	17BP	16BS	15BS	15CS	18CP	17CP	20CP	19CK	21CS	23DP	16CS	18DS	23DK	22DP	113
112	11	12	12AS	13AS	16AS	15AK	16BK	16BP	15BP	14CP	17CK	17CK	20CK	19CS	21CP	22DK	16CP	18DP	23DS	21DK	112
111	11	11	12AP	12AP	16AP	15AS	16BS	15BK	15BK	14CK	17CS	17CS	19CS	19CP	20CK	22DS	15CK	17CK	23DP	21DS	111
110	11	11	12AK	12AK	15AK	15AP	16AP	15BS	14BS	14CS	16CP	16CP	19CP	18CK	20CS	21DP	15CS	17CS	22DK	20DP	110
109	11	11	11	12AS	15	15AK	15AK	15BP	14BP	13CP	16CK	16CK	19CK	18CS	20CP	21CK	14CP	16CP	22DS	20DK	109
108	10	11	11	12AP	15	14AS	15AS	14BK	14BK	13CK	16CS	15CS	18CS	18CP	19CK	20CS	14CK	16CK	21DP	19DS	108
107	10	11	11	11AK	15	14AP	15AP	14BS	14BS	13BS	15CP	15CP	18CP	17CK	19CS	20CP	13CS	15CS	21DK	19DP	107
106	10	11	11	11AS	14	14AK	15AK	14BP	13BP	12BP	15CK	15CK	18BK	17CS	18CP	20CK	13CP	15CP	21DS	18DK	106
105	10	10	10	11AP	14	13AS	14AS	13BK	13BK	12BK	14BS	14CS	17BS	17CP	18CK	19CS	12CK	14CS	20DP	18DS	105
104	10	10	10	11AK	14	13	14AP	13BS	13BS	11BS	14BP	14CP	17BP	16CK	18CS	19CP	12CS	14CS	20DK	17CP	104
103	10	10	10	10AS	14	13	14AK	13BP	12AP	11BP	14BK	13CK	17BK	16CS	17CP	18CK	12CP	14CP	19DS	17CK	103
102	10	10	10	10AP	13	13	13AS	12AK	12AK	11BK	13BS	13CS	17BS	16CP	17CK	18CS	11BK	13CK	19DP	16CS	102
101	9	10	10	10AK	13	12	13AP	12AS	12AS	10BS	13BP	13CP	16BP	16CK	17CS	17CP	11BS	13CS	19CK	16CP	101
100	9	9	9	10AS	13	12	13AK	12AP	11AP	10BP	12BK	12CK	16BK	15CS	16CP	17CK	10BP	12CP	18CS	15CK	100
99	9	9	9	9	13	12	12	11AK	11AK	10BK	12BS	12CS	16BS	15CP	16CK	17CS	10BK	12BK	18CP	15CS	99
98	9	9	9	9	12	12	12	11AS	11AS	9BS	12BP	11CP	15BP	15CK	15CS	16CP	9AS	11BS	17CK	14CP	98
97	9	9	9	9	12	11	12	11AP	11AP	9BP	11BK	11BK	15BK	14BS	15BP	16CK	9AP	11BP	17CS	14CK	97
96	9	9	8	9	12	11	11	10AK	10AK	8AK	11BS	11BS	15BS	14BP	15BK	15CS	8AK	10BK	17CP	13CS	96
95	8	9	8	8	12	11	11	10AS	10AS	8AS	10BP	10BP	15BP	14BK	14BS	15BP	8AS	10BS	16CK	13CP	95
94	8	8	8	8	11	11	11	10AP	10	8AP	10AK	10BK	14AK	13BS	14BP	14BK	8	9BP	16CS	12BK	94
93	8	8	8	8	11	10	10	9AK	9	7AK	10AS	9BS	14AS	13BP	13BK	14BS	7	9AK	15CP	12BS	93
92	8	8	8	7	11	10	10	9AS	9	7AS	9AP	9BP	14AP	13BK	13BS	14BP	7	8AS	15CK	11BP	92
91	8	8	7	7	11	10	10	9AP	9	7AP	9AK	9BK	13AK	12BS	13BP	13BK	6	8AP	15CS	11BK	91
90	8	8	7	7	10	9	9	8AK	8	6AK	8AS	8BS	13AS	12BP	12BK	13BS	6	7AK	14CP	10AS	90
89	8	8	7	7	10	9	9	8	8	6	8AP	8BP	13AP	12BK	12BS	12BP	5	7	14CK	10AP	89
88	7	7	7	6	10	9	9	8	8	5	8AK	7BK	13AK	12BS	11BP	12BK	5	0	13BS	9AK	88
87	7	7	6	6	10	9	8	7	8	5	7AS	7BS	12AS	11BP	11BK	11BS	4	0	13BP	9	87
86	7	7	6	6	9	8	8	7	7	5	7AP	7BP	12AP	11AK	11BS	11BP	4	0	13BK	0	86
85	7	7	6	6	9	8	8	7	7	4	6AK	6AK	12AK	11AS	10AP	11BK	0	0	12BS	0	85
84	7	7	6	5	9	8	8	6	7	4	6	6AS	11	10AP	10AK	10BS	0	0	12BP	0	84
83	7	6	6	5	9	8	7	6	6	4	6	5AP	11	10AK	10AS	10AP	0	0	11BK	0	83
82	7	6	5	5	8	7	7	6	6	3	5	5AK	11	10AS	9AP	9AK	0	0	11AS	0	82
81	6	6	5	5	8	7	7	5	6	3	5	5AS	11	9AP	9AK	8AS	0	0	11AP	0	81
80	6	6	5	4	8	7	6	5	5	0	4	4AP	10	9AK	8AS	8AP	0	0	10AK	0	80
79	6	6	5	4	8	7	6	5	5	0	4	4AK	10	9	8AP	8AK	0	0	10AS	0	79
78	6	6	4	4	7	6	6	4	5	0	4	3AS	10	8	8AK	8AS	0	0	9AP	0	78
77	6	5	4	4	7	6	5	4	5	0	3	3	9	8	7AS	7AP	0	0	9	0	77
76	6	5	4	3	7	6	5	4	4	0	3	0	9	8	7AP	7AK	0	0	0	0	76
75	6	5	4	3	7	5	5	3	4	0	0	0	9	8	6AK	6AS	0	0	0	0	75
74	5	5	4	3	6	5	4	3	4	0	0	0	9	7	6	6AP	0	0	0	0	74
73	5	5	3	3	6	5	4	3	3	0	0	0	8	7	6	5AK	0	0	0	0	73
72	5	4	3	2	6	5	4	2	3	0	0	0	8	7	5	5	0	0	0	0	72
71	5	4	3	2	6	4	3	2	3	0	0	0	8	6	5	0	0	0	0	0	71
70	5	4	3	2	5	4	3	0	0	0	0	0	7	6	0	0	0	0	0	0	70
69	5	4	2	2	5	4	3	0	0	0	0	0	7	6	0	0	0	0	0	0	69
68	5	4	2	1	5	4	2	0	0	0	0	0	7	5	0	0	0	0	0	0	68
67	4	4	2	1	5	3	2	0	0	0	0	0	7	5	0	0	0	0	0	0	67
66	4	3	2	1	4	3	2	0	0	0	0	0	6	5	0	0	0	0	0	0	66
65	4	3	2	0	4	3	0	0	0	0	0	0	6	0	0	0	0	0	0	0	65
64	4	3	1	0	4	3	0	0	0	0	0	0	6	0	0	0	0	0	0	0	64
63	4	3	1	0	4	2	0	0	0	0	0	0	5	0	0	0	0	0	0	0	63
62	4	3	1	0	3	2	0	0	0	0	0	0	5	0	0	0	0	0	0	0	62
61	4	2	1	0	3	2	0	0	0	0	0	0	5	0	0	0	0	0	0	0	61
60	3	2	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60
59	3	2	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	59
58	3	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	58
57	3	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	57
56	3	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	56
55	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	55
54	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	54
53	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	53
52	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	52
51	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	51
50	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50
49	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	49
48	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48
47	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	47
46	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46
45	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	45
44	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	44
43	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43
42	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42
41	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	41



POLE ARM

Weight: 5-12 pounds

Fumble: 1-7

Type: Pole Arm

Range: –

Length: 6-15 feet

8.74

SPEAR

Weight: 3-8 pounds
Length: 5-10 feet
Fumble: 1-5

Type: Pole Arm
Range: 10 feet (-10%)
25 feet (-20%)
50 feet (-30%)

	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
150	8DP	10EP	12EP	14EP	20EP	20EP	23EP	23EP	20EP	22EP	26EP	26EP	20EP	20EP	25EP	28EP	22EP	25EP	28EP	30EP	150
149	8CP	10DP	12EP	14EP	20EP	20EP	23EP	23EP	20EP	22EP	26EP	26EP	20EP	20EP	25EP	28EP	22EP	25EP	28EP	30EP	149
148	8CP	10CP	12DP	14EP	20EP	20EP	23EP	23EP	20EP	22EP	26EP	26EP	20EP	20EP	25EP	28EP	22EP	25EP	28EP	30EP	148
147	8CP	10CP	12DP	14EP	20DP	20DP	23EP	23EP	20EP	22EP	26EP	26EP	20EP	20EP	25EP	28EP	22EP	25EP	28EP	30EP	147
146	8CP	10CP	12DP	14EP	20DP	20DP	23DP	23EP	20EP	21EP	25EP	25EP	20EP	20EP	25EP	27EP	21EP	24EP	27EP	29EP	146
145	8CP	10CP	12CP	14DP	20DP	20DP	22DP	22EP	19EP	21EP	25EP	25EP	20EP	20EP	24EP	27EP	21EP	24EP	27EP	29EP	145
144	8BP	10CP	12CP	14DP	19DP	19DP	22DP	22EP	19DP	21EP	25EP	25EP	19EP	19EP	24EP	27EP	21CP	24EP	27EP	28EP	144
143	8BP	10BP	12CP	13DP	19DP	19DP	22DP	22EP	19DP	21EP	24EP	24EP	19EP	19EP	24EP	26EP	21EP	24EP	27EP	28EP	143
142	8BP	10BP	12CP	13DP	19DP	19DP	22DP	22DP	19DP	20DP	24EP	24EP	19EP	19EP	24EP	26EP	20EP	23EP	26EP	28EP	142
141	8BP	10BP	11CP	13DP	19CP	19DP	21DP	21DP	19DP	20DP	24DP	24EP	19DP	19EP	23EP	26EP	20EP	23EP	26EP	28EP	141
140	8BP	10BP	11CP	13DP	19CP	19CP	21DP	21DP	18DP	20DP	24DP	23EP	19DP	19EP	23EP	26EP	20EP	23EP	26EP	27EP	140
139	8BP	10BP	11CP	13DP	18CP	18CP	21CP	21DP	18DP	20DP	23DP	23EP	19DP	19DP	23EP	25EP	20EP	22EP	26EP	27EP	139
138	8AP	9BP	11BP	13CP	18CP	18CP	21CP	21DP	18DP	19DP	23DP	23EP	18DP	18DP	23EP	25EP	19EP	22EP	25EP	27EP	138
137	8AP	9BP	11BP	13CP	18CP	18CP	20CP	20DP	18CP	19DP	23DP	22DP	18DP	18DP	22DP	25EP	19EP	22EP	25EP	26EP	137
136	8AP	9AP	11BP	12CP	18CP	18CP	20CP	20DP	18CP	19DP	22DP	22DP	18DP	18DP	22DP	24EP	19DP	22EP	25EP	26EP	136
135	8AP	9AP	11BP	12CP	18CP	18CP	20CP	20DP	17CP	19DP	22DP	22DP	18DP	18DP	22DP	24DP	19DP	21EP	25EP	26EP	135
134	7AP	9AP	11BP	12CP	18CP	17CP	20CP	20DP	17CP	18DP	22DP	22DP	18DP	18DP	22DP	24DP	18DP	21EP	24EP	25EP	134
133	7AP	9AP	11BP	12CP	17CP	17CP	20CP	19DP	17CP	18CP	22DP	21DP	18DP	17DP	21DP	23DP	18DP	21DP	24EP	25EP	133
132	7AP	9AP	10BP	12CP	17BP	17CP	19CP	19DP	17CP	18CP	21DP	21DP	17CP	17DP	21DP	23DP	18DP	20DP	24EP	25EP	132
131	7AS	9AP	10BP	12CP	17BP	17CP	19CP	19CP	17CP	18CP	21DP	21DP	17CP	17DP	21DP	23DP	17DP	20DP	24EP	24EP	131
130	7AP	9AP	10BP	12CP	17BP	17BP	19CP	19CP	16CP	17CP	21DP	20DP	17CP	17DP	21DP	23DP	17DP	20DP	23EP	24EP	130
129	7AK	9AP	10AP	11BP	17BP	17BP	19CP	18CP	16CP	17CP	20CP	20DP	17CP	17DP	20DP	22DP	17DP	20DP	23EP	24EP	129
128	7	9AP	10AP	11BP	16BP	16BP	18CP	18CP	16CP	17CP	20CP	20DP	17CP	17DP	20DP	22DP	17DP	19DP	23EP	23EP	128
127	7	8AP	10AP	11BP	16BP	16BP	18CP	18CP	16CP	17CP	20CP	19DP	17CP	16DP	20DP	22DP	16DP	19DP	23EP	23DP	127
126	7	8AS	10AP	11BP	16BP	16BP	18CP	18CP	15CP	16CP	20CP	19DP	16CP	16DP	20DP	21DP	16DP	19DP	22EP	23DP	126
125	7	8AP	10AP	11BP	16BP	16BP	18CP	17CP	15CP	16CP	19CP	19DP	16CP	16CP	19DP	21DP	16DP	18DP	22DP	22DP	125
124	7	8AK	9AP	11BP	16BP	15BP	17BP	17CP	15CP	16CP	19CP	18DP	16CP	16CP	19DP	21DP	16CS	18DP	22DP	22DP	124
123	7	8	9AP	11BP	16BP	15BP	17BP	17CP	15BP	15CP	19CP	18DP	16CP	16CP	19CP	20DP	15CP	18DP	21DP	22DP	123
122	7	8	9AP	10BP	15AP	15BP	17BP	17CP	15BP	15CP	18CP	18CP	16CP	15CP	19CP	20DP	15CS	18DS	21DP	21DP	122
121	7	8	9AP	10BP	15AP	15BP	17BP	16CP	14BP	15CP	18CP	18CP	16CP	15CP	18CP	20DP	15CP	17DP	21DP	21DP	121
120	7	8	9AP	10BP	15AP	15BP	17BP	16CP	14BP	15CP	18CP	17CP	15CP	15CP	18CP	20DP	15CP	17CS	21DP	21DP	120
119	6	8	9AP	10AP	15AP	15BP	16BP	16CP	14BP	14CP	17CP	17CP	15CP	15CP	18CP	19CP	14CP	17CP	20DP	20DS	119
118	6	8	9AP	10AP	15AP	14AP	16BP	16CP	14BP	14BP	17CP	17CP	15CP	15CP	18CP	19CP	14CS	16CS	20DP	20DP	118
117	6	8	9AP	10AP	14AP	14AP	16BP	15BP	14BP	14BP	17CP	16CP	15BP	15CP	17CP	19CP	14CP	16CP	20DP	20DS	117
116	6	7	9AS	10AP	14AP	14AP	16BP	15BP	13BP	14BP	17CP	16CP	15BP	14CP	17CP	18CP	14CS	16CS	20DP	19DP	116
115	6	7	8AP	9AP	14AS	14AP	15BP	15BP	13BP	13BP	16CP	16CP	14BP	14CP	17CP	18CP	13CP	16CP	19DP	19DS	115
114	6	7	8AK	9AP	14AP	14AP	15BP	15BP	13BP	13BP	16CP	15CP	14BS	14CP	17CP	18CP	13CS	15CS	19DS	19DP	114
113	6	7	8	9AP	14AS	13AP	15BP	14BP	13BP	13BP	16CP	15CP	14BP	14CP	16CP	17CP	13CP	15CP	19DP	19DS	113
112	6	7	8	9AP	14AP	13AP	15AP	14BP	13BP	13BP	15CP	15CP	14BS	14CP	16CP	17CP	12BS	16CS	19DS	18DP	112
111	6	7	8	9AP	13AS	13AP	14AP	14BP	12BS	12BP	15BP	14CP	14BP	13CS	16CP	17CP	12BP	15CP	18DP	18CS	111
110	6	7	8	9AP	13AP	13AS	14AP	14BP	12BP	12BP	15BP	14CP	14BS	13CP	16CP	17CP	12BS	14BS	18DS	18CP	110
109	6	7	8	9AP	13AS	13AP	14AP	13BP	12AS	12BP	15BP	14CP	13BP	13BS	15BP	16CP	12BP	14BP	18DP	17CS	109
108	6	7	8	8AS	13AP	12AS	14AP	13BP	12AP	12BS	14BP	14CP	13BS	13BP	15BS	16CP	11BS	14BS	18CS	17CP	108
107	6	7	7	8AP	13AK	12AP	14AS	13BP	12AS	11BP	14BP	13CP	13BP	13BS	15BP	16BP	11BP	13BP	17CP	17CS	107
106	6	7	7	8AS	12	12AS	13AP	13BP	11AP	11BS	14BP	13CP	13BS	13BP	15BS	15BP	11BS	13BS	17CS	16CP	106
105	6	7	7	8AP	12	12AP	13AS	12BP	11AS	11BP	13BP	13CP	13BP	12BS	14BP	15BS	11AP	13BP	17CP	16CS	105
104	6	6	7	8AK	12	12AS	13AP	12BP	11AP	11BS	13BP	12CP	13BS	12BP	14BS	15BP	10AS	13BS	17CS	16CP	104
103	5	6	7	8	12	11AP	13AS	12AP	11AS	10AP	13BS	12BP	12AP	12BS	14BP	15BS	10AP	12BP	16CP	15CS	103
102	5	6	7	8	12	11AK	12AP	12AP	10AP	10AS	13BP	12BP	12AS	12BP	14BS	14BP	10AS	12AS	16CS	15BP	102
101	5	6	7	7	12	11	12AS	12AP	10AS	10AP	12BS	11BP	12AP	12BS	13BP	14BS	10AP	12AP	16CP	15BS	101
100	5	6	7	7	11	11	12AP	11AP	10AP	10AS	12BP	11BP	12AS	11BP	13BS	14BP	9AK	11AS	16CS	14BP	100
99	5	6	7	7	11	11	12AS	11AS	10AS	9AP	12BS	11BP	12AP	11BS	13BP	13BP	9AS	11AP	15CP	14BS	99
98	5	6	6	7	11	10	11AP	11AP	10AP	9AS	11BP	10BP	12AS	11BP	13BP	13BP	9	11AS	15CS	14BP	98
97	5	6	6	7	11	10	11AK	11AS	9AS	9AP	11BS	10BS	11AP	11BS	12BP	13BS	9	11AP	15CP	13BS	97
96	5	6	6	7	11	10	11	10AP	9AP	8AS	11AP	10BP	11AS	11AP	12BS	12BP	8	10AS	14BS	13BP	96
95	5	6	6	7	10	10	11	10AS	9AK	8AP	11AS	10BS	11AP	11AS	12BP	12BS	8	10AP	14BP	13AS	95
94	5	6	6	6	10	10	10	10AP	9	8AS	10AP	9BP	11AS	10AP	12AS	12BP	8	10AK	14BS	12AP	94
93	5	5	6	6	10	10	10	10AS	9	8AP	10AS	9BS	11AP	10AS	11AP	12BS	7	9	14BP	12AS	93
92	5	5	6	6	10	9	10	9AP	8	7AS	10AP	9BP	11AS	10AP	11AS	11BP	7	9	13BS	12AP	92
91	5	5	6	6	10	9	10	9AS	8	7AP	9AS	8BS	10AP	10AS	11AP	11AS	7	9	13BP	11AS	91
90	5	5	6	6	9	9	10	9AP	8	7AK	9AP	8BP	10	10AP	11AS	11AP	7	9	13BS	11AP	90
89	5	5	5	6	9	9	9	9AS	8	7	9AS	8BS	10	9AS	10AP	10AS	6	8	13BP	11AK	89
88	4	5	5	6	9	9	9	8AP	8	6	8AP	7BP	10	9AP	10AS	10AP	6	8	12BS	10	88
87	4	5	5	5	9	8	9	8AK	7	6	8AS	7BS	10	9AS	10AP	10AS	6	8	12BP	10	87
86	4	5	5	5	9	8	9	8	7	6	8AP	7AP	10	9AP	10AS	9AP	6	7	12AS	10	86
85	4	5	5	5	9	8	8	8	7	6	8AK	6AS	9	9	9AP	9AS	5	7	12AP	9	85
84	4	5	5	5	8	8	8	7	7	5	7	6AP	9	9	9AS	9AP	5	7	11AS	9	84
83	4	5	5	5	8	8	8	7	7	5	7	6AS	9	8	9AP	9AS	5	7	11AP	9	83
82	4	4	5	5	8	7	8	7	6	5	7	6AP	9	8	9AS	8AP	5	6	11AS	8	82
81	4	4	4	5	8	7	7	7	6	5	6	5AS	9	8	8AP	8AS	4	6	11AP	8	81
80	4	4	4	4	8	7	7	6	6	4	6	5AP	8	8	8	8AP	4	6	10AK	8	80
79	4	4	4	4	7	7	7	6	6	4	6	5AS	8	8	8	7AS	4	0	10AS	0	79
78	4	4	4	4	7	7	7	6	5	4	6	4AP	8	7	8	7AP	4	0	10	0	78
77	4	4	4	4	7	6	7	6	5	4	5	4AS	8	7	7	7AS	3	0	10	0	77
76	4	4	4	4	7	6	6	5	5	3	5	4AP	8	7	7	6AP	3	0	9	0	76
75	4	4	4	4	7	6	6	5	5	3	5	3AK	8	7	7	6	3	0	9	0	75
74	4	4	4	4	7	6	6	5	5	3	4	3	7	7	7	6	0	0	9	0	74
73	3	4	4	3	6	6	6	5	4	3	4	3	7	7	6	6	0	0	9	0	73
72	3	4	3	3	6	5	5	4	4	2	4	2	7	6	6	5	0	0	8	0	72
71	3	4	3	3	6	5	5	4	4	2	4	2	7	6	6	5	0	0	8	0	71
70	3	3	3	3	6	5	5	4	4	2	3	2	7	6	6	5	0	0	8	0	70
69	3	3	3	3	6	5	5	4	4	0	3	0	7	6	5	4	0	0	0	0	69
68	3	3	3	3	5	5	4	3	3	0	3	0	6	6	5	4	0	0	0	0	68
67	3	3	3	3	5	5	4	3	3	0	2	0	6	5	5	4	0	0	0	0	67
66	3	3	3	2	5	4	4	3	3	0	2	0	6	5	5	0	0	0	0	0	66
65	3	3	3	2	5	4	4	3	3	0	2	0	6	5	4	0	0	0	0	0	65
64	3	3	2	2	5	4	4	2	3	0	0	0	6	5	4	0	0	0	0	0	64
63	3	3	2	2	5	4	3	2	2	0	0	0	6	5	4	0	0	0	0	0	63
62	3	3	2	2	4	4	3	2	2	0	0	0	5	5	4	0	0	0	0	0	62
61	3	3	2	2	4	3	3	2	2	0	0	0	5	4	0	0	0	0	0	0	61
60	3	3	2	2	4	3	3	1	2	0	0	0	5	4	0	0	0	0	0	0	60
59	3	2	2	1	4	3	2	1	0	0	0	0	5	4	0	0	0	0	0	0	59
58	3	2	2	1	4	3	2	1	0	0	0	0	5	4	0	0	0	0	0	0	58
57	2	2	2	1	3	3	2	1	0	0	0	0	5	4	0	0	0	0	0	0	57
56	2	2	2	1	3	2	2	0	0	0	0	0	4	0	0	0	0	0	0	0	56
55	2	2	1	1	3	2	1	0	0	0	0	0	4	0	0	0	0	0	0	0	55
54	2	2	1	1	3	2	1	0	0	0	0	0	4	0	0	0	0	0	0	0	54
53	2	2	1	1	3	2	1	0	0	0	0	0	4	0	0	0	0	0	0	0	53
52	2	2	1	0	3	2	1	0	0	0	0	0	4	0	0	0	0	0	0	0	52
51	2	2	1	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	51
50	2	2	1	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50
49	2	2	1	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	49
48	2	1	1	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48
47	2	1	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	47
46	2	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46
45	2	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	45
44	2	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	44
43	2	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43
42	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42
41	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	41
40	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40
39	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	39
38	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38
37	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37
36	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36
35	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	35
34	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34
33	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33
32	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32
31	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31
30	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30
29	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	29
28	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28

11.11 BEAK/PINCHER ATTACK TABLE



	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
01-02	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	01-02
03-30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	03-30
31-33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31-33
34-36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34-36
37-39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37-39
40-42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40-42
43-45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43-45
46-48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46-48
49-51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	49-51
52-54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	52-54
55-57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	55-57
58-60	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	2	58-60
61-63	0	0	1	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	2	3AT	61-63
64-66	0	0	1	2	0	0	1	1	0	0	0	2	0	0	0	1	0	0	3AT	4BT	64-66
67-69	0	0	2	3	0	1	1	2	0	0	1	3	0	0	0	1	0	1	4BT	5CT	67-69
70-72	0	0	2	3	1	1	2	3	0	0	1	4	0	0	0	2	0	1	5CT	6DT	70-72
73-75	0	0	3	4	1	2	3	4	0	0	2	5	0	0	1	3AT	0	2	6DT	7AS	73-75
76-78	0	1	4	5	2	2	3	4	0	1	3	5	0	0	2	4BT	1	3	7AS	8AS	76-78
79-81	0	1	4	5	2	3	4	5	0	1	4	6	0	1	3AT	5CT	1	4AT	7AS	9AS	79-81
82-84	0	2	5	6	3	3	5	6AT	1	2	4	7AT	1	1	4BT	6DT	2	5BT	8AS	10AS	82-84
85-87	1	2	6	7AT	3	4	6	7BT	1	2	5	8BT	1	2AT	5CT	7AS	3	6CT	9AS	10AS	85-87
88-90	1	3	6	8BT	4	5	6	7CT	2	3	6	9CT	2AT	3BT	6DT	8AS	4AT	6DT	10AS	11AS	88-90
91-93	2	3	7	8CT	5	5	7	8DT	2	4	7AT	9DT	3BT	4CT	7AS	9AS	5BT	7AS	11AS	12BS	91-93
94-96	2	4	8AT	9DT	5	6	8AT	9AS	3	4	8BT	10AS	4CT	5DT	8AS	10AS	6CT	8AS	12BS	13BS	94-96
97-99	3	5	8BT	10AS	6AT	6AT	8BT	10AS	3	5AT	8CT	11AS	4DT	5AK	9AK	11AS	6DT	9AS	13BS	14BS	97-99
100-102	3	5AT	9CT	10AS	6BT	7BT	9CT	10AS	4AT	6BT	9DT	12AS	5AS	6AS	10AS	12BS	7AS	10AS	14BS	15BS	100-102
103-105	4AT	6BT	10DT	11AS	7CT	8CT	10DT	11AS	5BT	6CT	10AS	13AS	6AK	7AK	11AK	13BS	8AS	11AS	14BK	16BK	103-105
	MAXIMUM RESULTS FOR SMALL ATTACKS																				
106-108	5BT	6CT	10AS	12AS	7DT	8DT	11AS	12AS	5CT	7DT	11AS	13AS	7AS	8AS	12BS	14BS	9AS	12BS	15CS	17CS	106-108
109-111	5CT	7DT	11AK	12AS	8AK	9AK	11AK	13BS	6DT	7AK	11AK	14BS	7AK	9AK	13BK	15BK	10AS	12BS	16CK	18CK	109-111
112-114	6DT	8AS	12AS	13BS	9AS	9AS	12AS	13BS	6AK	8AS	12AS	15BS	8BS	10BS	14BS	16CS	11AS	13BS	17CK	19CS	112-114
115-117	6AK	8AK	12AK	14BK	9AK	10AK	13AK	14BK	7AK	9AK	13BK	16BK	9BK	10BK	15BK	17CK	11AK	14BK	18CK	20DK	115-117
118-120	7AK	9AS	13AS	15BS	10AS	11AS	13BS	15CS	8AS	9AS	14BS	17CS	10BS	11BS	16CS	18CS	12BS	15CS	19DS	20DS	118-120
	MAXIMUM RESULTS FOR MEDIUM ATTACKS																				
121-123	7AK	9AK	14BK	15CK	10AK	11AK	14BK	16CK	8AK	10BK	15BK	17CK	11BK	12BK	17CK	19CK	13BK	16CK	20DK	21DK	121-123
124-126	8AK	10BS	14BS	16CS	11BS	12BS	15BS	16CS	9AS	11BS	15CS	18CS	11CS	13CS	18CS	20CS	14BS	17CS	21DS	22DS	124-126
127-129	9AK	10BK	15BK	17CK	11BK	12BK	16CK	17CK	9BK	11BK	16CK	19CK	12CK	14CK	19CK	21DK	15CK	18CK	21DK	23DK	127-129
130-132	9BS	11BS	16CS	17CS	12BS	13BS	16CS	18DS	10BS	12CS	17CS	20DS	13CS	15CS	20DS	22DS	16CS	18DS	22ES	24ES	130-132
133-135	10BK	12CK	16CK	18DK	13CK	14CK	17CK	19DK	11BK	12CK	18DK	21DK	14CK	15CK	21DK	23DK	16CK	19DK	23EK	25EK	133-135
	MAXIMUM RESULTS FOR LARGE ATTACKS																				
136-138	10BS	12CS	17CS	19DS	13CS	14CS	18DS	19DS	11CS	13CS	18DS	21DS	14DS	16DS	22DS	24ES	17DS	20DS	24ES	26ES	136-138
139-141	11CK	13CK	18DK	19DK	14CK	15CK	18DK	20EK	12CK	14DK	19DK	22EK	15DK	17DK	23EK	25EK	18DK	21EK	25EK	27EK	139-141
142-144	11CS	13DS	18DS	20ES	14DS	15DS	19DS	21ES	12DS	14DS	20ES	23ES	16ES	18ES	24ES	26ES	19ES	22ES	26ES	28ES	142-144
145-147	12DK	14DK	19EK	21EK	15DK	16DK	20EK	22EK	13DK	15EK	21EK	24EK	17EK	19EK	25EK	27EK	20EK	23EK	27EK	29EK	145-147
148-150	13ES	15ES	20ES	22FS	16ES	17ES	21ES	23FS	13ES	16ES	22ES	25FS	18ES	20ES	26ES	28FS	21ES	24ES	28FS	30FS	148-150
	MAXIMUM RESULTS FOR HUGE ATTACKS																				



NOTE: *An F-severity critical result indicates an E-critical roll on the Slash Critical Strike Table and a C-critical roll on the Krush Critical Strike Table.*

NOTE: *Animals attempting to hold onto a target (on this table) may be given an additional attack on the Grapple Attack Table if they obtain a critical strike result on this table.*

CRITICAL STRIKES: **P** = *Puncture* **S** = *Slash* **K** = *Krush* **G** = *Grapple* **U** = *Unbalance* **T** = *Tiny*

11.12 BITE ATTACK TABLE



	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
01-02	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	01-02
03-30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	03-30
31-33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31-33
34-36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34-36
37-39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37-39
40-42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40-42
43-45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43-45
46-48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46-48
49-51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	49-51
52-54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	52-54
55-57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3AT	55-57
58-60	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	3	5AT	58-60
61-63	0	0	0	1	0	0	0	0	0	0	0	2	0	0	1	2	0	0	4AT	6BT	61-63
64-66	0	0	0	2	0	0	0	1	0	0	0	3	0	0	2	3	0	1	6BT	7CT	64-66
67-69	0	0	1	3	0	0	1	2	0	0	0	4	1	1	3	5AT	1	2	7CT	9DT	67-69
70-72	0	0	1	4	0	0	2	3	0	0	0	5	2	2	4AT	6AT	2	3	8DT	10ET	70-72
73-75	0	0	2	5	0	0	3	4	0	0	1	7	3AT	3	6AT	7BT	3	4	10ET	11AS	73-75
76-78	0	0	3	6	0	1	4	5	0	0	2	8	4BT	4AT	7BT	9CT	4	5AT	11AP	13AP	76-78
79-81	0	0	4	7	1	1	5	6	0	1	3	9AT	5CT	5BT	8CT	10DT	5	7BT	12AS	14AS	79-81
82-84	0	1	5	8	1	2	6	7AT	0	2	4AT	10BT	6DT	6CT	9DT	11ET	6	8CT	14AP	15AP	82-84
85-87	0	2	6	9AT	2	3	7AT	9AT	0	3	5BT	11CT	7ET	7DT	11ET	13AS	7AT	9DT	15AS	17BS	85-87
88-90	0	3	7AT	10BT	3AT	4AT	8AT	10AT	1	4	7CT	13DT	8AP	8ET	12AS	14AP	8BT	10ET	16AP	18BP	88-90
91-93	0	4	8BT	11CT	4AT	5AT	9BT	11BT	1	5AT	8DT	14ET	9AP	9AP	13AP	16AS	9CT	11AP	18BS	19BS	91-93
94-96	1	5AT	9CT	12DT	5BT	6AT	10CT	12CT	2AT	6BT	9ET	15AP	10AP	10AP	15AS	17AP	10DT	13AS	19BP	21BP	94-96
97-99	1AT	6AT	9DT	13ET	6CT	7BT	11DT	13DT	3AT	7CT	10AP	16AS	11AP	11AP	16AP	18BS	11ET	14AP	20BS	22BS	97-99
100-102	2AT	7BT	10ET	14AP	7DT	8CT	12ET	14ET	4AT	8DT	12AS	17AP	12AP	12AP	17BS	20BP	12AP	15BS	22BP	23BP	100-102
103-105	3BT	8CT	11AP	15AS	8ET	8DT	13AP	15AP	5BT	9ET	13AP	19AS	13BP	13BP	18BP	21BS	13AS	16BP	23BS	25BS	103-105
	MAXIMUM RESULTS FOR SMALL ATTACKS																				
106-108	4CT	9DT	12AS	16AP	9AP	9ET	14AS	17BS	6CT	10AP	14AS	20BP	14BP	14BP	20BS	22CP	14AP	18BS	24BP	26CP	106-108
109-111	5DT	10ET	13AP	17AS	10AP	10AP	15AP	18BP	7DT	11AP	15BP	21BS	16BP	16BP	21BP	24CS	15AS	19BP	25CS	27CS	109-111
112-114	6ET	11AP	14BS	18BP	11AP	11AP	16BS	19BS	8ET	12AP	17BS	22BP	17BS	17BS	22CS	25CP	16BP	20CS	27CP	29DP	112-114
115-117	6AP	12AP	15BP	19BS	11AP	12AP	17BP	20CP	9AP	13AP	18BP	23CS	18CP	18CP	23CP	26CS	17BS	21CP	28DS	30DS	115-117
118-120	7AP	13AP	16BS	20BP	12BS	13BS	18BS	21CS	10AP	14BP	19CS	25CP	19CS	19CS	25CS	28DP	18BP	22CS	29DP	31DP	118-120
	MAXIMUM RESULTS FOR MEDIUM ATTACKS																				
121-123	8AP	14BP	17BP	21CS	13BP	14BP	19BP	22CP	11AP	15BS	20CP	26CS	20CP	20CP	26CP	29DS	19CS	24CP	31DS	33DS	121-123
124-126	9AP	15BS	17CS	22CP	14BS	15BS	20CS	23CS	12BP	16BP	22CS	27CP	21CS	21CS	27DS	31DP	20CP	25DS	32DP	34EP	124-126
127-129	10BP	16BP	18CP	23CS	15BP	15BP	21CP	25DP	13BP	17BS	23DP	28DS	22DP	22CP	29DP	32DS	21CS	26DP	33ES	35ES	127-129
130-132	11BS	17BS	19CS	24DP	16CS	16CS	22CS	26DS	14BS	18CP	24DS	29DP	23DS	23DS	30DS	33EP	22DP	27DS	35EP	37EP	130-132
133-135	11BP	18CP	20CP	25DS	17CP	17CP	23CP	27DP	15BP	19CS	25DP	31DS	24DP	24DP	31DP	35ES	23DS	28DP	36ES	38ES	133-135
	MAXIMUM RESULTS FOR LARGE ATTACKS																				
136-138	12BS	19CS	21CS	26DP	18CS	18CS	24CS	28DS	16CS	20CP	27DS	32DP	25DS	25DS	32ES	36EP	24DP	30ES	37EP	39EP	136-138
139-141	13CP	20CP	22DP	27ES	19CP	19CP	25DP	29EP	17CP	21CS	28EP	33ES	26EP	26EP	34EP	37ES	25ES	31EP	39ES	41ES	139-141
142-144	14CK	21DK	23DK	28EP	20DK	20DK	26DK	30EK	18CK	22DP	29EK	34EP	27EK	27EK	35EK	39EP	26EP	32EK	40EP	42EP	142-144
145-147	15DS	22DS	24ES	29ES	21DS	21DS	27ES	31ES	19DS	23DS	30ES	35ES	28ES	28ES	36ES	40ES	27ES	33ES	41ES	43ES	145-147
148-150	16EP	23EP	25EP	30FP	22EP	22EP	28EP	33FP	20EP	25EP	32EP	37FP	29EP	29EP	38EP	42FP	29EP	35EP	43FP	45FP	148-150
	MAXIMUM RESULTS FOR HUGE ATTACKS																				



NOTE: *An F-severity critical result indicates an E-critical roll on the Puncture Critical Strike Table and a C-critical roll on the Slash Critical Strike Table.*

NOTE: *Animals attempting to hold onto a target (on this table) may be given an additional attack on the Grapple Attack Table if they obtain a critical strike result on this table.*

CRITICAL STRIKES: **P** = *Puncture* **S** = *Slash* **K** = *Krush* **G** = *Grapple* **U** = *Unbalance* **T** = *Tiny*

11.13 CLAW/TALON ATTACK TABLE





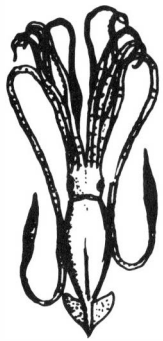


	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
01-02	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	01-02
03-30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	03-30
31-33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31-33
34-36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34-36
37-39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	37-39
40-42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	40-42
43-45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	43-45
46-48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	46-48
49-51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	3	49-51
52-54	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	3	4AT	52-54
55-57	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	2	0	1	4AT	4AT	55-57
58-60	0	0	0	1	0	0	0	1	0	0	0	2	0	0	1	3	0	2	4BT	5BT	58-60
61-63	0	0	1	2	0	0	1	1	0	0	1	2	0	0	1	3	1	2	5CT	6CT	61-63
64-66	0	0	1	2	0	0	1	2	0	0	1	3	0	0	2	4	1	3	6DT	6DT	64-66
67-69	0	0	2	3	0	1	2	2	0	0	2	3	1	1	3	5AT	2	4	6ET	7ET	67-69
70-72	0	0	2	3	1	1	2	3	0	1	2	4	1	1	3	5AT	2	4	7AS	8AS	70-72
73-75	0	1	3	4	1	1	3	4	0	1	3	5	2	2	4AT	6BT	3	5AT	8AS	8AS	73-75
76-78	0	1	3	4	2	2	3	4	1	2	3	5AT	2	2	5AT	7CT	4	6BT	8AS	9AS	76-78
79-81	0	1	4	5	2	2	4	5AT	1	2	4	6BT	3	3AT	5BT	7DT	4	6CT	9AS	10AS	79-81
82-84	0	2	4	5AT	3	3	4	5AT	1	3	5	6CT	3AT	3BT	6CT	8ET	5	7DT	9AS	10AS	82-84
85-87	1	2	5	6BT	3	3	5	6AT	2	3	5AT	7DT	4BT	4CT	7DT	9AS	5AT	7ET	10BS	11AS	85-87
88-90	1	3	5	7CT	4	4	5AT	7BT	2	4	6BT	8ET	4CT	4DT	7ET	9AS	6BT	8AS	11BS	12BS	88-90
91-93	1	3	6AT	7DT	4	4	6AT	7CT	3	4	6CT	8AS	5DT	5ET	8AS	10AS	7CT	9AS	11BS	12BS	91-93
94-96	2	4AT	6BT	8ET	5	5	7BT	8DT	3	5AT	7DT	9AS	5ET	5AS	9AS	11AS	7DT	9AS	12BS	13BS	94-96
97-99	2	4AT	7CT	8AS	5AT	5AT	7CT	8ET	4	5BT	8ET	9AS	6AS	6AS	9AS	11BS	8ET	10AS	13BS	13BS	97-99
100-102	3	5BT	7DT	9AS	6AT	6AT	8DT	9AS	4AT	6CT	8AS	10BS	6AS	6AS	10AS	12BS	9AS	11BS	13BS	14BS	100-102
103-105	3AT	5CT	8ET	9AS	6BT	6AT	8ET	10BS	5AT	6DT	9AP	11BS	7AS	7BS	11BS	13BS	9AS	11BS	14BS	15BP	103-105
	MAXIMUM RESULTS FOR SMALL ATTACKS																				
106-108	4AT	6DT	8AP	10AS	7CT	7BT	9AS	10BS	5AT	7ET	9AS	11BS	7AS	7BS	11BS	13CS	10AS	12BS	15BP	15CS	106-108
109-111	4BT	6ET	9AS	10AS	7DT	7CT	9AP	11BS	6BT	8AP	10AP	12CS	8AS	8BS	12BS	14CS	10AS	12BS	15CS	16CP	109-111
112-114	4CT	7AS	9AP	11BS	8ET	8DT	10BS	11CP	6CT	8AS	10AS	12CS	8BS	8BS	13CS	15CP	11BS	13CS	16CP	17DS	112-114
115-117	5DT	7AP	10BS	11BS	8AP	8ET	10BP	12CS	6DT	9AP	11BP	13CP	9BS	9CS	13CP	15CS	12BS	14CP	16DS	17DP	115-117
118-120	5ET	8BS	10BP	12BS	9AP	9AP	11BS	13CP	7ET	9BS	12BS	14CS	9BS	9CP	14CS	16DP	12BS	14CS	17DP	18DS	118-120
	MAXIMUM RESULTS FOR MEDIUM ATTACKS																				
121-123	6AP	8BP	11BS	13CP	9AP	9BP	12BP	13CS	7AP	10BP	12BP	14DP	10CP	10CS	15CP	17DS	13CP	15CP	18DS	19EP	121-123
124-126	6AP	9BS	11BP	13CS	10AP	10BP	12CS	14DP	8BP	10BS	13CS	15DS	10CS	10CP	15DS	17DP	14CS	16DS	18EP	19ES	124-126
127-129	7BP	9BP	12CS	14CP	10BP	10BP	13CP	14DS	8BP	11BP	13CP	15DP	11CP	11CS	16DP	18DS	14CP	16DP	19ES	20EP	127-129
130-132	7BS	10CS	12CP	14DS	11BP	11BS	13CS	15DP	9BS	11CS	14CS	16DS	11CS	11DP	17DS	19EP	15DS	17DS	20EP	21ES	130-132
133-135	7BP	10CP	13CS	15DP	11BP	11CP	14CP	16DK	9BP	12CP	15DP	17DP	12DP	12DS	17DP	19ES	15DP	17DP	20ES	21EP	133-135
	MAXIMUM RESULTS FOR LARGE ATTACKS																				
136-138	8BS	11CS	13CP	15DS	12BS	12CS	14CS	16ES	10CS	12CS	15DS	17ES	12DS	12DP	18ES	20EP	16DS	18ES	21EP	22ES	136-138
139-141	8CP	11CP	14CS	16EP	12CP	12CP	15DP	17EP	10CP	13CP	16DP	18EP	13DP	13ES	19EP	21ES	17EP	19EP	22ES	23EP	139-141
142-144	9CK	12DK	14DP	16EK	13CK	13CK	15DK	17EK	11CK	13DK	16EK	18EK	13EK	13EP	19EK	21EP	17EK	19EK	22EP	23EK	142-144
145-147	9DS	12DS	15DS	17ES	13CS	13DS	16ES	18ES	11DS	14DS	17ES	19ES	14ES	14ES	20ES	22ES	18ES	20ES	23ES	24ES	145-147
148-150	10EP	13EP	15EP	18FP	14DP	14DP	17EP	19FP	12EP	15EP	18EP	20FP	15EP	15EP	21EP	23FP	19EP	21EP	24FP	24FP	148-150
	MAXIMUM RESULTS FOR HUGE ATTACKS																				

NOTE: *An F-severity critical indicates an E-critical roll on the Puncture Critical Strike Table and a C-critical roll on the Slash Critical Strike Table.*

CRITICAL STRIKES: **P** = *Puncture* **S** = *Slash* **K** = *Krush* **G** = *Grapple* **U** = *Unbalance* **T** = *Tiny*

11.14 GRAPPLE/GRASP/ENVELOP/SWALLOW ATTACK TABLE





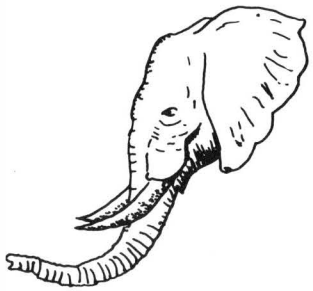
	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
01-02	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	01-02
03-30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	03-30
31-33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31-33
34-36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34-36
37-39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37-39
40-42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40-42
43-45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43-45
46-48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46-48
49-51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	49-51
52-54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	52-54
55-57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	55-57
58-60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	58-60
61-63	1AG	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61-63
64-66	1AG	1	0	0	1AG	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	64-66
67-69	1AG	1AG	1	1	1AG	1AG	0	0	1AG	1	0	0	1	1	0	0	0	0	0	0	67-69
70-72	1AG	1AG	1	1	1AG	1AG	1	1	1AG	1	0	0	1AG	1	0	0	0	0	0	0	70-72
73-75	1AG	1AG	1AG	1	2AG	1AG	1	1	1AG	1AG	1	1	2AG	1AG	1	0	0	0	0	0	73-75
76-78	1AG	1AG	2AG	2AG	2AG	2AG	1AG	1	1AG	1AG	1	1	2AG	2AG	1	0	0	0	1	0	76-78
79-81	1AG	2AG	2AG	2AG	2AG	2AG	2AG	2AG	1AG	2AG	1AG	2	2AG	2AG	1	1	0	0	1	0	79-81
82-84	1AG	2AG	2AG	3AG	2AG	2AG	2AG	2AG	2AG	2AG	2AG	2AG	3AG	3AG	2	1	0	0	2AG	1	82-84
85-87	1AG	2AG	3AG	3AG	3AG	3AG	2AG	3AG	2AG	2AG	2AG	3AG	3AG	3AG	2AG	2	0	0	2AG	1	85-87
88-90	1AG	2AG	3AG	3AG	3AG	3AG	3AG	3AG	2AG	2AG	3AG	3AG	3AG	3AG	3AG	2	1AG	1	3AG	2	88-90
91-93	2BG	2AG	3AG	4AG	3AG	3AG	3AG	4AG	2AG	3AG	3AG	4AG	4AG	4AG	3AG	3	1AG	1	3AG	2	91-93
94-96	2BG	3AG	4AG	4AG	4AG	4AG	4AG	4AG	2AG	3AG	4AG	4AG	4AG	4AG	4AG	4	1AG	2AG	4AG	3	94-96
97-99	2BG	3AG	4AG	5AG	4AG	4AG	4AG	5AG	2AG	3AG	4AG	5AG	4AG	5AG	4AG	4AG	2AG	2AG	5AG	4	97-99
100-102	2BG	3AG	4AG	5AG	4AG	4AG	4AG	5AG	3AG	3AG	4AG	5AG	5AG	5AG	5AG	5AG	2AG	3AG	5AG	4	100-102
103-105	2BG	3BG	5BG	5BG	4BG	5BG	5BG	6BG	3BG	4BG	5BG	6AG	5BG	5BG	5AG	5AG	3AG	4AG	6AG	5AG	103-105
MAXIMUM RESULTS FOR SMALL ATTACKS																					
106-108	2CG	4CG	5BG	6BG	5BG	5BG	5BG	6BG	3BG	4BG	5BG	6AG	6BG	6BG	6AG	6AG	3AG	4AG	6AG	6AG	106-108
109-111	2CG	4BG	5BG	6BG	5BG	5BG	6BG	7BG	3BG	4BG	6BG	7AG	6BG	6BG	6AG	7AG	4AG	5AG	7AG	6AG	109-111
112-114	2CG	4BG	6BG	7BG	5BG	6BG	6BG	7BG	3BG	4BG	6BG	7AG	6BG	7BG	7AG	7AG	4AG	5AG	8AG	7AG	112-114
115-117	2CG	4CG	6CG	7CG	5CG	6CG	6CG	7CG	4CG	5CG	7CG	8BG	7CG	7CG	7BG	8BG	5BG	6AG	8BG	8AG	115-117
118-120	2CG	4CG	6CG	7CG	6CG	6CG	7CG	8CG	4CG	5CG	7CG	8BG	7CG	7CG	8BG	8BG	5BG	7BG	9BG	8AG	118-120
MAXIMUM RESULTS FOR MEDIUM ATTACKS																					
121-123	3DG	5CG	7CG	8CG	6CG	7CG	7CG	8CG	4CG	5CG	8CG	9BG	7CG	8CG	8BG	9BG	6BG	7BG	9BG	9AG	121-123
124-126	3DG	5CG	7CG	8CG	6CG	7CG	7CG	9CG	4CG	5CG	8CG	9CG	8CG	8CG	9CG	10CG	6CG	8CG	10CG	9AG	124-126
127-129	3DG	5DG	7DG	9DG	7DG	7DG	8DG	9DG	4DG	6DG	8DG	10CG	8DG	9DG	9CG	10CG	7CG	8CG	10CG	10BG	127-129
130-132	3DG	5DG	8DG	9DG	7DG	8DG	8DG	10DG	4DG	6DG	9DG	10CG	8DG	9DG	10CG	11CG	7CG	9CG	11CG	11BG	130-132
133-135	3DG	5DG	8DG	9DG	7DG	8DG	9DG	10DG	5DG	6DG	9DG	11DG	9DG	9DG	10DG	11DG	8DG	10DG	12DG	11CG	133-135
MAXIMUM RESULTS FOR LARGE ATTACKS																					
136-138	3EG	6DG	8DG	10DG	7DG	8DG	9DG	11DG	5DG	6DG	10DG	11DG	9DG	10DG	11DG	11DG	8DG	10DG	12DG	12CG	136-138
139-141	3EG	6EG	9EG	10EG	8EG	9EG	9EG	11EG	5EG	7EG	10EG	12DG	9EG	10EG	11DG	13DG	9DG	11DG	13DG	13DG	139-141
142-144	3EG	6EG	9EG	11EG	8EG	9EG	10EG	12EG	5EG	7EG	11EG	12EG	10EG	11EG	12EG	13EG	9EG	11EG	13EG	13DG	142-144
145-147	3EG	6EG	9EG	11EG	8EG	9EG	10EG	12EG	5EG	7EG	11EG	13EG	10EG	11EG	12EG	14EG	10EG	12EG	14EG	14EG	145-147
148-150	4EG	7EG	10EG	12FG	9EG	10EG	11EG	13FG	6EG	8EG	12EG	14FG	11EG	12EG	13EG	14FG	11EG	13EG	15FG	15FG	148-150
MAXIMUM RESULTS FOR HUGE ATTACKS																					

NOTE: *An F-severity critical result indicates an E-critical roll and a C-critical roll.*

NOTE: *For each consecutive round that a creature obtains a critical strike result on the same target (on this table), the creature obtains +10 against that target in addition to its other bonuses.*

CRITICAL STRIKES: **P** = *Puncture* **S** = *Slash* **K** = *Krush* **G** = *Grapple* **U** = *Unbalance* **T** = *Tiny*

11.15 HORN/TUSK ATTACK TABLE



	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
01-02	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	01-03
03-30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	03-30
31-33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31-33
34-36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34-36
37-39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37-39
40-42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40-42
43-45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43-45
46-48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46-48
49-51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	49-51
52-54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	52-54
55-57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	3AT	55-57
59-60	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	1	3	4BT	58-60
61-63	0	0	0	1	0	0	0	0	0	0	0	1	0	0	1	3	0	2	4AT	5CT	61-63
64-66	0	0	0	2	0	0	0	1	0	0	0	2	0	0	2	4AT	0	3	5BT	6DT	64-66
67-69	0	0	1	3	0	0	1	1	0	0	1	3	0	0	3	5BT	1	4	6CT	7AP	67-69
70-72	0	0	1	4	0	0	1	2	0	0	1	4	1	0	4AT	6CT	2	5	7DT	8AP	70-72
73-75	0	0	2	5	1	1	2	3	0	0	2	5AT	1	1	5BT	7DT	3	6AT	8AP	9AP	73-75
76-78	0	0	2	6	1	1	3	4	0	1	3	6BT	2	1	6CT	8AP	4	7BT	9AP	10AP	76-78
79-81	0	1	4	6	2	2	4	5AT	0	1	4	7CT	3	2AT	7DT	9AP	5AT	8CT	10AP	11AP	79-81
82-84	0	1	5	7	3	3	5	6BT	1	2	5AT	8DT	4AT	3BT	8AP	10AP	6BT	9DT	11AP	12AP	82-84
85-87	0	2	5	8	4	4	6AT	7CT	1	3AT	6BT	9AP	5BT	4CT	9AP	11AP	7CT	10AP	12AP	13AP	85-87
88-90	1	3	6AT	9AT	5	5	6BT	8DT	2	4BT	7CT	10AP	5CT	5DT	10AP	12AP	8DT	11AP	13AP	14AP	88-90
91-93	1	4AT	7BT	10BT	6	6	7CT	9AP	3AT	5CT	8DT	11AP	6DT	6AP	11AP	13AP	9AP	12AP	14AP	15BP	91-93
94-96	2	5BT	8CT	11CT	6AT	6AT	8DT	10AP	4BT	6DT	9AP	12AP	7AP	7AP	12AP	14AP	10AP	13AP	15BP	16BP	94-96
97-99	3	5CT	9DT	11DT	7BT	7BT	9AP	11AP	5CT	7AP	9AP	13AP	8AP	8AP	13AP	15BP	11AP	14AP	16BP	17BP	97-99
100-102	4AT	6DT	9AP	12AP	8CT	8CT	10AP	12AP	6DT	8AP	10AP	14BP	9AP	9BP	14BP	16BP	12AP	15AP	17BP	18BP	100-102
103-105	5BT	7AU	10AP	13AP	9DT	9DT	11AP	13BP	7AP	9AP	11AP	15BP	9AP	10AP	15BP	17BP	13AP	16AP	18BP	19BP	103-105
	MAXIMUM RESULTS FOR SMALL ATTACKS																				
106-108	6CT	8AK	11AP	14AP	10AP	10AP	12AP	14AP	7AP	10AP	12AP	16BP	10AP	11BP	16BP	18CP	14AP	17BP	19BP	20CP	106-108
109-111	6DT	9AP	12AP	15AP	11AP	11AP	12AP	14BP	8AP	11AP	13BP	17CP	11AP	12BP	17BP	19CP	15AP	18BP	20CP	21DP	109-111
112-114	7AU	10AU	13AP	16BP	11AP	11AP	13BP	15CP	9AP	12AP	14BP	18CP	12BP	13BP	18CP	20CP	16BP	19BP	21CP	22DP	112-114
115-117	8AK	10AK	14AK	16BK	12AP	12AP	14BP	16CP	10AP	12BP	15BP	19CP	13BP	14BP	19CP	21CP	17BP	20CP	22DP	23DP	115-117
118-120	9AP	11BP	14BP	17BP	13AP	13AP	15BP	17CP	11BP	13BP	16CP	20CP	13BP	15CP	20CP	22DP	18CP	21CP	23DP	24DK	118-120
	MAXIMUM RESULTS FOR MEDIUM ATTACKS																				
121-123	10AU	12BU	15BK	18CK	14AP	14BP	16BP	18CP	12BP	14BP	17CP	21DK	14CP	16CP	21CK	23DK	19CK	22CK	24DP	25DP	121-123
124-126	11AK	13BK	16BP	19CP	15BP	15BP	17CP	19DP	13BP	15BP	17CP	22DP	15CP	17CP	22DP	24DP	20DP	23DP	25DK	26EK	124-126
127-129	12AP	14BP	17CK	20CK	16BP	16BP	18CK	20DK	13BP	16CK	18DK	23DK	16CK	18CK	23DK	25DK	21DK	24DK	26EP	27EP	127-129
130-132	12BU	15CU	18CP	21DP	16BK	16CK	18CP	21DP	14CP	17CP	19DP	24DP	17DP	19DP	24DP	26EP	22DP	25DP	27EU	28EU	130-132
133-135	13BK	15CK	18CK	21DK	17CK	17CP	19CK	22DK	15CK	18CK	20DK	25DK	17DK	20DK	25DK	27EK	23DK	26DK	28EK	29EK	133-135
	MAXIMUM RESULTS FOR LARGE ATTACKS																				
136-138	14BP	16CP	19CP	22DP	18CK	18CK	20CP	23EP	16CP	19DP	21DP	26EP	18DP	21DP	26EP	28EP	24EP	27EP	29EP	30EP	136-138
139-141	15CU	17DU	20DU	23EU	19CP	19DP	21DU	24EU	17DU	20DU	22EU	27EU	19EU	22EU	27EU	29EU	25EU	28EU	30EU	31EU	139-141
142-144	16CK	18DK	21DK	24EK	20DK	20DK	22DK	25EK	18DK	21DK	23EK	28EK	20EK	23EK	28EK	30EK	26EK	29EK	31EK	32EK	142-144
145-147	17DP	19EP	22EP	25EP	21DP	21DP	23EP	26EP	19EP	22EP	24EP	29EP	21EP	24EP	29EP	31EP	27EP	30EP	32EP	33EP	145-147
148-150	18EU	20EU	23EU	26FU	22EU	22EU	24EU	27FU	20EU	23EU	25EU	30FU	22EU	25EU	30EU	33FU	29EU	31EU	34FU	35FU	148-150
	MAXIMUM RESULTS FOR HUGE ATTACKS																				



NOTE: *An F-severity critical result indicates an E-critical roll on the Puncture Critical Strike Table and a C-critical roll on the Unbalance Critical Strike Table.*

NOTE: *If the attacking creature is "charging," it obtains +* **20** *on this table in addition to its other bonuses.*

CRITICAL STRIKES: **P** = *Puncture* **S** = *Slash* **K** = *Krush* **G** = *Grapple* **U** = *Unbalance* **T** = *Tiny*

11.16 RAM/BUTT/BASH/KNOCK DOWN/SLUG ATTACK TABLE



	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
01-02	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	01-02
03-30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	03-30
31-33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31-33
34-36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34-36
37-39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37-39
40-42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40-42
43-45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43-45
46-48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	46-48
49-51	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	1	49-51
52-54	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	2	52-54
55-57	0	0	0	1	0	0	0	1	0	0	1	2	0	0	1	2	0	1	2	2	55-57
58-60	0	0	0	2	0	0	0	1	0	0	1	2	0	0	1	2	0	1	2	3	58-60
61-63	0	0	1	2	0	0	1	2	0	0	1	3	1	1	2	3	1	1	3	3	61-63
64-66	0	1	1	3	1	1	1	2	0	0	2	3	1	1	2	3	1	2	3	4	64-66
67-69	1AU	1	1	3	1	1	2	3	0	1	2	4	1	1	3	4	1	2	4	4	67-69
70-72	1AU	1AU	2	4	1AU	1	2	3	1	1	3	4	2	2	3	4	2	3	4	5	70-72
73-75	1AU	2AU	2AU	4	2AU	2AU	3	4	1AU	1	3	5	2	2	4	5	2	3	5	6	73-75
76-78	2AU	2AU	3AU	5AU	2AU	2AU	3	4	1AU	2AU	4	5	3AU	3	4	5	3	4	5	6	76-78
79-81	2AU	2AU	3AU	5AU	3AU	3AU	4AU	5	2AU	2AU	4	6	3AU	3	5	6	3	4	6	7	79-81
82-84	2AU	3AU	4AU	6AU	3AU	3AU	4AU	5AU	2AU	3AU	5AU	6	4AU	4AU	5	7	4	5	7	7	82-84
85-87	3AU	3AU	4AU	6AU	4AU	4AU	5AU	6AU	2AU	3AU	5AU	7AU	4AU	4AU	6	7	4	5	7AK	8	85-87
88-90	3AU	4AU	5AU	7AU	4AU	4AU	5AU	7AU	3AU	4AU	6AU	7AU	5AU	5AU	6AU	8	5AK	5	8AU	8	88-90
91-93	3AU	4AU	5AU	7AK	5AU	5AU	6AU	7AK	3AU	4AU	6AU	8AU	5AU	5AU	7AU	8AK	5AK	6AK	8AK	9	91-93
94-96	4AU	4AU	6AU	8AU	5AU	5AU	6AU	8AU	4AU	5AU	7AU	8AU	5AU	6AU	7AU	9AU	6AU	6AU	9AU	9AK	94-96
97-99	4AU	5AU	6AU	8AK	6AU	6AU	7AU	8AK	4AU	5AU	7AU	9AK	6AU	6AU	8AK	9AK	6AK	7AK	9AK	10AK	97-99
100-102	4AU	5AU	7AU	9BU	6AU	6AU	7AU	9AU	4AU	5AU	8AU	9AU	6AU	7AU	8AU	10AU	7AU	7AU	10AU	11AU	100-102
103-105	5AU	6AU	7AK	9BK	7AU	7AU	8AK	9AK	5AU	6AU	8AU	10AK	7AK	7AU	9AK	10AK	7AK	8AK	10AK	11AK	103-105
	MAXIMUM RESULTS FOR SMALL ATTACKS																				
106-108	5BU	6BU	8BU	10BU	7AU	7AU	8AU	10BU	5BU	6BU	9AU	10AU	7BU	8AU	9AU	11AU	8AU	8AU	11AU	12AU	106-108
109-111	5BU	6BU	8BK	10BK	7BU	7BU	9BK	10BK	6BU	7BU	9BK	11BK	8BK	8AK	10AK	11AK	8AK	9AK	11BK	12AK	109-111
112-114	6BU	7BU	9BU	11CU	8BU	8BU	9BU	11BU	6BU	7BU	10BU	11BU	8BU	9BU	10BU	12BU	9BU	9BU	12BU	13AU	112-114
115-117	6BU	7BK	9BK	11CK	8BK	8BK	10BK	11CK	6BU	8BU	10BK	12CK	9BK	9BK	11BK	13BK	9BK	10BK	13CK	13BK	115-117
118-120	6BU	8BU	10BU	12CU	9BU	9BU	10BU	12CU	7BU	8BU	11CU	12CU	9CU	10BU	11BU	13CU	10BU	10BU	13CU	14BU	118-120
	MAXIMUM RESULTS FOR MEDIUM ATTACKS																				
121-123	7BU	8BK	10CK	12CK	9BK	9BK	11CK	13CK	7BU	9BK	11CK	13CK	9CK	10CK	12CK	14CK	10CK	10CK	14CK	14CK	121-123
124-126	7BU	8CU	11CU	13DU	10BU	10CU	11CU	13CU	7CU	9CU	12CU	13CU	10CU	11CU	12CU	14CU	11CU	11CU	14DU	15CU	124-126
127-129	7CU	9CK	11CK	13DK	10CK	10CK	12CK	14DK	8CU	9CK	12DK	14DK	10CK	11CK	13CK	15DK	11CK	11CK	15DK	16DK	127-129
130-132	8CU	9CU	12CU	14DU	11CU	11CU	12CU	14DU	8CU	10CU	13DU	14DU	11DU	12CU	13DU	15DU	12DU	12DU	15DU	16DU	130-132
133-135	8CK	10CK	12CK	14DK	11CK	11CK	13CK	15DK	9CK	10CK	13DK	15DK	11DK	12CK	14DK	16DK	12DK	12DK	16EK	17DK	133-135
	MAXIMUM RESULTS FOR LARGE ATTACKS																				
136-138	8CU	10CU	13CU	15EU	12CU	12CU	13CU	15DU	9CU	11CU	14DU	15DU	12DU	13DU	14DU	16EU	13DU	13DU	16EU	17EU	136-138
139-141	9DK	10DK	13DK	15EK	12CK	12DK	14DK	16EK	9DK	11DK	14EK	16EK	12EK	13DK	15EK	17EK	13EK	13EK	17EK	18EK	139-141
142-144	9DU	11DU	14DU	16EU	13DU	13DU	14DU	16EU	10DU	12DU	15EU	16EU	13EU	14EU	15EU	17EU	14EU	14EU	17EU	18EU	142-144
145-147	9EK	11EK	14EK	16EK	13DK	13DK	15EK	17EK	10EK	12DK	15EK	17EK	13EK	14EK	16EK	18EK	14EK	14EK	18EK	19EK	145-147
148-150	10EU	12EU	15EU	17FU	14EU	14EU	15EU	18FU	11EU	13EU	16EU	18FU	14FU	15FU	17FU	19FU	15FU	15FU	19FU	20EU	148-150
	MAXIMUM RESULTS FOR HUGE ATTACKS																				



NOTE: *An F-severity critical result indicates an E-critical roll on Unbalance Critical Strike Table and a C-critical roll on the Krush Critical Strike Table.*
NOTE: *If the attacking creature is "charging," it obtains +20 on this table in addition to any other bonuses.*

CRITICAL STRIKES: **P** = *Puncture* **S** = *Slash* **K** = *Krush* **G** = *Grapple* **U** = *Unbalance* **T** = *Tiny*

11.17 STINGER ATTACK TABLE







	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
01-02	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	01-02
03-30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	03-30
31-33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31-33
34-36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34-36
37-39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37-39
40-42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	40-42
43-45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	43-45
46-48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	46-48
49-51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	49-51
52-54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	2	52-54
55-57	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	1	1	2	2AT	55-57
58-60	0	o	0	1	0	0	0	1	0	0	0	1	0	0	0	1	1	1	2AT	2AT	58-60
61-63	0	0	0	1	0	0	0	1	0	0	0	1	1	1	1	2	1	2	2AT	3AT	61-63
64-66	0	0	1	1	0	0	1	1	0	0	1	2	1	1	1	2	2	2	3AT	3AT	64-66
67-69	0	0	1	2	0	0	1	2	0	0	1	2	1	1	1	2	2	2AT	3AT	3AT	67-69
70-72	0	0	1	2	0	0	1	2	0	0	1	2	1	1	2	3	2	3AT	3AT	4AT	70-72
73-75	0	0	1	2	0	1	1	2	0	0	1	3	1	1	2	3AT	2	3AT	4AT	4AT	73-75
76-78	0	0	2	3	1	1	2	3	0	0	2	3	2	2	2	3AT	3	3AT	4AT	4BT	76-78
79-81	0	1	2	3	1	1	2	3AT	0	0	2	3AT	2	2	3AT	4AT	3AT	4AT	4BT	4BT	79-81
82-84	0	1	2	3AT	1	1	2	3AT	0	1	2	4AT	2	2	3AT	4AT	3AT	4AT	5BT	5BT	82-84
85-87	0	1	2	3AT	1	1	3	4AT	0	1	3AT	4AT	2	2AT	3AT	4AT	4AT	4AT	5BT	5BT	85-87
88-90	0	1	3	4AT	1	2	3AT	4AT	1	1AT	3AT	4AT	2AT	2AT	4AT	5AT	4AT	4BT	5BT	5CT	88-90
91-93	0	1	3AT	4AT	2	2	3AT	4AT	1	1AT	3AT	5AT	3AT	3AT	4AT	5BT	4AT	5BT	6CT	6CT	91-93
94-96	1	2	3AT	4AT	2	2	3AT	5BT	1	2AT	4AT	5AT	3AT	3AT	4AT	5BT	4AT	5BT	6CT	6CT	94-96
97-99	1	2AT	3AT	5AT	2AT	2AT	4AT	5BT	1	2AT	4AT	5BT	3AT	3AT	5BT	6BT	5AT	5BT	6CT	6CT	97-99
100-102	1	2AT	4AT	5BT	2AT	2AT	4AT	5BT	1AT	2AT	4AT	6BT	3AT	3AT	5BT	6BT	5BT	6BT	6CT	7CT	100-102
103-105	1AT	2AT	4AT	5BT	2AT	3AT	4AT	6BT	2AT	2AT	5BT	6BT	3AT	3AT	5BT	6CT	5BT	6CT	7CT	7CT	103-105
	MAXIMUM RESULTS FOR SMALL ATTACKS																				
106-108	1AT	2AT	4AT	5BT	3AT	3AT	5AT	6CT	2AT	3AT	5BT	7CT	4AT	4BT	6BT	7CT	6BT	6CT	7CT	7DT	106-108
109-111	1AT	3AT	4AT	6BT	3AT	3AT	5BT	6CT	2AT	3BT	5BT	7CT	4BT	4BT	6CT	7CT	6BT	7CT	7DT	8DT	109-111
112-114	2AT	3AT	5BT	6CT	3AT	3AT	5BT	7CT	2AT	3BT	6BT	7CT	4BT	4BT	6CT	7CT	6CT	7CT	8DT	8DT	112-114
115-117	2AT	3AT	5BT	6CT	3AT	3AT	5BT	7CT	2AT	4BT	6CT	8CT	4BT	4CT	7CT	8CT	6CT	7CT	8DT	8DT	115-117
118-120	2AT	3BT	5BT	7CT	3BT	4BT	6BT	7CT	3AT	4BT	6CT	8CT	4CT	4CT	7CT	8DT	7CT	7DT	8DT	8DT	118-120
	MAXIMUM RESULTS FOR MEDIUM ATTACKS																				
121-123	2AT	4BT	5BT	7CT	4BT	4BT	6CT	8DT	3BT	4BT	7CT	8DT	5CT	5CT	7DT	8DT	7CT	8DT	9DT	9ET	121-123
124-126	2AT	4BT	6CT	7DT	4BT	4BT	6CT	8DT	3BT	4CT	7CT	9DT	5CT	5CT	8DT	9DT	7DT	8DT	9ET	9ET	124-126
127-129	2BT	4BT	6CT	7DT	4BT	4BT	7CT	8DT	3BT	5CT	7DT	9DT	5CT	5CT	8DT	9DT	8DT	8DT	9ET	9AP	127-129
130-132	3BT	4BT	6CT	8DT	4CT	4CT	7CT	9DT	3BT	5CT	8DT	9DT	5DT	5DT	8DT	9ET	8ET	9DT	10AP	10AP	130-132
133-135	3BT	4CT	6CT	8DT	4CT	5CT	7CT	9DT	4BT	5DT	8DT	10DT	5DT	5DT	9ET	10AP	8AP	9AP	10AP	10AP	133-135
	MAXIMUM RESULTS FOR LARGE ATTACKS																				
136-138	3BT	5CT	7CT	8ET	5CT	5CT	7DT	9ET	4CT	5DT	8DT	10ET	6DT	6DT	9AP	10AP	8AP	9AP	10AP	10AP	136-138
139-141	3CT	5CT	7DT	9ET	5DT	5DT	8DT	10ET	4CT	6DT	9ET	10AP	6ET	6ET	9AP	10AP	9AP	10AP	11AP	11BP	139-141
142-144	3CT	5DT	7DT	9ET	5DT	5DT	8ET	10ET	4DT	6ET	9AP	11AP	6AP	6AP	10AP	11AP	9AP	10AP	11BP	11BP	142-144
145-147	3DT	5ET	7ET	9ET	5ET	5ET	8AP	10ET	4ET	6ET	9AP	11AP	6AP	6AP	10AP	11AP	9AP	10BP	11BP	11BP	145-147
148-150	4ET	6AP	8AP	10BP	6AP	6AP	9AP	11BP	5ET	7AP	10AP	12BP	7AP	7AP	11BP	12BP	10BP	11BP	12BP	12BP	148-150
	MAXIMUM RESULTS FOR HUGE ATTACKS																				

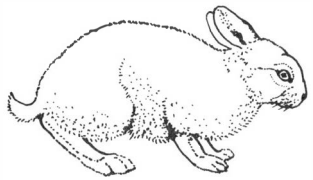
NOTE: *A critical result means the attack has injected poison, in addition to a normal critical result (if applicable).*

NOTE: *Swarms of very small creatures (i.e., bees) could roll on this table as a small attack.*

NOTE: *A really huge stinger (longer than 1') should use the Horn Attack Table.*

CRITICAL STRIKES: **P** = *Puncture* **S** = *Slash* **K** = *Krush* **G** = *Grapple* **U** = *Unbalance* **T** = *Tiny*

11.18 TINY ANIMAL ATTACK TABLE







	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
01-02	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	01-02
03-30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	03-30
31-33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31-33
34-36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	34-36
37-39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	37-39
40-42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	40-42
43-45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2	43-45
46-48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	2AT	46-48
49-51	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	1	2AT	2AT	49-51
52-54	0	0	0	1	0	0	0	1	0	0	0	1	0	0	1	1	1	1	2AT	3AT	52-54
55-57	0	0	0	1	0	0	0	1	0	0	0	1	0	0	1	2	1	1	3AT	3AT	55-57
58-60	0	0	1	2	0	0	1	2	0	0	1	2	0	0	1	2	1	2	3AT	3AT	58-60
61-63	0	0	1	2	0	0	1	2	0	0	1	2	0	0	1	2	1	2	3AT	4AT	61-63
64-66	0	0	1	2	0	0	1	2	0	0	1	2	0	0	2	3AT	2	2	4AT	4BT	64-66
67-69	0	0	1	3	0	0	1	3	0	0	1	3	1	1	2	3AT	2	3AT	4AT	5BT	67-69
70-72	0	0	2	3	0	1	2	3	0	0	2	3	1	1	2AT	3AT	2	3AT	4BT	5BT	70-72
73-75	0	1	2	3	1	1	2	3	0	0	2	3AT	1	1	3AT	4AT	3	3AT	5BT	5BT	73-75
76-78	0	1	2	4	1	1	2	4AT	0	1	2	4AT	1	1AT	3AT	4AT	3	4AT	5BT	6BT	76-78
79-81	0	1	3	4AT	1	1	3	4AT	0	1	3	4AT	2AT	2AT	3AT	4AT	3AT	4AT	5BT	6CT	79-81
82-84	0	1	3	4AT	1	1	3	4AT	1	1	3AT	4AT	2AT	2AT	4AT	5AT	4AT	4AT	6BT	6CT	82-84
85-87	0	1	3	5AT	1	1	3AT	5AT	1	1	3AT	5AT	2AT	2AT	4AT	5BT	4AT	5AT	6CT	7CT	85-87
88-90	1	2	4AT	5AT	2	2	4AT	5AT	1	2	4AT	5AT	2AT	2AT	4AT	5BT	4AT	5BT	6CT	7CT	88-90
91-93	1	2AT	4AT	5AT	2	2	4AT	5BT	1	2AT	4AT	5AT	3AT	3AT	5BT	6BT	5AT	5BT	7CT	8CT	91-93
94-96	1	2AT	4AT	6AT	2AT	2AT	4AT	6BT	1	2AT	4AT	6BT	3AT	3BT	5BT	6BT	5AT	6BT	7CT	8CT	94-96
97-99	1	2AT	4AT	6AT	2AT	2AT	4AT	6BT	1AT	2AT	4AT	6BT	3BT	3BT	5BT	6CT	5AT	6BT	8CT	8CT	97-99
100-102	1AT	3AT	5AT	6BT	2AT	2AT	5AT	6BT	2AT	3AT	5AT	6BT	3BT	3BT	6BT	6CT	6BT	6BT	8CT	9CT	100-102
103-105	2AT	3AT	5AT	7BT	3AT	3AT	5AT	7CT	2AT	3AT	5BT	7CT	4BT	4BT	6CT	7CT	6BT	7CT	8CT	9CT	103-105
NORMAL MAXIMUM RESULTS FOR AN ATTACK																					
106-108	2AT	3AT	5BT	7BT	3AT	3AT	5BT	7CT	2AT	3AT	5BT	7CT	4BT	4CT	6CT	7CT	6BT	7CT	9CT	9CT	106-108
109-111	2AT	3AT	6BT	7BT	3AT	3AT	6BT	7CT	2AT	3AT	6BT	7CT	4CT	4CT	6CT	7CT	6BT	7CT	9CT	10CT	109-111
112-114	2AT	4BT	6BT	8CT	3AT	3AT	6BT	8CT	2AT	4BT	6BT	8CT	4CT	4CT	7CT	8CT	7CT	8CT	9CT	10CT	112-114
115-117	2AT	4BT	6BT	8CT	3BT	3AT	6BT	8CT	3AT	4BT	6CT	8CT	5CT	5CT	7CT	8CT	7CT	8CT	10CT	10DT	115-117
118-120	3AT	4BT	7BT	8CT	4BT	4BT	7CT	8CT	3AT	4BT	7CT	8CT	5CT	5CT	7CT	8CT	7CT	8CT	10CT	11DT	118-120
MAXIMUM RESULTS FOR AN ATTACK THE ROUND AFTER A CRITICAL RESULT																					
121-123	3AT	4BT	7CT	9CT	4BT	4BT	7CT	9CT	3BT	4BT	7CT	9CT	5CT	5CT	8CT	9DT	8CT	9CT	10DT	11DT	121-123
124-126	3BT	5BT	7CT	9CT	4BT	4BT	7CT	9CT	3BT	5BT	7CT	9CT	5CT	5CT	8CT	9DT	8CT	9CT	11DT	12DT	124-126
127-129	3BT	5CT	7CT	9CT	4BT	4BT	7CT	9CT	3BT	5CT	7CT	9DT	6CT	6CT	8DT	9DT	8CT	9DT	11DT	12DT	127-129
130-132	3BT	5CT	8CT	10CT	4CT	4CT	8CT	10DT	3BT	5CT	8CT	10DT	6CT	6CT	9DT	10DT	9CT	10DT	11DT	12DT	130-132
133-135	4BT	5CT	8CT	10DT	5CT	5CT	8CT	10DT	4BT	5CT	8CT	10DT	6DT	6DT	9DT	10DT	9DT	10DT	12DT	13DT	133-135
MAXIMUM RESULTS FOR AN ATTACK THE ROUND AFTER TWO CONSECUTIVE CRITICAL RESULTS																					
136-138	4BT	6CT	8CT	10DT	5CT	5CT	8CT	10DT	4CT	6CT	8DT	10DT	6DT	6DT	9DT	10DT	9DT	10DT	12DT	13DT	136-138
139-141	4CT	6CT	9CT	11DT	5CT	5CT	9CT	11DT	4CT	6CT	9DT	11DT	7DT	7DT	10DT	11DT	10DT	11DT	12DT	13DT	139-141
142-144	4CT	6CT	9DT	11DT	5CT	5CT	9DT	11DT	4CT	6DT	9DT	11DT	7DT	7DT	10DT	11DT	10DT	11DT	13DT	14DT	142-144
145-147	4CT	6DT	9DT	11DT	5CT	5DT	9DT	11DT	4CT	6DT	9DT	11DT	7DT	7DT	10DT	11DT	10DT	11DT	13DT	14DT	145-147
148-150	5DT	7DT	10DT	12DT	6DT	6DT	10DT	12DT	5DT	7DT	10DT	12DT	8DT	8DT	11DT	12DT	11DT	12DT	14DT	15DT	148-150
MAXIMUM RESULTS FOR AN ATTACK THE ROUND AFTER THREE OR MORE CONSECUTIVE CRITICAL RESULTS																					

NOTE: *This table is used only for very small animals (e.g. house cats).*

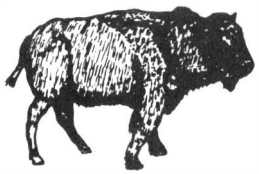
NOTE: *The maximum result depends upon how many consecutive critical results were achieved in the rounds immediately preceeding the attack.*

CRITICAL STRIKES: **P** = *Puncture* **S** = *Slash* **K** = *Krush* **G** = *Grapple* **U** = *Unbalance* **T** = *Tiny*

11.19 TRAMPLE/STOMP ATTACK TABLE



	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
01-02	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	01-02
03-30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	03-30
31-33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	31-33
34-36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	34-36
37-39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	37-39
40-42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2AT	4AT	40-42
43-45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	1	3BT	5BT	43-45
46-48	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	3	0	1	4CT	6CT	46-48
49-51	0	0	0	1	0	0	1	1	0	0	0	2	0	0	1	4AT	1	2	5DT	7DT	49-51
52-54	0	0	0	1	0	0	1	2	0	0	0	3	0	0	2	5BT	1	3	6ET	8ET	52-54
55-57	0	0	1	2	0	1	2	3	0	0	1	4	1	1	3	6CT	2	4AT	7AK	9AK	55-57
58-60	0	0	1	3	1	1	2	4	0	0	1	5	1	2	4AT	7DT	3	5BT	8AK	10AK	58-60
61-63	0	0	2	4	1	2	3	4AT	0	0	2	6	2	3AT	5BT	8ET	4AT	6CT	9AK	11AK	61-63
64-66	0	0	2	4	2	2	4	5BT	0	1	3	7AT	3AT	4BT	6CT	9AK	5BT	7DT	10AK	12AK	64-66
67-69	0	1	3	5	2	3	4	6CT	0	1	3	7BT	4BT	5CT	7DT	10AK	6CT	8ET	11AK	13AK	67-69
70-72	0	1	4	6AT	3	3	5AT	7DT	1	2	4	8CT	5CT	6DT	8ET	11AK	7DT	9AK	12AK	14AK	70-72
73-75	0	2	4	7BT	3	4	6BT	8ET	1	2	5AT	9DT	6DT	7ET	9AK	12AK	8ET	10AK	13AK	15AK	73-75
76-78	0	2	5	7CT	4	4	6CT	8AK	2	3	6BT	10ET	7ET	8AK	10AK	13AK	9AK	11AK	14BK	16BK	76-78
79-81	1	3	5AT	8DT	4	5AT	7DT	9AK	2	4	6CT	11AK	8AK	9AK	11AK	14AK	10AK	11AK	15BK	17BK	79-81
82-84	1	4AT	6BT	9ET	5AT	5BT	8ET	10AK	3	4AT	7DT	12AK	9AK	10AK	12AK	15BK	11AK	12AK	16BK	18BK	82-84
85-87	2	4BT	7CT	10AK	6BT	6CT	8AK	11AK	3	5BT	8ET	13AK	10AK	11AK	13AK	16BK	11AK	13AK	17BK	19BK	85-87
88-90	2	5CT	7DT	10AK	6CT	7DT	9AK	12AK	4AT	6CT	9AK	13AK	11AK	12AK	14BK	17BK	12AK	14BK	18BK	20BK	88-90
91-93	3AT	6DT	8ET	11AK	7DT	7ET	9AK	12AK	5BT	6DT	9AK	14AK	12AK	13AK	15BK	18BK	13AK	15BK	19BK	21BK	91-93
94-96	4BT	6ET	8AK	12AK	7ET	8AK	10AK	13BK	5CT	7ET	10AK	15BK	13AK	14BK	16BK	19BK	14BK	16BK	20BK	22CK	94-96
97-99	4CT	7AK	9AK	13AK	8AK	8AK	11AK	14BK	6DT	8AK	11AK	16BK	14AK	15BK	17BK	20CK	15BK	17BK	21CK	23CK	97-99
100-102	5DT	7AK	10AK	13BK	8AK	9AK	11AK	15BK	6ET	8AK	12AK	17CK	15BK	16BK	18CK	21CK	16BK	18CK	22CK	24CK	100-102
103-105	5ET	8AK	10AK	14BK	9AK	9AK	12BK	16CK	7AK	9AK	12BK	18CK	15BK	17BK	19CK	22CK	17BK	19CK	23CK	25CK	103-105
	MAXIMUM RESULTS FOR SMALL ATTACKS																				
106-108	6AK	9AK	11AK	15BK	10AK	10AK	13BK	16CK	7AK	10AK	13BK	19CK	16BK	18CK	20CK	23CK	18CK	20CK	24CK	26CK	106-108
109-111	7AK	9AK	12BK	16CK	10AK	10BK	13BK	17CK	8AK	10AK	14BK	19CK	17BK	19CK	21CK	24CK	19CK	21CK	25CK	27CK	109-111
112-114	7AK	10AK	12BK	16CK	11AK	11BK	14BK	18CK	9AK	11BK	15CK	20CK	18CK	20CK	22CK	25CK	20CK	22CK	26CK	28CK	112-114
115-117	8AK	11BK	13BK	17CK	11BK	11BK	15CK	19CK	9AK	11BK	15CK	21CK	19CK	21CK	23CK	26CK	21CK	22CK	27CK	29CK	115-117
118-120	8AK	11BK	13BK	18CK	12BK	12BK	15CK	20CK	10BK	12BK	16CK	22CK	20CK	22CK	24CK	27CK	21CK	23CK	28CK	30CK	118-120
	MAXIMUM RESULTS FOR MEDIUM ATTACKS																				
121-123	9BK	12BK	14CK	19CK	12BK	13BK	16CK	20CK	10BK	13BK	17CK	23DK	21CK	23CK	25DK	28DK	22CK	24DK	29DK	31DK	121-123
124-126	10BK	12BK	15CK	19CK	13BK	13CK	16CK	21CK	11BK	13BK	18CK	24DK	22CK	24CK	26DK	29DK	23DK	25DK	30EK	32DK	124-126
127-129	10BK	13CK	15CK	20DK	14CK	14CK	17CK	22DK	11BK	14CK	18DK	25DK	23DK	25DK	27DK	30EK	24DK	26DK	31EK	33EK	127-129
130-132	11BK	14CK	16CK	21DK	14CK	14CK	18CK	23DK	12CK	15CK	19DK	25EK	24DK	26DK	28EK	31EK	25DK	27EK	32EK	34EK	130-132
133-135	11CK	14CK	16CK	22EK	15CK	15CK	18DK	24EK	13CK	15CK	20DK	26EK	25DK	27DK	29EK	32EK	26EK	28EK	33EK	35EK	133-135
	MAXIMUM RESULTS FOR LARGE ATTACKS																				
136-138	12CK	15CK	17DK	22EK	15CK	15DK	19DK	24EK	13CK	16CK	21EK	27EK	26EK	28EK	30EK	33EK	27EK	29EK	34EK	36EK	136-138
139-141	13DK	16DK	18DK	23EK	16DK	16DK	20DK	25EK	14DK	17DK	21EK	28EK	27EK	29EK	31EK	34EK	28EK	30EK	35EK	37EK	139-141
142-144	13DK	16DK	18DK	24EK	16DK	16DK	20EK	26EK	14DK	17DK	22EK	29EK	28EK	30EK	32EK	35EK	29EK	31EK	36EK	38EK	142-144
145-147	14EK	17EK	19EK	25EK	17EK	17EK	21EK	27EK	15EK	18EK	23EK	30FK	29EK	31EK	33EK	36EK	30EK	32EK	37EK	39EK	145-147
148-150	14FK	18FK	20FK	26FK	18FK	18FK	22FK	28FK	16FK	19FK	24FK	31FK	30FK	32FK	34FK	37FK	31FK	33FK	38FK	40FK	148-150
	MAXIMUM RESULTS FOR HUGE ATTACKS																				



NOTE: *An F-severity critical indicates an E-critical roll and a C-critical roll.*

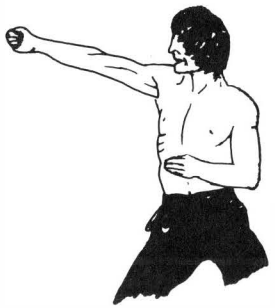
NOTE: *If the target is down the attacker obtains +30 in addition to its other bonuses.*

CRITICAL STRIKES: **P** = *Puncture* **S** = *Slash* **K** = *Krush* **G** = *Grapple* **U** = *Unbalance* **T** = *Tiny*

11.22 MARTIAL ARTS STRIKING ATTACK TABLE







	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
01-02	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	01-02
03-30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	03-30
31-33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31-33
34-36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34-36
37-39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37-39
40-42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	40-42
43-45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	43-45
46-48	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	1	2	2	46-48
49-51	0	0	0	0	0	1	1	1	0	0	0	1	0	1	1A	2	1	1	2	3	49-51
52-54	0	0	0	1	0	1	1	2	0	0	1	1	1	1	2A	2	1	2	3	3	52-54
55-57	0	0	1	1	1	1	2	2	0	0	1	2	1	2	2A	3	2	2	4	4A	55-57
58-60	0	0	1	2	1	2	2	3	0	0	2	2	2	2	3A	4A	2	3	4A	5A	58-60
61-63	0	0	1	2	1	2	3	4	0	1	2	3	2	3	4A	4A	3	4	5A	5A	61-63
64-66	0	0	2	3	2	3	3	4	0	1	3	3	3	3A	4A	5A	3	4A	6A	6A	64-66
67-69	0	1	2	3	2	3	4	5	0	1	3	4	3A	4A	5A	6A	4	5A	6A	7A	67-69
70-72	0	1	3	4	3	4	5	5A	1	2	4	4	4A	4A	5A	6A	5A	5A	7A	7A	70-72
73-75	0	1	3	4	3	4	5	6A	1	2	4	5A	4A	5A	6A	7A	5A	6A	8A	8A	73-75
76-78	0	2	4	5	4	5	6A	7A	1	3	5	5A	5A	5A	7A	8A	6A	7A	8A	9A	76-78
79-81	1	2	4	5	4	5A	6A	7A	2	3	5A	6A	5A	6A	7B	8A	6A	7A	9A	9A	79-81
82-84	1	3	5	6A	5A	6A	7A	8A	2	4	6A	7A	6A	7A	8B	9A	7A	8A	9A	10A	82-84
85-87	1	3	5	6A	5A	6A	7A	9A	3	4	6A	7A	6A	7A	9B	10A	7A	9A	10A	11A	85-87
88-90	2	4	5A	7A	6A	7A	8A	9A	3	5A	7A	8A	7A	8A	9B	10A	8A	9A	11A	11A	88-90
91-93	2	4	6A	7A	6A	7A	9A	10A	4	5A	7A	8A	7B	8B	10B	11B	9A	10B	11B	12B	91-93
94-96	2	5A	6A	8A	7A	8A	9A	10A	4	6A	8A	9A	8B	9B	10B	12B	9A	10B	12B	13B	94-96
97-99	3	5A	7A	8A	7A	8A	10A	11A	5A	6A	8A	9A	8B	9B	11C	12B	10A	11B	13B	13B	97-99
100-102	3	5A	7A	9A	8A	9A	10A	12A	5A	7A	9A	10A	9B	10B	12C	13B	10A	12B	13B	14B	100-102
103-105	4A	6A	8A	10B	8B	9B	11B	12B	6A	7A	9B	10B	9B	10B	12C	14B	11B	12B	14B	15B	103-105
MAXIMUM RESULTS FOR RANK 1 ATTACKS																					
106-108	4A	6A	8A	10B	9B	10B	11B	13B	6A	8A	10B	11B	10C	11C	13C	14C	11B	13C	15C	15C	106-108
109-111	4A	7A	9A	11B	9B	10B	12B	13B	7A	8A	10B	11B	10C	11C	13C	15C	12B	13C	15C	16C	109-111
112-114	5A	7A	9A	11B	10B	11B	13B	14B	7A	9A	11B	12B	11C	12C	14C	16C	13B	14C	16C	17C	112-114
115-117	5A	8B	10B	12C	10C	11C	13C	15C	7B	9B	11C	13C	11C	13C	15C	16C	13C	15C	16C	17C	115-117
118-120	6A	8B	10B	12C	11C	12C	14C	15C	8B	10B	12C	13C	12C	13C	15C	17C	14C	15C	17C	18C	118-120
MAXIMUM RESULTS FOR RANK 2 ATTACKS																					
121-123	6A	9B	10B	13C	11C	12C	14C	16C	8B	10B	12C	14C	12D	14D	16D	18C	14C	16D	18D	19D	121-123
124-126	6A	9C	11C	13C	12C	13C	15C	17C	9C	11C	13C	14C	13D	14D	17D	18D	15C	17D	18D	19D	124-126
127-129	7B	9C	11C	14D	12D	13D	15D	17D	9C	11C	13D	15D	13D	15D	17D	19D	15D	17D	19D	20D	127-129
130-132	7B	10C	12C	14D	13D	14D	16D	18D	10C	12C	14D	15D	14D	15D	18D	20D	16D	18D	20D	21D	130-132
133-135	8C	10D	12D	15D	13D	14D	17D	18D	10D	12D	14D	16D	14D	16D	18E	20D	17D	18D	20D	21D	133-135
MAXIMUM RESULTS FOR RANK 3 ATTACKS																					
136-138	8C	11D	13D	15D	14D	15D	17D	19D	11D	13D	15D	16D	15E	16E	19E	21E	17D	19E	21E	22E	136-138
139-141	8D	11D	13D	16E	14E	15E	18E	20E	11D	13D	15E	17E	15E	17E	20E	22E	18E	20E	22E	23E	139-141
142-144	9D	12E	14E	16E	15E	16E	18E	20E	12E	14E	16E	17E	16E	17E	20E	22E	18E	20E	22E	23E	142-144
145-147	9E	12E	14E	17E	15E	16E	19E	21E	12E	14E	16E	18E	16E	18E	21E	23E	19E	21E	23E	24E	145-147
148-150	10E	13E	15E	18E	16E	17E	20E	22E	13E	15E	17E	19E	17E	19E	22E	24E	20E	22E	24E	25E	148-150
MAXIMUM RESULTS FOR RANK 4 ATTACKS																					

NOTE: *All critical results are rolled on the Martial Arts Striking Critical Table.*
NOTE: *Bare hands attacks by non-martial artists are Rank 1 attacks.*

11.23 MARTIAL ARTS SWEEPS and THROWS ATTACK TABLE







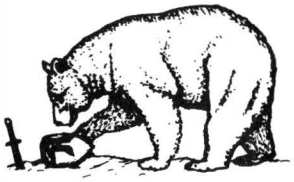
	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
01-02	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	01-02
03-30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	03-30
31-33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31-33
34-36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34-36
37-39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37-39
40-42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40-42
43-45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43-45
46-48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46-48
49-51	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	49-51
52-54	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	52-54
55-57	1A	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	55-57
58-60	1A	1A	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	58-60
61-63	1A	1A	1A	1	1A	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	61-63
64-66	1A	1A	1A	1A	1A	1A	1	0	1	1	0	0	1	0	0	0	0	0	0	0	64-66
67-69	1A	1A	1A	1A	1A	1A	1	1	1A	1	0	0	1A	1	0	0	0	0	0	0	67-69
70-72	1A	1A	1A	2A	2A	1A	1A	1	1A	1A	1	0	1A	1	0	0	0	0	0	0	70-72
73-75	1A	2A	2A	2A	2A	2A	1A	1A	1A	1A	1	1	2A	1A	1	0	0	0	0	0	73-75
76-78	1A	2A	2A	2A	2A	2A	2A	2A	1A	1A	1A	1	2A	2A	1	1	0	0	0	0	76-78
79-81	1A	2A	2A	2A	2A	2A	2A	2A	1A	2A	2A	1A	2A	2A	1A	1	0	0	0	0	79-81
82-84	2A	2A	2A	3A	3A	2A	2A	2A	1A	2A	2A	2A	3A	2A	2A	1A	0	0	0	0	82-84
85-87	2A	2A	3A	3A	3A	3A	3A	3A	2A	2A	2A	2A	3A	3A	2A	2A	0	0	0	0	85-87
88-90	2A	2A	3A	3A	3A	3A	3A	3A	2A	2A	3A	3A	3A	3A	3A	2A	1	0	1	0	88-90
91-93	2B	3B	3B	3B	3B	3B	3A	3A	2B	2A	3A	3A	4B	3A	3A	3A	1	1	1A	0	91-93
94-96	2B	3B	3B	4B	3B	3B	3A	4A	2B	3A	3A	3A	4B	4A	3A	3A	1A	1	2A	1	94-96
97-99	2B	3B	4B	4B	4B	4B	4A	4A	2B	3A	4A	4A	4B	4A	4A	4A	2A	1A	2A	1	97-99
100-102	2B	3B	4B	4B	4B	4B	4A	4A	2B	3A	4A	4A	5B	4A	4A	4A	2A	2A	3A	2A	100-102
103-105	2B	3B	4B	5B	4B	4B	4B	5B	2B	3B	4B	5B	5B	5B	5B	5B	3A	2A	3A	2A	103-105
	MAXIMUM RESULTS FOR RANK 1 ATTACKS																				
106-108	2C	3C	4C	5C	4C	4C	5B	5B	3C	4B	5B	5B	5C	5B	5B	5B	3A	3A	4A	3A	106-108
109-111	2C	3C	4C	5C	5C	4C	5B	5B	3C	4B	5B	5B	5C	5B	5B	6B	3A	3A	4A	4A	109-111
112-114	2C	4C	5C	5C	5C	5C	5B	6B	3C	4B	5B	6B	6C	6B	6B	6B	4A	4A	5A	4A	112-114
115-117	3C	4C	5C	6C	5C	5C	5C	6C	3C	4C	6C	6C	6C	6C	6C	6C	4B	4B	5B	5B	115-117
118-120	3C	4C	5C	6C	5C	5C	6C	6C	3C	4C	6C	7C	6C	6C	7C	7C	5B	5B	6B	5B	118-120
	MAXIMUM RESULTS FOR RANK 2 ATTACKS																				
121-123	3D	4D	5D	6D	5D	5D	6C	7C	3D	5C	6C	7C	7D	7C	7C	7C	5B	5B	7B	6B	121-123
124-126	3D	4D	6D	6D	6D	6D	6C	7C	3D	5C	7C	7C	7D	7C	7C	8C	5C	6C	7C	7C	124-126
127-129	3D	4D	6D	7D	6D	6D	7D	7D	4D	5D	7D	8D	7D	7D	8D	8D	6C	6C	8C	7C	127-129
130-132	3D	5D	6D	7D	6D	6D	7D	8D	4D	5D	7D	8D	8D	8D	8D	9D	6C	7C	8C	8C	130-132
133-135	3D	5D	6D	7D	6D	6D	7D	8D	4D	5D	8D	9D	8D	8D	9D	9D	7D	7D	9D	8D	133-135
	MAXIMUM RESULTS FOR RANK 3 ATTACKS																				
136-138	3E	5E	7E	7E	7E	7E	7D	8D	4E	6D	8D	9D	8E	8D	9D	10D	7D	8D	9D	9D	136-138
139-141	3E	5E	7E	8E	7E	7E	8E	9E	4E	6E	8E	9E	9E	9E	9E	10E	7D	8D	10D	10D	139-141
142-144	3E	5E	7E	8E	7E	7E	8E	9E	4E	6E	9E	10E	9E	9E	10E	11E	8E	9E	10E	10E	142-144
145-147	3E	5E	7E	8E	7E	7E	8E	9E	4E	6E	9E	10E	9E	9E	10E	11E	8E	9E	11E	11E	145-147
148-150	4E	6E	8E	9E	8E	8E	9E	10E	5E	7E	10E	11E	10E	10E	11E	12E	9E	10E	12E	12E	148-150
	MAXIMUM RESULTS FOR RANK 4 ATTACKS																				

NOTE: *All critical results are rolled on the Martial Arts Sweeps and Throws Critical Table.*

NOTE: *Bare hands attacks by non-martial artists are Rank 1 attacks.*

NOTE: *Humanoid type creatures attempting to subdue (without major injury) other humanoid types may use this table* **or** *the Grapple Attack Table (both with a maximum result of* **105***).*

11.21 FALL/CRUSH ATTACK TABLE



	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
01-02	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	01-02
03-30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	03-30
31-33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	31-33
34-36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2AK	34-36
37-39	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	2AK	0	1	3AK	3AK	37-39
40-42	0	0	0	0	0	0	1	2	0	0	0	1	0	1	2AK	3AK	1	2	4AK	4AK	40-42
43-45	0	0	0	1	0	1	2	3	0	0	1	2	1	2AK	3AK	4AK	2	3AK	5AK	6AK	43-45
46-48	0	0	1	1	1	1	3	4	0	0	1	3	1AK	3AK	4AK	5AK	3	4AK	7AK	7AK	46-48
49-51	0	0	1	2	1	2	4	5AK	0	0	2	4	2AK	4AK	5AK	7AK	4AK	5AK	8AK	8AK	49-51
52-54	0	0	2	3	2	3	5	6AK	0	1	3	5AK	3AK	5AK	6AK	8AK	5AK	6AK	9AK	9AK	52-54
55-57	0	0	3	4	3	4	6AK	7AK	0	1	4	6AK	4AK	6AK	7AK	9AK	6AK	8AK	10AK	11AK	55-57
58-60	0	1	4	5	4	5AK	7AK	9AK	0	2	5AK	7AK	5AK	7AK	8AK	10AK	7AK	9AK	11AK	12AK	58-60
61-63	0	1	5	6AK	5AK	6AK	8AK	10AK	1	3	6AK	8AK	6AK	8AK	10AK	11AK	8AK	10AK	13AK	13AK	61-63
64-66	0	2	6	7AK	6AK	7AK	9AK	11AK	1	4	7AK	9AK	7AK	9AK	11AK	13AK	9AK	11AK	14AK	14AK	64-66
67-69	0	3	6AK	8AK	7AK	8AK	10AK	12AK	2	5AK	8AK	10AK	8AK	10AK	12AK	14AK	0AK	12AK	15AK	16AK	67-69
70-72	1	4	7AK	9AK	8AK	9AK	11AK	13AK	3	6AK	9AK	11AK	8AK	11AK	13AK	15AK	11AK	14AK	16AK	17AK	70-72
73-75	1	5AK	8AK	10AK	8AK	10AK	12AK	14AK	4	7AK	10AK	12AK	9AK	12AK	14AK	16AK	12AK	15AK	17AK	18AK	73-75
76-78	2	5AK	9AK	11AK	9AK	11AK	13AK	16AK	5AK	8AK	11AK	13AK	10AK	13AK	15AK	17BK	14AK	16AK	19BK	19BK	76-78
79-81	3	6AK	10AK	12AK	10AK	12AK	14AK	17AK	6AK	9AK	12AK	14AK	11AK	14AK	16BK	19BK	15AK	17AK	20BK	21BK	79-81
82-84	3AK	7AK	11AK	13AK	11AK	13AK	15AK	18BK	7AK	10AK	13AK	15BK	12AK	15BK	18BK	20BK	16BK	18BK	21BK	22BK	82-84
85-87	4AK	8AK	12AK	14AK	12AK	14AK	16AK	19BK	8AK	11AK	14AK	16BK	13AK	16BK	19BK	21BK	17BK	20BK	22BK	23CK	85-87
88-90	5AK	9AK	12AK	15AK	13AK	15AK	17AK	20BK	9AK	12AK	15AK	17BK	14BK	17BK	20BK	22CK	18BK	21BK	23CK	24CK	88-90
91-93	6AK	9AK	13AK	16AK	14AK	16AK	18BK	21BK	9AK	13AK	16BK	18CK	15BK	18BK	21CK	24CK	19BK	22BK	25CK	26CK	91-93
94-96	6AK	10AK	14AK	17BK	15AK	17BK	20BK	23CK	10AK	14AK	17BK	20CK	16BK	19BK	22CK	25CK	20BK	23CK	26CK	27CK	94-96
97-99	7AK	11AK	15AK	18BK	16BK	17BK	21BK	24CK	11AK	15AK	17BK	21CK	16BK	20CK	23CK	26CK	21CK	24CK	27CK	28CK	97-99
100-102	8AK	12AK	16BK	19BK	16BK	18BK	22BK	25CK	12AK	16AK	18BK	22CK	17BK	21CK	24CK	27CK	22CK	25CK	28CK	29CK	100-102
103-105	9AK	13AK	17BK	20BK	17BK	19BK	23BK	26CK	13AK	16BK	19CK	23CK	18CK	22CK	25CK	28CK	23CK	27CK	29CK	31CK	103-105
----------	MAXIMUM RESULTS FOR FALLS OF 1'-10' AND SMALL ATTACKS																				----------
106-108	9AK	13BK	18BK	21CK	18BK	20BK	24CK	27CK	14AK	17BK	20CK	24DK	18CK	23CK	27DK	30DK	24CK	28DK	31DK	32DK	106-108
109-111	10AK	14BK	18BK	22CK	19BK	21BK	25CK	28DK	15AK	18BK	21CK	25DK	20CK	24CK	28DK	31DK	25CK	29DK	32DK	33DK	109-111
112-114	11AK	15BK	19BK	23CK	20BK	22CK	26CK	30DK	16BK	19BK	22CK	26DK	21CK	25CK	29DK	32DK	27DK	30DK	33DK	34DK	112-114
115-117	11BK	16BK	20CK	24CK	21CK	23CK	27CK	31DK	17BK	20BK	23DK	27DK	22CK	26CK	30DK	33DK	28DK	31DK	34DK	36DK	115-117
118-120	12BK	17BK	21CK	25DK	22CK	24CK	28CK	32DK	18BK	21BK	24DK	28DK	23DK	27DK	31DK	34DK	29DK	33DK	35DK	37DK	118-120
----------	MAXIMUM RESULTS FOR FALLS OF 11'-50' AND MEDIUM ATTACKS																				----------
121-123	13BK	17CK	22CK	26DK	23CK	25CK	29CK	33DK	18BK	22CK	25DK	29DK	24DK	28DK	32DK	36DK	30DK	34DK	37DK	38EK	121-123
124-126	14BK	18CK	23CK	27DK	23CK	26CK	30CK	34DK	19BK	23CK	26DK	30DK	24DK	29DK	33DK	37EK	31DK	35DK	38EK	39EK	124-126
127-129	14BK	19CK	24CK	28DK	24CK	27CK	31CK	35DK	20CK	24CK	27DK	31EK	25DK	30DK	35EK	38EK	32DK	36EK	39EK	41EK	127-129
130-132	15CK	20CK	24CK	29DK	25CK	28DK	32DK	37EK	21CK	25CK	28DK	32EK	26DK	31DK	36EK	39EK	33EK	37EK	40EK	42EK	130-132
133-135	16CK	21CK	25DK	30EK	26DK	29DK	33DK	38EK	22CK	26CK	29EK	33EK	27EK	32EK	37EK	40EK	34EK	39EK	41EK	43EK	133-135
----------	MAXIMUM RESULTS FOR FALLS OF 51'-100' AND LARGE ATTACKS																				----------
136-138	17CK	21DK	26DK	31EK	27DK	30DK	34DK	39EK	23CK	27DK	30EK	34EK	28EK	33EK	38EK	42EK	35EK	40EK	43EK	44EK	136-138
139-141	17DK	22DK	27DK	32EK	28DK	31DK	35DK	40EK	24DK	28DK	31EK	35EK	29EK	34EK	39EK	43EK	36EK	41EK	44EK	46EK	139-141
142-144	18DK	23DK	28EK	33EK	29EK	32EK	36EK	41EK	25DK	29DK	32EK	36EK	30EK	35EK	40EK	44EK	37EK	42EK	45EK	47EK	142-144
145-147	19EK	24EK	29EK	34EK	30EK	33EK	37EK	42EK	26EK	30EK	33EK	37FK	31EK	36EK	41EK	45EK	38EK	43EK	46EK	48EK	145-147
148-150	20FK	25FK	30FK	35FK	31FK	34FK	39FK	44FK	27FK	31FK	34FK	39FK	32FK	38FK	43FK	47FK	40FK	45FK	48FK	50FK	148-150
----------	MAXIMUM RESULTS FOR FALLS OF OVER 100' AND HUGE ATTACKS																				----------

NOTE: *For falls, add* **1** *to the roll for each foot fallen (other factors may modify this).*

NOTE: *An F-severity critical result indicates an E-critical roll and a C-critical roll.*

CRITICAL STRIKES: **P** = *Puncture* **S** = *Slash* **K** = *Krush* **G** = *Grapple* **U** = *Unbalance* **T** = *Tiny*

Critical Strikes for Grappling	A	B	C	D	E
01-05	WEAK GRIP. NO BONUS.	INDECISION AND AN OPPORTUNITY LOST.	+1 HIT	+2 HITS	+3 HITS
06-10	+1 HIT	+2 HITS	+3 HITS	+4 HITS	GLANCING ATTACK. YOU HAVE THE INITIATIVE NEXT ROUND. +5 HITS.
11-15	GLANCING ATTACK. NO EXTRA DAMAGE, BUT YOU HAVE THE INITIATIVE NEXT ROUND. PRACTICE.	PASSING STRIKE. YOU HAVE THE INITIATIVE NEXT ROUND. +2 HITS.	GRAZING SIDE STRIKE. YOU RECEIVE THE INITIATIVE NEXT ROUND. +4 HITS.	GLANCING BLOW. YOU RECEIVE THE INITIATIVE NEXT ROUND. +6 HITS.	LAME ATTACK, BUT FOE MUST PARRY NEXT ROUND. +6 HITS
16-20	FOE IS FREE, BUT YOU HAVE THE INITIATIVE NEXT ROUND. +3 HITS.	FOE FENDS OFF ATTACK BUT IS FORCED TO PARRY NEXT ROUND. +2 HITS.	FOE RECOVERS BUT IS FORCED TO PARRY NEXT ROUND. +4 HITS.	SIDE STRIKE UNBALANCES FOE. YOU HAVE INITIATIVE FOR 2 ROUNDS. +5 HITS.	STRONG, PASSING BLOW. FOE IS STUNNED FOR 1 ROUND. +3 HITS.
21-35	GRAZING HIP STRIKE. YOU HAVE THE INITIATIVE NEXT ROUND. +5 HITS.	ATTACK HAS PUNCH, BUT NOTHING MORE. FOE MUST PARRY NEXT ROUND AT -20%.	GLANCING ATTACK. FOE IS STUNNED FOR 1 ROUND. +2 HITS	HARD BUT MISPLACED STRIKE. FOE ELUDES GRIP BUT IS STUNNED FOR 1 ROUND. +3 HITS.	DISJOINTED ATTACK AND A LITTLE LUCK ALLOW FOE TO ESCAPE GRASP. FOE IS STUNNED FOR 1 ROUND. YOU HAVE INITIATIVE 2 ROUNDS.
36-45	BLOW TO LOWER BACK. FOE MUST PARRY NEXT ROUND.	UNBALANCE FOE. +4 HITS. FOE MUST PARRY NEXT ROUND. YOU HAVE INITIATIVE FOR 2 ROUNDS.	FLAILING ATTACK. FOE IS STUNNED 1 ROUND AND MUST PARRY THE FOLLOWING ROUND.	STRIKE TO FOE'S SHIELD ARM. IF FOE HAS SHIELD, +3 HITS. IF NOT, ARM IS CAUGHT FOR 6 ROUNDS (AND IMMOBILE), AND FOE STUNNED 3 ROUNDS.	ATTACK TO UPPER LEG. FOE IS SPUN ABOUT AND BREAKS LOOSE, BUT IS STUNNED AND UNABLE TO PARRY 1 ROUND.
46-50	PASSING HIP STRIKE. FOE MUST PARRY NEXT ROUND AT -20%. +3 HITS.	BLOW TO CHEST STUNS FOE FOR 1 ROUND. +5 HITS	YOUR ATTACK PRODUCES A WEAK GRASP AROUND FOE'S WAIST. FOE IS AT -25% FOR 3 ROUNDS.	ATTACK YIELDS WEAK HOLD AROUND FOE'S CHEST. FOE IS AT -30% FOR 3 ROUNDS. YOU HAVE INITIATIVE 4 ROUNDS.	ATTACK PRODUCES A HOLD AROUND FOE'S LEG. FOE SLIPS AWAY, BUT IS STUNNED 2 ROUNDS AND IS UNABLE TO PARRY NEXT ROUND.
51-55	SLIGHTLY UNBALANCING BLOW TO CHEST. FOE MUST PARRY NEXT ROUND. YOU HAVE INITIATIVE 2 ROUNDS.	BLOW TO BACK STUNS FOE FOR 1 ROUND. +7 HITS	ATTACK YIELDS SLIPPING GRASP AROUND FOE'S LEG. FOE IS STUNNED AND UNABLE TO PARRY 1 ROUND.	ATTACK RESULTS IN SLIPPING GRIP AROUND FOE'S WAIST. FOE IS AT -50% FOR 3 ROUNDS.	FOE BREAKS FREE OF HOLD AROUND SHIELD ARM. FOE IS STUNNED 2 ROUNDS AND UNABLE TO PARRY NEXT ROUND. +5 HITS.
56-60	GLANCING BACK BLOW. FOE MUST PARRY NEXT ROUND AT -25%. YOU HAVE INITIATIVE 2 ROUNDS.	UNBALANCING STRIKE. FOE SPINS FREE BUT IS STUNNED FOR 1 ROUND AND MUST PARRY THE FOLLOWING ROUND.	FOE BREAKS FREE OF HOLD AROUND THIGH, BUT IS STUNNED AND UNABLE TO PARRY 1 ROUND. +3 HITS.	ATTACK PRODUCES HOLD AROUND LEG. GRIP IS SLIPPING BUT FOE STUNNED 3 ROUNDS. +6 HITS.	GRASP AROUND FOE'S LEG. FOE IS STUNNED AND UNABLE TO PARRY 1 ROUND AND IS AT -25% THE FOLLOWING 3 ROUNDS.
61-65	BLOW TO SHOULDER. FOE IS STUNNED 1 ROUND. +3 HITS	SLIPPING GRASP AROUND FOE'S WAIST IS WEAK. FOE IS STUNNED FOR 2 ROUNDS.	GRASP AROUND FOE'S CHEST. FOE IS AT -50% FOR 3 ROUNDS. +3 HITS.	GRASP AROUND FOE'S CHEST. FOE IS STUNNED AND UNABLE TO PARRY FOR 1 ROUND AND IS AT -20% THE FOLLOWING 2 ROUNDS.	ATTACK TO FOE'S SHIELD ARM. IF FOE HAS SHIELD, +6 HITS. IF NOT, FOE IS STUNNED AND UNABLE TO PARRY 3 ROUNDS, TAKES +7 HITS.
66	GRASP AROUND WEAPON ARM DISARMS FOE. +2 HITS. FOE IS STUNNED FOR 2 ROUNDS.	GRASP AROUND WEAPON ARM DISARMS FOE AND SPRAINS HIS WRIST. FOE IS STUNNED 2 ROUNDS, AND FIGHTS AT -25%.	GRASP AROUND BOTH OF FOE'S LEGS. FOE SLIPS AWAY, BUT IS KNOCKED DOWN AND PRONE FOR 1 ROUND. +5 HITS.	GRASP AROUND LEG KNOCKS FOE DOWN. TIGHT GRIP. FOE IS PRONE AND IMMOBILE 2 ROUNDS. +6 HITS.	GRASP FOE AROUND NECK AND KNOCK HIM DOWN. FOE HAS TORN NECK MUSCLES, IS AT -20%. FOE IS PRONE AND IMMOBILE FOR 3 ROUNDS.
67-70	PASSING CHEST STRIKE. FOE ELUDES ENTANGLEMENT BUT MUST PARRY NEXT 2 ROUNDS AT -20%.	ENTANGLE FOE'S LEG. +4 HITS. FOE IS STUNNED AND UNABLE TO PARRY 1 ROUND.	ENTANGLE SHIELD ARM. IF FOE HAS SHIELD, HE IS AT -50% UNTIL HE DROPS IT. IF NOT, FOE IS AT -50%.	ENTANGLE LEG. FOE IS STUNNED FOR 2 ROUNDS AND UNABLE TO PARRY NEXT ROUND. +7 HITS.	ENTANGLE WEAPON ARM. FOE IS STUNNED AND UNABLE TO PARRY FOR 2 ROUNDS, AND AT -75% RD FOLLOWING.
71-75	ATTACK RESULTS IN AN UNEASY HOLD ON FOE'S MIDSECTION. FOE IS AT -50% FOR 2 ROUNDS, +5 HITS.	ATTACK YIELDS A WEAK HOLD AROUND FOE'S LOWER CHEST. FOE IS AT -50% FOR 3 ROUNDS. +4 HITS.	ATTACK RESULTS IN LOOSE GRASP ON FOE'S MIDSECTION. FOE IS STUNNED FOR 2 ROUNDS AND IS AT -50% FOR THE FOLLOWING 3 ROUNDS.	ATTACK YIELDS LOOSE HOLD AROUND FOE'S MIDSECTION. FOE IS STUNNED AND UNABLE TO PARRY 1 ROUND AND IS AT -70% THE FOLLOWING 3 RDS.	ENTANGLE FOE'S LEG. FOE IS KNOCKED DOWN, AND STUNNED AND UNABLE TO PARRY FOR 2 ROUNDS. +9 HITS.
76-80	INFIRM HOLD ON FOE'S MIDSECTION. FOR THE NEXT 3 ROUNDS FOE IS AT -50% AND YOU HAVE THE INITIATIVE.	ENTANGLE SHIELD ARM. IF FOE HAS SHIELD, HE IS AT -30% UNTIL HE DROPS IT. IF NOT, FOE IS AT -40%.	ENTANGLE WEAPON ARM. FOE IS STUNNED AND UNABLE TO PARRY FOR 2 ROUNDS, AND IS AT -50% DURING THE FOLLOWING ROUND.	ENTANGLE FOE'S WEAPON ARM. FOE HANGS ONTO WEAPON, BUT THE ARM IS IMMOBILIZED. +3 HITS.	GRAPPLE WEAPON ARM. FOE IS DISARMED AND HIS LEFT STUNNED FOR 3 ROUNDS. TORN LIGAMENTS AND PULLED MUSCLE LEAVE FOE AT -40%.
81-85	GRASP FOE'S LEG. FOE BREAKS FREE BUT IS STUNNED FOR 2 ROUNDS. +3 HITS. YOU HAVE INITIATIVE 6 ROUNDS.	INFIRM GRASP ON FOE'S MIDSECTION. FOR THE NEXT 6 ROUNDS FOE IS AT -50% AND YOU HAVE THE INITIATIVE.	GRASP AROUND FOE'S CHEST BREAKS RIB AND LEAVES FOE STUNNED AND UNABLE TO PARRY FOR 3 ROUNDS. FOE FIGHTS AT -5%.	ENTANGLE FOE'S LEG. FOE IS KNOCKED DOWN, STUNNED AND UNABLE TO PARRY 2 ROUNDS, AND DISARMED. FALL BREAKS SHIELD ARM.	ENTANGLE BOTH OF FOE'S ARMS AND PIN THEM TO HIS CHEST. FOE CANNOT MOVE HIS ARMS AND HAS MOBILITY REDUCED BY -75%.
86-90	ATTACK TO FOE'S SHIELD ARM. IF FOE HAS SHIELD, HE MUST PARRY NEXT ROUND. IF NOT, ARM IS IMMOBILIZED AND FOE IS AT -50%.	ENTANGLE FOE'S LEG. FOE IS KNOCKED DOWN AND IS STUNNED AND UNABLE TO PARRY FOR 2 ROUNDS. PULLED MUSCLE LEAVES FOE AT -10%.	ENTANGLE FOE'S FOOT. FOE STUMBLES, FALLS, AND BREAKS SHOULDER. +8 HITS. FOE IS STUNNED 6 ROUNDS AND FIGHTS AT -30%.	TIE UP BOTH OF FOE'S ARMS SO THEY ARE IMMOBILE. FOE IS STUNNED FOR 9 ROUNDS AND CANNOT FIGHT. +6 HITS.	ENTANGLE FOE'S FOOT. FOE STUMBLES, FALLS, BREAKS WEAPON ON IMPACT, AND IS STUNNED 2 RDS. IF NO CHEST ARMOR, ROLL "D" CRUSH CRIT.
91-95	ENTANGLE FOE'S LEG. FOE IS KNOCKED DOWN AND IS STUNNED AND UNABLE TO PARRY FOR 2 ROUNDS. +3 HITS.	BOTH OF FOE'S LEGS ARE TIED UP. FOE IS DOWNED, DISARMED, AND STUNNED AND UNABLE TO PARRY 6 ROUNDS. ANKLE SPRAIN, FOE IS AT -25%.	PIN BOTH OF FOE'S ARMS TO CHEST. FOE IS STUNNED AND UNABLE TO PARRY 4 ROUNDS, THEN FIGHTS AT -95%.	ENTANGLE AND COMPLETELY IMMOBILIZE FOE'S LEGS. FOE FALLS AND IS LEFT STUNNED AND UNABLE TO PARRY FOR 30 ROUNDS. +10 HITS.	WRAP UP BOTH OF FOE'S LEGS. FOE TUMBLES TO GROUND AND IS KNOCKED OUT. FOE IS AT -95% DUE TO 2 BROKEN ARMS AND A BROKEN ANKLE. +20 HITS.
96-99	TIE FOE UP COMPLETELY. FOE IS ENTIRELY IMMOBILIZED FOR 12 ROUNDS, AND IS AT -60% FOR THE FOLLOWING 3 ROUNDS. +7 HITS.	ATTACK COMPLETELY ENTANGLES AND IMMOBILIZES FOE. THE PITIFUL CREATURE IS LEFT PRONE BUT CONSCIOUS. BROKEN LEG LEAVES FOE AT -40%.	ENTANGLE AND COMPLETELY IMMOBILIZE FOE'S LEGS. FOE FALLS, IS DISARMED, BREAKS WEAPON ARM, AND IS KNOCKED OUT. +20 HITS.	GRAPPLE FOE'S NECK. IF FOE HAS NECK ARMOR, HE IS LEFT DISARMED, AND STUNNED AND UNABLE TO PARRY 3 ROUNDS. IF NOT, HE DIES IN 6 ROUNDS.	ATTACK RESULTS IN STRANGLING HOLD. FOE IS UNABLE TO BREAK FREE AND DIES AFTER 9 ROUNDS OF AMAZINGLY HELPLESS STRUGGLING. GRIM.
100	BOTH OF FOE'S LEGS ARE ENTANGLED. FOE IS DOWNED AND KNOCKED OUT. +9 HITS. ADD +20 TO YOUR NEXT ROLL.	ATTACK YIELDS VICIOUS HOLD AROUND FOE'S NECK. FOE IS KNOCKED OUT. SPRAINED NECK LEAVES FOE AT -90%.	GRAPPLE FOE'S NECK. IF FOE HAS NECK ARMOR, HE IS AT -75% DUE TO NECK SPRAIN AND STUNNED 3 ROUNDS. IF NOT, HE DIES OF BROKEN NECK.	GRAPPLE FOE'S HEAD. IF FOE HAS HELM, HE IS STUNNED AND UNABLE TO PARRY FOR 9 ROUNDS. IF NOT, FOE FALLS INTO COMA DUE TO FRACTURE.	CRUSH FOE'S WINDPIPE. FOE DIES INSTANTLY DUE TO MASSIVE SHOCK AND SAVAGE ASPHYXIATION. ADD +25 TO YOUR NEXT ROLL.

TABLE 11:32 MARTIAL ARTS (STRIKES)

Critical Strikes for Martial Arts Strikes	A	B	C	D	E
01-05	Sorry.	Fine artistry, but no extra damage.	+1 hit	+2 hits	+3 hits
06-10	+1 hit	+2 hits	+3 hits	+4 hits	Glancing strike makes foe respect you a little more. +5 hits
11-15	Weak strike, but you gain the initiative. +3 hits	Mild blow. You gain the initiative next round. +4 hits	Mild strike. You have the initiative next round. +5 hits	Kick to foe's side yields +6 hits. You have the initiative next round.	Moderate strike stuns foe for 1 round. +7 hits
16-20	Kick to foe's side yields +4 hits and you have the initiative next round.	Side strike. Foe loses initiative next 2 rounds. +5 hits	Side strike forces foe to parry next round. +6 hits	Side strike forces foe to parry at -10% next round. +8 hits.	Side strike cracks foe's ribs and stuns foe for 1 round. +5 hits. Foe is at -10%.
21-35	Light, but well-placed strike forces foe to parry 1 round. +5 hits.	Strong, but poorly aimed strike forces foe to parry next round. +6 hits.	Kick foe in ribs and stun him for 1 round. +6 hits	Side strike. Foe is stunned next round and loses initiative for 3 rounds. +2 hits.	Fine side strike cracks 3 ribs. Foe is at -20%. +6 hits
36-45	Mild chest strike forces foe to parry next round at -10%. +6 hits.	Chest strike. Foe must parry next round at -20%. +7 hits.	Clever fake yields fine but light chest strike. Foe is stunned 1 round. +8 hits.	Chest strike. Foe is stunned and unable to parry next round. +5 hits.	Back strike stuns foe 1 round. You have a clear shot to foe's rear next round.
46-50	Acrobatic move forces foe to parry next round at -25%. +6 hits.	Glancing kick to foe's back. Foe is stunned 1 round. +5 hits.	Strike to foe's back. Foe is stunned and unable to parry for 1 round.	Chest strike. Foe is stunned for 2 rounds. Broken ribs. Foe is at -10%. +3 hits.	Chest strike. Foe is stunned 2 rounds and unable to parry 1 round. +5 hits.
51-55	Strike to hip stuns foe for 1 round. +3 hits	Strike to foe's chest stuns him for 1 round. +6 hits	Side strike. Foe is stunned and unable to parry next round. Add +20% next attack.	Upper leg strike causes deep bruise. Foe operates at -25%. +6 hits.	Hip strike spins foe. +5 hits. Foe stunned for 3 rounds.
56-60	Strike to foe's lower chest stuns foe for 1 round. +5 hits.	Back strike. Foe is stunned for 2 rounds. +3 hits	Strong wheel kick sends foe 10 feet in any desired direction. Foe is stunned 2 rounds. +8 hits.	Back strike. Foe is stunned for 3 rounds. +4 hits	Chest strike. Foe is stunned 2 rounds, unable to parry next round and operates at -10%.
61-65	Blow to top of foe's foot is slightly misplaced but quick. Foe operates at -20%. +5 hits.	Strike to back of lower leg. Foe is stunned for 2 rounds. +7 hits	Upper leg strike. Foe has deep bruise and operates at -25%. +5 hits.	Blow to nerve in upper leg. Foe is stunned 2 rounds and operates at -25% for 6 rounds.	Forearm strike cleanly disarms foe. +3 hits
66	Strike to Achilles tendon. Vicious bruise. Foe is at -30%. +7 hits and foe stunned 2 rounds.	Kick to foe's head sprains neck and fractures jaw. Foe is is stunned 9 rounds, operates at -50%.	Knife hand strike breaks foe's weapon arm, leaving it useless. Follow-up punch to solar plexus knocks foe out.	Superb move. Break foe's weapon. Foe is stunned for 3 rounds. Add +20 next roll	Simultaneous open palm strikes destroy foe's hearing and balance. Foe at -95%. He is stunned 24 rds.
67-70	Weak spear hand stuns foe for 2 rounds. +2 hits	Spear hand to foe's chest. Foe is stunned 3 rounds.	Strong knife hand to upper portion of foe's shield arm. Arm is broken and useless.	Strike to top of foe's foot. Foe is stunned and unable to parry for 2 rounds.	Combination elbow to solar plexus and back fist to face drops foe. Foe is stunned 3 rounds and unable to parry 2 rounds.
71-75	Knife hand, spear hand combination. Foe must roll on fumble table and is stunned 1 round.	Strike to foe's weapon arm. Deep bruise. Foe is at -20%. +6 hits. Foe stunned 2 rounds.	Strike to back of lower leg. Foe is stunned and unable to parry for 2 rounds.	Knife hand strike breaks foe's collarbone. Foe is stunned and unable to parry 2 rds, acts at -25%.	Heel kick breaks bone in foe's foot. Foe is at -50%. +5 hits. Fool stunned for 3 rounds,
76-80	Kick to foe's shield arm. If foe has shield, it is broken. If not, arm is useless and +6 hits.	Blow to back of foe's knee damages tendons. Foe is stunned 2 rounds and operates at -25%.	Kick disarms foe and stuns him for 1 round. Foe fights at -10% due to cartilage damage.	Strike to area behind foe's knee. Tendon and cartilage damage. Foe is at -75%.	Front kick to midsection doubles foe over. You follow with knee strike which breaks foe's nose and knocks him out.
81-85	Kick to foe's weapon arm disarms him. +3 hits	Kick foe's weapon 5 feet away and break 2 fingers. Foe stunned 2 rounds and fights at -20%.	Heel kick breaks bone in foe's foot. Foe is at -50%; he is also stunned and unable to parry for 2 rounds.	Kick breaks foe's leg. Foe is stunned and unable to parry 2 rounds, and operates at -75%. +5 hits.	Strike to knee shatters joint. Foe drops and is stunned and unable to parry 6 rounds. Foe is at -80%. +6 hits.
86-90	Fluid move followed by a leaping kick to foe's back knocks foe down and stuns him 3 rounds.	Wheel kick knocks foe flat, smash tendons and tear muscle. Foe is at -30%. He is also stunned 9 rounds.	Strike to leg severs Achilles tendon and drops foe. +10 hits. Foe stunned 9 rounds, acts at -80%.	Open-handed blow to foe's Adam's apple (neck) crushes windpipe. Foe dies in 18 rounds - shock and asphyxiation.	Roundhouse kick hits kidney drops foe. Your follow-up knife hand snaps foe's kneck. He is knocked out, dies in 9 rds.
91-95	Strike to nerve in upper leg. +8 hits. Foe stunned and unable to parry for 2 rounds, and operates at -40% for 6 rounds.	Strike to foe's knee shatters joint. Foe drops, is at -85%. He is stunned and unable to parry 4 rounds.	Flying kick to foe's back. You knock foe down, disarm him, and leave stunned and unable to parry for 12 rounds.	Jab to foe's eyes buries him. Crescent kick sends foe 10 feet to right or left. Sucker is at -100%. He is stunned 18 rounds.	Strike to stomach destroys a variety of organs. Foe drops helplessly and dies in 12 rounds. Add +10 to your next roll.
96-99	A chop deflects foe's attack, and a subsequent strike knocks him down. Foe stunned and unable to parry for 3 rounds.	Roundhouse kick knocks foe out and fractures collarbone. Foe has sprained neck and shoulder.	Kick to solar plexus drops foe and leaves him stunned and unable to parry 30 rounds. +30 hits.	Brutal head kick flips foe over onto his head. Skull fracture is minor but concussion severe. Foe dies of hemorrhage in 9 rds.	Double palmstrike to foe's nose breaks cartilage and drives bone into brain. Foe drops helplessly and dies in 6 rounds.
100	Gooseneck strike. Foe's inner ear ruptured (he hears at -50%, operates at -75%). Foe is knocked out by follow-up strike.	Knife hand strike to foe's weapon arm breaks bone. Kick to lower back breaks backbone, leaving foe paralyzed from waist down.	Sweep lays foe out and heel strike to foe's sternum collapses the ribcage. Foe is helpless and dies in 4 rounds.	Awesome spear hand strike finds seam, penetrates solar plexus and ruptures the heart. Foe dies instantly.	Kick disarms foe. A follow-up chop snaps his neck and a subsequent flip sends foe 5 feet in any desired direction. Foe dies.

TABLE 11:33 MARTIAL ARTS (SWEEPS AND THROWS)

Critical Strikes for Martial Arts Sweeps & Throws	A	B	C	D	E
01-05	Acrobatic, but no extra damage. +0 hits	Shoddy followthrough. +0 hits	+1 hit	+2 hits	+3 hits
06-10	+1 hit	+1 hit	+2 hits	+3 hits	Unbalance foe. You have initiative next round. +4 hits
11-15	You have initiative next round. +1 hit	Foe takes 3 extra hits and you have the initiative next round.	You have the initiative next round. Add +20 to your next attack. Foe is confused.	Foe must parry next round. +4 hits	Stun foe with your fine moves. Add +10 to next attack. Foe is stunned 1 round.
16-20	Foe must parry next round. +2 hits	Dazzle foe. He must parry next round at -10%. +2 hits	Foe unbalanced and must parry next round at -20%. +3 hits	Foe is stunned for 1 round. +4 hits	Sweep staggers foe. +2 hits. Foe is stunned and unable to parry 1 round.
21-35	Sweep forces foe to parry next round at -10%. +2 hits	Sweep unbalances foe. +3 hits. Foe must parry next round at -20%.	Sweep stuns foe for 1 round. +4 hits	Sweep sends foe to his knees. Foe is stunned and unable to parry for 1 round. +4 hits.	Sweep downs foe. Foe is stunned for 2 rounds.
36-45	Sweep staggers foe. Foe must parry next round at -20%. +3 hits	Sweep bruises foe's leg. Foe operates at -25% for 3 rounds. +4 hits	Sweep bruises foe's leg. Foe fights at -10%. You have the initiative next round.	Sweep bruises foe's calf. Foe operates at -20%. +5 hits	Sweep drops foe and bruises thigh. Foe is stunned 1 round. +5 hits. Foe is at -20%.
46-50	Sweep forces foe to parry next round at -25%. +4 hits	Sweep stuns foe for 1 round. +5 hits	Sweep downs foe. +4 hits. Foe is stunned for 2 rounds while trying to rally.	Sweep drops foe. +5 hits. Foe is stunned and unable to parry for 1 round.	Foe slips to his knees. +7 hits. Foe is stunned for 2 rounds and is unable to parry next round.
51-55	Sweep drives foe back 3 feet. Foe must parry next round at -30%. +5 hits.	Throw knocks wind out of foe, and he is stunned for 1 round. +6 hits.	Throw stuns foe for 2 rounds. +6 hits	Throw breaks 3 of foe's ribs. Foe is stunned for 1 round and operates at -20%. +6 hits.	Throw drops foe. +8 hits. Foe is stunned for 3 rounds.
56-60	Throw stuns foe for 1 round. +6 hits	Throw stuns foe for 1 round and sprains a finger on his weapon hand. Foe is at -10%.	Sweep knocks foe back 5 feet. Foe is stunned and unable to parry for 1 round.	Sweep nearly knocks foe down. Foe is stunned and unable to parry for 1 round. +7 hits.	Surprising sweep sends foe reeling. Foe is stunned for 3 rounds. +9 hits.
61-65	Throw downs foe, but there is a good recovery. Foe is stunned for 1 round. +7 hits.	Throw pulls muscle in foe's weapon arm. Foe is stunned for 1 round. +3 hits. Foe is at -20%.	Throw disarms foe. +3 hits and foe is stunned for 1 round. If you want to run, the time is now.	Throw disarms foe and leaves him stunned for 2 rounds.	Fine throw. Foe lands on his weapon arm, is disarmed, and is stunned for 3 rounds.
66	Throw dislocates foe's shield shoulder. Foe is stunned and unable to parry 3 rds, and is -50%.	Nifty throw. You have foe pinned, on his face, and in an arm lock. +9 hits. Foe is disarmed and immobilized.	Sweep shatters foe's knee. Foe is stunned and unable to parry 4 rounds, operates -80%.	Smooth throw. Foe lands on his head. If foe has helm, he is knocked out. If not, he is paralyzed from the waist down.	Perfect toss sends foe flying over your shoulder and 10 feet. Foe dies on impact. Add +10 next roll.
67-70	Hard, but unsmooth throw stuns foe for 2 rounds. +7 hits	Strong throw stuns foe for 2 rounds. You have the initiative for 6 rounds. +8 hits.	Foe is knocked back 5 feet and has a bruised chest muscle. Foe is stunned 2 rds, is -10%.	Throw drops foe on his shield shoulder. Arm and collar bone broken, arm useless. +5 hits.	Foe lands on shield arm. If foe has shield, +10 hits and shield is broken. If not, foe's arm shattered and useless, +20 hits.
71-75	Fall bruises foe's thigh. Foe is stunned and unable to parry 1 round. +2 hits. Foe is at -5%.	Fall tears ligament in upper leg. Foe is at -10%. +5 hits. Foe is stunned and unable to parry 1 round.	Fall pulls muscle in foe's leg. Foe stunned 2 rounds and unable to parry next round. Foe operates at -25%.	Foe falls and breaks leg. Minor fracture, but foe operates at -30%. Poor fool stunned for 3 rounds.	Foe falls and breaks his hip. Mild fracture, foe is at -40%. He is stunned and unable to parry 2 rds.
76-80	Foe lands on shield arm. If foe has shield, it is broken. If not, arm is sprained and foe is at -10%, and stunned for 2 rounds.	Foe breaks fall with his weapon hand and sprains 2 fingers. Foe is at -25% and is stunned for 2 rounds.	Foe falls and dislocates shield shoulder, +6 hits. Foe is at -40% and must parry for 6 rounds.	Throw puts foe on back and breaks shoulder blade. Foe is at -20%. +9 hits. Foe stunned and unable to parry 2 rounds.	Throw sends foe down on his elbow. Joint shattered and arm is useless. Foe is stunned 4 rounds.
81-85	Sweep unbalances foe. +3 hits. Foe is stunned for 3 rounds. Add +25 to your next attack.	Sweep knocks foe 10 feet to side. Foe stunned and unable to parry 2 rounds. +9 hits.	Sweep staggers foe. +7 hits. Foe is stunned and unable to parry 2 rounds. Add +30 to next attack.	Break foe's wrist on weapon arm. Arm is useless. +10 hits. Fine hand throw.	Throw foe 10 feet. Foe is down on his face, disarmed, and stunned and unable to parry 6 rounds.
86-90	Foe lands on his back, muscle and cartilage damage. Foe quickly recovers, but is stunned and unable to parry for 2 rounds. Foe is at -20%.	Foe lands on his back and is stunned and unable to parry for 2 rounds. Torn tendon and broken bone, foe is at -25%.	Throw drops foe on his back. Vertebrae cracked and foe is at -50%. Foe is stunned and unable to parry 3 rounds.	Throw drops foe and you put him into a severely immobilizing arm lock. Foe is stunned and unable to parry for 6 rounds.	Throw sends foe flying into nearest enemy within 10 feet. All involved are stunned and unable to parry 3 rds, take +9 hits.
91-95	Throw downs foe and breaks his nose. Foe is at -25%. +7 hits. Foe is stunned and unable to parry 2 rounds.	Fall breaks ribs, disarms foe, and sends him rolling 10 feet. Foe is at -30% and is stunned and unable to parry for 12 rounds.	Sweep downs foe and you put him in a leg-breaking hold. +9 hits. Foe is pinned and stunned and unable to parry 15 rounds.	Throw bashes foe against nearest hard surface. Foe is knocked out and you can use a killing kick if you so desire.	Sly rolling throw sends foe into air. Foe is left disarmed and unconscious. You spring to your feet 10 feet away.
96-99	Throw sends foe down on his head. If foe has helm, he is stunned 9 rounds. If not, foe is knocked out.	Sweep stuns foe; kick disarms him; and another sweep knocks him flat on his back. Foe is unconscious. +20 hits.	Throw cracks foe's skull. If foe has helm, he is in a coma. If not, he dies of brain damage in 1 round.	Throw sends foe down. He is impaled by broken rib or his own weapon and dies in 6 rounds.	Fall snaps foe's neck, killing him instantly. Add +25 to your next attack.
100	Sneaky throw. Foe is stunned and unable to parry 6 rds. Foe is prone and you can finish him (if you so desire) with a knee to the solar plexus.	Fabulous throw sends foe flying. Foe's neck is broken on impact and he dies after rolling 15 feet.	Fall breaks foe's back. +12 hits. Foe paralyzed from the neck down. Add +20 next roll.	Sweep sends foe twisting backwards 5 feet. Foe's spine is snapped and he is left a quadriplegic.	Using but half the round, you use a rolling throw to send foe against nearest hard surface. Foe dies, you are up, press on.

Critical Strikes for Tiny Animals	A	B	C	D	E
01-05	DUBIOUS STRIKE. +0 HITS	NOT ENOUGH. +0 HITS	REAL WEAK. +0 HITS	HA.	+1 HIT
06-10	ZIP.	NO BONUS. +0 HITS	NOTHING EXTRA.	+1 HIT	+2 HITS
11-15	LOOKING BAD. +0 HITS	+1 HIT	+1 HIT	+1 HIT	+2 HITS
16-20	+1 HIT	+1 HIT	+1 HIT	+2 HITS	CUTTING STRIKE. +2 HITS AND FOE TAKES +1 HIT PER ROUND.
21-35	+1 HIT	+2 HITS	+2 HITS	+3 HITS	MINOR CALF WOUND. +2 HITS AND FOE TAKES +1 HIT PER ROUND.
36-45	CRUEL BLOW. +2 HITS	+3 HITS	LIGHT WOUND. +2 HITS AND FOE TAKES +1 HIT PER ROUND.	LEG STRIKE. IF FOE HAS NO LEG ARMOR, +5 HITS AND HE TAKES +1 HIT PER ROUND.	LEG HIT. +3 HITS AND FOE TAKES +1 HIT PER ROUND.
46-50	POOR FOLLOWTHROUGH. FOE TAKES +4 HITS BUT YOU LOSE A CLAW AND FIGHT AT -5% FOR 2 MOS.	+3 HITS	+4 HITS	MILD PUNCTURE. +3 HITS AND FOE TAKES +1 HIT PER ROUND.	LOWER BACK STRIKE. +5 HITS. FOE MUST PARRY NEXT ROUND AND TAKES +1 HIT ROUND.
51-55	LEAPING CHEST STRIKE YIELDS +3 HITS.	LIGHT WOUND. FOE TAKES +1 HIT PER ROUND. +3 HITS	MILD CHEST WOUND. FOE TAKES +2 HITS PER ROUND. +4 HITS	SLASH FOE'S LOWER CHEST. IF FOE HAS NO METAL CHEST ARMOR, +5 HITS AND +3 PER RD.	CHEST STRIKE. +6 HITS AND FOE IS FORCED TO PARRY NEXT ROUND. FOE TAKES +2 HITS PER ROUND.
56-60	LIGHT THIGH WOUND. FOE TAKES +1 HIT PER ROUND. +1 HIT	THIGH STRIKE, BUT NO REAL PENETRATION. +6 HITS	MILD THIGH WOUND STUNS FOE NEXT ROUND. +4 HITS AND FOE TAKES +2 HITS PER ROUND.	THIGH STRIKE STUNS FOE FOR NEXT ROUND. +6 HITS AND FOE TAKES +2 HITS PER ROUND.	THIGH WOUND. FOE IS STUNNED FOR NEXT ROUND. +7 HITS AND FOE TAKES +3 HITS PER ROUND.
61-65	MILD FOREARM WOUND. FOE TAKES +2 HITS PER ROUND. +2 HITS	RAKING FOREARM STRIKE LEAVES NASTY SCAR. FOE TAKES +2 HITS PER ROUND. +3 HITS.	FOREARM STRIKE. FOE IS FORCED TO PARRY FOR 2 ROUNDS. +3 HITS AND FOE TAKES +2 HITS PER ROUND.	FOREARM WOUND. FOE IS FORCED TO PARRY FOR 2 ROUNDS. +5 HITS. FOE TAKES +2 HITS PER ROUND. ADD +10 TO YOUR NEXT ROLL.	STRIKE TO FOREARM. FOE IS STUNNED NEXT ROUND AND YOU GAIN INITIATIVE FOR NEXT 2 ROUNDS. FOE TAKES +3 HITS PER RD. +6 HITS.
66	LEG STRIKE. FOE IS STUNNED AND UNABLE TO PARRY NEXT ROUND. +4 HITS. FOE TAKES +2 HITS PER ROUND.	CALF STRIKE. FOE TEARS MUSCLE, IS STUNNED 2 ROUNDS, AND IS AT -20% +5 HITS	BIZARRE WRIST STRIKE DISARMS FOE. +4 HITS. FOE IS STUNNED NEXT ROUND. ADD +10 TO YOUR NEXT ROLL.	ASTOUNDING HEAD STRIKE. IF FOE HAS A HELM, +4 HITS. IF NOT, +7 HITS AND FOE IS STUNNED AND UNABLE TO PARRY FOR 6 ROUNDS.	BIZARRE STRIKE TO EYES DESTROYS 1 EYE AND BLINDS THE OTHER EYE FOR 2 DAYS. FOE IS AT -45% AND IS STUNNED FOR 24 ROUNDS.
67-70	SHOULDER STRIKE. FOE TAKES +1 HIT PER ROUND AND MUST PARRY NEXT ROUND. +3 HITS.	UPPER CHEST STRIKE. FOE IS STUNNED NEXT ROUND. +4 HITS. FOE TAKES +1 HIT PER ROUND.	STRIKE TO FOE'S SHOULDER. FOE TAKES +2 HITS PER ROUND. +5 HITS. FOE IS STUNNED NEXT RD AT -20%.	UPPER ARM STRIKE. FOE TAKES +2 HITS PER RD. +6 HITS. FOE STUNNED AND UNABLE TO PARRY NEXT RD.	INSPIRED SHOULDER STRIKE TEARS MUSCLE. FOE IS AT -20%. +7 HITS. FOE IS STUNNED AND UNABLE TO PARRY NEXT ROUND.
71-75	LOWER LEG STRIKE. IF FOE HAS LEG ARMOR, +1 HIT. IF NOT, FOE TAKES +4 HITS AND +2 HITS PER ROUND. FOE HAS INITIATIVE NEXT ROUND.	STRIKE TO LOWER LEG. IF FOE HAS LEG ARMOR, +3 HITS. IF NOT, FOE TAKES +6 HITS, +2 HITS PER ROUND, AND MUST PARRY NEXT 2 ROUNDS.	CALF STRIKE. SLASH MUSCLE. FOE IS AT -20%. WOUND GIVES FOE +2 HITS PER ROUND AND STUNS HIM FOR 2 ROUNDS.	LOWER LEG STRIKE. IF FOE HAS LEG ARMOR, +3 HITS AND HE IS STUNNED NEXT ROUND. IF NOT, FOE IS STUNNED 2 ROUNDS, IS UNABLE TO PARRY NEXT ROUND.	VICIOUS LEG WOUND. FOE TAKES +4 HITS PER ROUND AND IS STUNNED 3 ROUNDS. +5 HITS
76-80	WEAK, BUT PRECISE STRIKE TO FOE'S ARM. FOE TAKES +1 HIT PER ROUND AND IS STUNNED NEXT ROUND. +3 HITS.	STRONG, BUT IMPRECISE ARM STRIKE. FOE TAKES +2 HITS PER ROUND AND IS AT -15% DUE TO MODERATE WOUND. +5 HITS.	FOREARM STRIKE. MUSCLE AND TENDON SLASHED. FOE FIGHTS AT -25%, TAKES +2 HITS PER ROUND, AND IS STUNNED 2 ROUNDS. +5 HITS.	ARM STRIKE. MUSCLE AND TENDON TORN. FOE FIGHTS AT -25%, TAKES +2 HITS PER ROUND, AND IS STUNNED 3 ROUNDS. +5 HITS.	SLY ARM STRIKE GIVES FOE A TROUBLESOME WOUND. FOE IS STUNNED AND UNABLE TO PARRY FOR 2 ROUNDS AND TAKES 3 HITS PER ROUND.
81-85	STRIKE TO FOE'S FACE. +4 HITS. FOE IS STUNNED NEXT ROUND AND TAKES +2 HITS PER ROUND.	FLYING FACE STRIKE. IF FOE HAS FACIAL ARMOR, +2 HITS AND FOE MUST PARRY NEXT RD. IF NOT, FOE TAKES +3 HITS PER RD AND STUNNED FOR 3 ROUNDS.	HEAD STRIKE. IF FOE HAS HELM, +3 HITS AND HE IS STUNNED NEXT ROUND. IF NOT, FOE HAS VICIOUS SCAR, TAKES +3 HITS PER ROUND, AND IS AT -40%.	ACROBATIC FACE STRIKE. IF FOE HAS FACIAL ARMOR, +5 HITS. IF NOT, FOE'S NOSE TORN AND HE TAKES +3 HITS PER ROUND, IS STUNNED 3 ROUNDS, AND IS -40%.	HEAD STRIKE. IF FOE HAS HELM, +4 HITS AND HE IS STUNNED NEXT ROUND. IF NOT, FOE TAKES +3 HITS PER ROUND, FIGHTS AT -25%, AND IS STUNNED 9 ROUNDS.
86-90	SUDDEN, WELL-PLACED BLOW. FOE IS STUNNED FOR 2 ROUNDS. +6 HITS	SLASH FOE'S NECK. FOE TAKES +2 HITS PER ROUND AND IS STUNNED FOR 3 ROUNDS. +5 HITS	SHOULDER STRIKE SPINS FOE. FOE IS STUNNED AND UNABLE TO PARRY 2 ROUNDS. +6 HITS	STRIKE TO FOE'S WEAPON ARM. FOE IS DISARMED AND STUNNED NEXT ROUND. +5 HITS	UPPER THIGH WOUND. MUSCLE TORN. FOE IS AT -40% AND TAKES +3 HITS PER ROUND. +4 HITS. FOE IS STUNNED FOR 3 ROUNDS, UNABLE TO PARRY 1 RD.
91-95	LEAPING HEAD STRIKE. IF FOE HAS HELM, +3 HITS AND FOE IS STUNNED NEXT ROUND. IF NOT, FOE IS AT -30% AND STUNNED 2 RDS... EAR TORN.	WRIST STRIKE. WOUND YIELDS +2 HITS PER ROUND. FOE IS STUNNED FOR 3 ROUNDS AND UNABLE TO PARRY NEXT ROUND. +5 HITS.	NECK STRIKE. FOE IS STUNNED AND UNABLE TO PARRY FOR 2 ROUNDS AND TAKES +2 HITS PER ROUND. FOE FIGHTS AT -20%. +3 HITS.	WELL-TIMED ATTACK TEARS MUSCLE IN THUMB ON FOE'S HAND. FOE IS DISARMED AND STUNNED AND UNABLE TO PARRY 2 ROUNDS. FOE FIGHTS AT -50%.	DAZZLING LEAP KNOCKS FOE DOWN. FOE IS DISARMED AND UNCONSCIOUS. +9 HITS
96-99	INSULTING STRIKE TO FOE'S NOSE. IF FOE HAS FULL HELM, HE IS STUNNED 2 ROUNDS. IF NOT, FOE HAS SHREDDED NOSE, TAKES +3 HITS PER RD, AND IS STUNNED 9 RDS.	HEAD STRIKE. FOE IS BLINDED BY BLEEDING, TAKES +3 HITS PER ROUND, AND IS STUNNED AND UNABLE TO PARRY FOR 3 ROUNDS. FOE AT -40% WHILE BLEEDING.	SLASH FOE'S ACHILLES TENDON. FOE IS KNOCKED DOWN AND IS STUNNED AND UNABLE TO PARRY FOR 3 ROUNDS. FOE TAKES +1 HIT PER RD, OPERATES AT -75%.	STRIKE TO FOE'S EYES. IF FOE HAS FULL HELM, HE IS BLIND AND AT -95% FOR 1 WEEK. IF NOT, FOE LOSES 1 EYE AND IS BLIND IN THE OTHER... AND AT -100%.	HEAD STRIKE KNOCKS FOE DOWN. FOE HAS MASSIVE CONCUSSION AND DIES IN 9 ROUNDS DUE TO SHOCK AND INTERNAL BLEEDING. PITIFUL SIGHT.
100	STRIKE TO FOE'S EYES. IF FOE HAS FULL HELM, HE IS STUNNED AND UNABLE TO PARRY FOR 2 RDS. IF NOT, FOE LOSES 1 EYE, IS AT -75%, AND IS STUNNED AND UNABLE TO PARRY 3 ROUNDS.	SLASHING THROAT ATTACK KNOCKS FOE DOWN. FOE IS STUNNED AND UNABLE TO PARRY FOR 6 ROUNDS, TAKES +3 HITS PER ROUND, AND FIGHTS -50%.	BIZARRE ATTACK TO FOE'S HEAD AREA CAUSES FOE TO STRIKE HIMSELF. FOE MUST ROLL ON THE "E" COLUMN ON THE CRUSH CRITICAL STRIKE TABLE.	STRIKE TO FOE'S EYES. +10 HITS. FOE IS STUNNED AND UNABLE TO PARRY FOR 6 ROUNDS, TAKES +2 HITS PER ROUND, AND IS AT -95%. BLINDNESS PERMANENT.	UNBELIEVABLE NECK STRIKE KNOCKS FOE DOWN. VEIN AND ARTERY ARE SEVERED. FOE TAKES +20 HITS PER ROUND, DIES AFTER 6 INACTIVE ROUNDS.

Critical Strikes: Unbalancing	A	B	C	D	E
01-05	NARY A THING EXTRA. +0 HITS	FAIRLY WEAK. +0 ZIP	NOPE.	+1 HIT	+2 HITS
06-10	SORRY PAL, MAYBE NEXT TIME.	+1 HIT	+2 HITS	+3 HITS	+5 HITS
11-15	GLANCING STRIKE. +3 HITS	LAME SIDE STRIKE. +4 HITS	WEAK BLOW. +5 HITS	BACK STRIKE. +6 HITS	BLOW TO BACK. +7 HITS
16-20	FOE MUST PARRY NEXT ROUND. +3 HITS	GLANCING SIDE BLOW. +4 HITS AND FOE MUST PARRY NEXT ROUND.	SIDE STRIKE. FOE MUST PARRY NEXT ROUND. +5 HITS	BLOW TO FOE'S SIDE. FOE IS AT -10% NEXT ROUND. +7 HITS	SIDE BLOW. FOE IS AT -20% NEXT ROUND. +8 HITS
21-35	ON LINE, BUT WEAK. FOE MUST PARRY NEXT ROUND. +4 HITS.	FOE IS UNBALANCED AND IS AT -20% NEXT ROUND. +5 HITS	CHEST STRIKE. FOE IS STUNNED NEXT ROUND. +6 HITS.	BLOW IS WEAK BUT STUNS FOE FOR NEXT ROUND. +8 HITS	BLOW CRACKS FOE'S RIB. FOE IS STUNNED AND AT -10% NEXT ROUND. +9 HITS.
36-45	BREAK FOE'S CONCENTRATION. YOU GAIN INITIATIVE FOR NEXT ROUND. +4 HITS	LEG STRIKE UNSTEADIES FOE. +5 HITS. YOU GAIN INITIATIVE NEXT ROUND. FOE IS AT -5% FOR 2 ROUNDS.	BLOW TO LEG. FOE IS AT -40% NEXT ROUND. +5 HITS	CALF STRIKE. FOE'S HURT MUSCLE IMPAIRS MANEUVERS BY -25%. YOU GAIN THE INITIATIVE NEXT ROUND. +7 HITS.	HARD GLANCING BLOW TO LEG. IF FOE HAS LEG ARMOR, +10 HITS. IF NOT, +12 HITS AND FOE IS STUNNED FOR 2 ROUNDS.
46-50	BACK STRIKE. +5 HITS. FOE MUST PARRY NEXT ROUND AT -10%. GOOD, GLANCING SHOT.	BACK HIT FORCES FOE TO PARRY NEXT ROUND AT -20%. +5 HITS	LOWER BACK STRIKE. FOE REELS AND IS STUNNED AND UNABLE TO PARRY NEXT ROUND. +5 HITS.	BLOW TO BACK SPINS FOE. +8 HITS AND FOE IS STUNNED AND UNABLE TO PARRY NEXT ROUND.	STRONG BACK BLOW STAGGERS FOE. +12 HITS. FOE IS STUNNED AND SADLY UNABLE TO PARRY NEXT ROUND.
51-55	CHEST STRIKE KNOCKS FOE BACK. FOE MUST PARRY NEXT ROUND AT -20%. +5 HITS	BLOW STUNS FOE FOR NEXT ROUND. +5 HITS	BLAST STAGGERS FOE. +6 HITS AND FOE IS STUNNED AND UNABLE TO PARRY NEXT ROUND.	CHEST STRIKE TAKES WIND OUT OF FOE. +10 HITS. FOE IS STUNNED AND UNABLE TO PARRY NEXT ROUND.	FOE IS KNOCKED DOWN. +12 HITS. FOE IS STUNNED FOR 2 ROUNDS AND UNABLE TO PARRY NEXT ROUND.
56-60	GLANCING LEG STRIKE. IF FOE HAS LEG ARMOR, +5 HITS. IF NOT, +7 HITS AND FOE IS STUNNED NEXT ROUND.	THIGH STRIKE BRUISES FOE. +6 HITS. FOE IS FORCED TO PARRY AT -30% NEXT ROUND.	SKIPPING CALF STRIKE. IF FOE HAS LEG ARMOR, +7 HITS. IF NOT, +9 HITS; FOE IS STUNNED 2 ROUNDS, AND MOVES AT -10%.	THIGH STRIKE. +12 HITS. FOE IS STUNNED FOR 2 ROUNDS. YOU HAVE INITIATIVE NEXT 3 ROUNDS.	GLANCING STRIKE TO LEG. FOE IS STUNNED FOR 3 ROUNDS. +14 HITS
61-65	ARM STRIKE. FOE IS STUNNED FOR NEXT ROUND. +6 HITS	FOREARM STRIKE DISARMS FOE. +6 HITS	SHOULDER STRIKE DISARMS FOE AND LEAVES FOE STUNNED FOR NEXT 2 ROUNDS. +6 HITS.	ARM STRIKE DISARMS FOE. FOE IS STUNNED FOR 2 ROUNDS. ADD 20 TO NEXT ACTION. +7 HITS.	BLOW TO SHOULDER SPINS FOE. +13 HITS. FOE IS STUNNED AND UNABLE TO PARRY FOR 2 ROUNDS.
66	SHOULDER STRIKE SENDS FOE SPINNING. +7 HITS. FOE IS STUNNED AND UNABLE TO PARRY FOR 2 ROUNDS WHILE REGAINING BEARINGS.	ELBOW STRIKE NUMBS FOE'S FOREARM, +8 HITS. FOE DROPS HIS WEAPON AND IS STUNNED AND UNABLE TO PARRY 2 ROUNDS.	KNEE STRIKE KNOCKS FOE DOWN. +9 HITS. FOE IS AT -80% DUE TO BROKEN KNEE AND IS STUNNED AND UNABLE TO PARRY 3 ROUNDS.	HARD HIT STRIKE. IF FOE HAS HELM, HE IS KNOCKED BACK 10 FEET AND STUNNED FOR 6 RDS. IF NOT, FOE IS KNOCKED OUT FOR 24 HOURS.	FOE IS KNOCKED DOWN AND IS UNCONSCIOUS. +30 HITS
67-70	CHEST STRIKE UNBALANCES FOE. +6 HITS. FOE IS UNBALANCED AND FIGHTS AT -50% FOR 2 ROUNDS.	BLOW TO FOE'S CHEST. +7 HITS. CONFUSED FOE IS STUNNED AND UNABLE TO PARRY NEXT ROUND.	STRIKE TO CHEST. FOE IS AT -20% DUE TO BROKEN RIBS. +8 HITS. FOE IS STUNNED FOR 2 ROUNDS.	SHOULDER STRIKE SPINS FOE. +10 HITS. FOE IS AT -25% DUE TO A BROKEN COLLAR BONE AND IS STUNNED AND UNABLE TO PARRY NEXT RD.	SHOULDER BLAST KNOCKS FOE DOWN. FOE IS STUNNED AND UNABLE TO PARRY FOR 2 ROUNDS AND IS AT -10% DUE TO MINOR FRACTURE.
71-75	BLOW TO FOE'S LOWER LEG. FOE IS STUNNED FOR 2 ROUNDS. +7 HITS	BLOW BRUISES FOE'S CALF. FOE IS STUNNED NEXT ROUND. +9 HITS. FOE IS AT -10%.	BRUISE FOE'S LEG. +10 HITS. FOE IS STUNNED AND UNABLE TO PARRY NEXT ROUND. FOE OPERATES AT -20%.	BLOW BREAKS FOE'S LEG. FOE MOVES AT -75%. +12 HITS. FOE IS STUNNED AND UNABLE TO PARRY NEXT ROUND.	HARD BLOW TO FOE'S THIGH KNOCKS FOE DOWN. +15 HITS. FOE IS STUNNED AND UNABLE TO PARRY FOR 3 ROUNDS.
76-80	BLOW TO FOE'S SHIELD ARM. IF FOE HAS A SHIELD, IT IS TORN AWAY AND +8 HITS. IF NOT, +12 HITS AND FOE IS STUNNED FOR 2 ROUNDS.	STRIKE TO FOE'S SHIELD ARM. FOE IS STUNNED FOR 2 ROUNDS AND IS KNOCKED BACKWARDS 5 FEET. +10 HITS. BRUISE - FOE AT -10%.	STRIKE TO FOE'S WEAPON ARM. FOE IS KNOCKED BACK 5 FEET AND IS STUNNED FOR 3 ROUNDS. +11 HITS. MILD FRACTURE. FOE IS AT -25%.	STRONG BLOW TO FOE'S WEAPON ARM. FOE IS KNOCKED BACK 10 FEET. +10 HITS. FOE IS AT -25% AND DROPS WEAPON. FOE IS STUNNED FOR 3 ROUNDS.	STRIKE TO FOE'S SHIELD ARM. FOE STUMBLES BACK 3 FEET AND FALLS DOWN. +15 HITS. FOE IS STUNNED AND UNABLE TO PARRY FOR 4 RDS AND IS DISARMED.
81-85	SIDE STRIKE. +12 HITS. FOE IS STUNNED AND UNABLE TO PARRY NEXT ROUND. ADD +10 TO YOUR NEXT ROLL.	BLOW TO FOE'S SIDE. FOE IS KNOCKED SIDEWAYS 3 FEET AND IS STUNNED FOR 3 ROUNDS. +15 HITS	SHOT TO SIDE KNOCKS FOE 5 FEET SIDEWAYS. FOE DROPS ANYTHING CARRIED IN HIS SHIELD HAND (AND ANY SHIELD) AND IS STUNNED FOR 6 ROUNDS.	STRIKE TO FOE'S SHIELD SIDE KNOCKS FOE 5 FEET SIDEWAYS. FOE BREAKS ANKLE AND FALLS DOWN. FOE IS AT -50%. +11 HITS.	AWESOME SIDE SHOT SENDS FOE TRIPPING SIDEWAYS. FOE BREAKS LEG AND ROLLS 5 FEET. FOE IS AT -50%, IS STUNNED AND UNABLE TO PARRY 6 ROUNDS.
86-90	BLOW TO BACK. FOE STUMBLES 5 FEET SIDEWAYS AND IS STUNNED FOR 3 ROUNDS. +13 HITS. ADD +20 TO YOUR NEXT ROLL.	STRIKE TO FOE'S BACK KNOCKS FOE SIDEWAYS 10 FEET. +12 HITS. FOE IS STUNNED AND UNABLE TO PARRY FOR 2 ROUND.	PRECISE BACK STRIKE KNOCKS FOE DOWN. FOE IS DISARMED AND STUNNED FOR 6 ROUNDS. +14 HITS. ADD +20 TO YOUR NEXT ROUND.	BRUTAL BACK STRIKE KNOCKS FOE DOWN. +12 HITS. FOE IS DISARMED AND STUNNED AND UNABLE TO PARRY FOR 4 ROUNDS.	CRUEL HEAD STRIKE... FOE SEES STARS. +20 HITS. FOE IS KNOCKED 10 FEET BACKWARDS AND IS STUNNED AND UNABLE TO PARRY 12 RDS.
91-95	HEAD STRIKE BREAKS FOE'S NOSE. IF FOE HAS HELM, HE IS STUNNED 3 ROUNDS; IF NOT, FOE IS KNOCKED OUT FOR AT LEAST 2 HOURS.	BLOW TO SIDE OF FOE'S HEAD CRUSHES EAR AREA. FOE IS STUNNED FOR 6 ROUNDS. +9 HITS. FOE IS AT -50% FOR 3 WEEKS... IMPAIRED BALANCE.	SIDE STRIKE SPINS FOE 10 FEET SIDEWAYS. FOE MUST ROLL ON APPROPRIATE FUMBLE TABLE NEXT 3 ROUNDS. +8 HITS	STRIKE TO FOE'S SHIELD ARM. IF FOE HAS SHIELD, HE LOSES IT AND TAKES +10 HITS. IF NOT, FOE'S ARM IS USELESS AND HE IS STUNNED FOR 9 ROUNDS.	BLOW TO FOE'S SHIELD SHOULDER. IF FOE HAS SHIELD, HE IS STUNNED 6 ROUNDS. IF NOT, HE IS KNOCKED DOWN, HAS A USELESS ARM, PASSES OUT.
96-99	NICELY PLACED STRIKE SENDS FOE SPRAWLING ON HIS FACE. +10 HITS. FOE IS STUNNED AND UNABLE TO PARRY FOR 3 ROUNDS.	SIDE STRIKE CAUSES FOE TO UNGRACEFULLY STUMBLE TO AN EMBARRASSING PRONE POSITION. FOE IS STUNNED AND UNABLE TO PARRY 6 ROUNDS.	SMOOTH AND SNAZZY STRIKE SENDS FOE TO HIS KNEES. IF FOE WAS USING 1-HAND WEAPON, IT IS THROWN BACKWARDS 10 FEET. FOE IS STUNNED 24 ROUNDS.	STRIKE TO FOE'S HEAD SENDS HIM 10 FEET BACKWARDS. IF FOE HAS HELM, +9 HITS; THE HELM IS DESTROYED, AND FOE STUNNED 6 ROUNDS. IF NOT, FOE IS SENT INTO COMA FOR 4 WEEKS.	PINPOINT STRIKE BREAKS FOE'S NECK. FOE FALLS BACK 5 FEET, SPINS, AND STUMBLES TO THE GROUND. FOE DIES OF SHOCK AND SUFFOCATION IN 3 ROUNDS.
100	BRUTAL HIP STRIKE KNOCKS FOE DOWN, TEARS TENDON, AND SHATTERS JOINT. FOE STUNNED AND UNABLE TO PARRY FOR 9 HOURS. LEG USELESS, FOE -90%.	INSPIRED BACK STRIKE SENDS FOE FLYING 10 FEET AND ONTO HIS FACE. SEVERE NERVE DAMAGE. FOE IS PARALYZED FROM WAIST DOWN.	UPPER CHEST STRIKE KNOCKS FOE 10 FEET SIDEWAYS. FOE FALLS DOWN AND BREAKS BOTH ARMS. FOE IS SENT INTO A 2 MONTH COMA.	SAVAGE BLOW TO FOE'S HEAD KNOCKS FOE DOWN. FOE FALLS INTO COMA AND DIES IN 12 ROUNDS DUE TO SEVERED VEIN. ADD +20 NEXT ROLL.	FRIGHTENING STRIKE TO FOE'S TEMPLE KNOCKS FOE BACK 20 FEET. FOE DIES INSTANTLY. ADD +20 TO YOUR NEXT 3 ROLLS. BE KIND NOW.

11.41 GUIDELINES FOR USE OF WEAPON STATISTICS

The weapons given in table 11.42 are historical weapons that have actually been used. The statistics given are suggested values for their use with Arms Law. They indicate which Arms Law attack tables to use and what modifications to make. These weapons are intended to be examples of how to use the Arms Law/Claw Law system to simulate any weapon.

The weapons in table 11.43 are fantasy (made up) weapons. They are very powerful; and depend on special design and material. They are included to illustrate how you can make up your own weapons using this system.

11.51 GUIDELINES FOR USE OF ANIMAL STATISTICS

Most animals will rarely attack a human unless they or their young are threatened. When an attack does occur, however, it is often sudden and ferocious. The ferocity of animal attacks is reflected to a certain degree by the ten animal attack tables found in Claw Law. Some of these tables make huge animals more terrible than the most fearsome weapon in Arms Law. The comparative ferocity and prowess of animals is subject to the value judgements of the gamesmaster. The summary of animal combat capabilities provides some suggested combat capabilities for common earthly animals using the animal attack charts. Only the broad physical characteristics are presented, the tactical application of the animals' characteristics (as well as any unusual abilities) should be developed by the gamesmaster.

Each animal described on the summary charts has at least one type of attack and possibly three (Primary, Secondary and Tertiary). To determine which attack is used roll percentile dice (1-100), low (and in the given percent range) indicates that the primary attack is used while the higher rolls indicate secondary and possibly tertiary attacks.

EXAMPLE: Examine the Wolverine entry, on a roll of 1-40 the wolverine will use the Bite Attack Table with an offensive bonus of 50 and a Maximum result of Medium (M). On a roll of 41-50, the wolverine will use the Claw/Talon Attack Table with an OB of 45 and a Maximum result of Medium. On a roll of 51-100, the Wolverine will make both *of the attacks just mentioned.*

The gamesmaster may always change the given pattern of attack for a given animal or situation; the provided values are only meant to be guidelines for the use of the Claw Law tables. The explanation for the ◄ and ↙ symbols, is that the attacks so marked only occur as a result of another successful attack (an attack obtaining a critical strike) by the same animal. A definition and example of these types of attacks is given on the KEY for the Combat Characteristics tables.

The statistics given for animals apply in general to the size and nature of the animal found in our world. For creatures smaller than normal (e.g. a baby elephant), decrease the SZ, HITS, and MAX (on attacks), but leave the pattern of attack the same. Similarly, for larger than normal animals (e.g. giant crab, huge bird, giant spider, etc.) increase the SZ, HITS, and MAX (on attacks), but leave the pattern of attack the same. The bonuses (ADD) for various attacks should be decreased for smaller animals and increased for larger animals.

Swarms or groups of tiny creatures (bees, ants, etc.) may be given a small attack on the appropriate table. Some of these "swarm" attacks are indicated on the charts (Bees, Birds, Crabs, Lizards, etc.).

Trained or usually intelligent animals may have higher offensive bonuses (ADD) and use different combinations of attacks. These statistics are only meant to be a sample and the gamesmaster should feel free to use the provided tables for describing and designing his own animals and monsters.

11.61 GUIDELINES FOR USE OF MONSTER STATISTICS

All the above comments apply to any monsters, and a sample of commonly used monsters is provided on the summary of monster combat capabilities. This chart and this package only provide the *Combat* capabilities of the listed monsters, any special abilities (fire-breathing, invisibility, flying, etc.) must be provided by whatever spell and system you use in your game. A good rule of thumb for converting monsters is to first determine the size (Tiny, Small, Medium, Large, or Huge) and type of attack. Then determine the Maximum damage for each type of attack (usually the size). Finally, an appropriate offensive bonus must be determined. If this cannot be easily set, approximate it by +10 per hit die that the creature normally has under your system.

ATTACK TYPE CHART

P	=	Beak/Pincher
S	=	Stinger
Ba	=	Bash/Ram/Butt/Knockdown/Slug
B	=	Bite
C	=	Claw/Talon
H	=	Horn/Tusk
T	=	Tiny Animals
TS	=	Trample/Stomp
G	=	Grapple/Envelope/Swallow
K	=	Fall/Krush
W	=	Weapons

SIZE CHART

Size	DB Mod.*
Tiny	30
Small	20
Medium	0
Large	-10
Huge	-20

SPEED CHART*

abbr.	RATE	MS* DB Mod.	AQ 1st Swing Pt.	AQ Charge/Lunge[1] DB Mod.	MS Flee/Evade[2] DB Mod.
C	= Creeping	-20	10	0	0
VS	= Very Slow	-10	20	0	0
S	= Slow	0	50	0	0
M	= Medium	10	85	-5	5
MF	= Moderately Fast	20	97	-10	10
F	= Fast	30	101	-15	15
VF	= Very Fast	40	110	-20	20
BF	= Blindingly Fast	50	120	-20	25

[1] This DB Modifier is only used when an animal attacks a target from the front without surprise. The animals' DB is only modified with respect to the target's attack. If this modifier is applied the target gets the first attack.

[2] This DB modifier applies if the animal is actively fleeing or evading pursuit, the animal must be moving.

[1,2] Have *not* been factored into the DB's of the sample animals and monsters, and thus must be applied as the situation calls for.

*These modifications have already been factored into the animal and monster stats given, they are included to facilitate designing your own animals and monsters.

NOTE: If you are using a weapon that falls into a column found on the Fumble Table (see Arms Law), *roll and refer to the appropriate result. Weaponry that doesn't fall into a "fumble category" (e.g. bare fist, hooves, etc.) makes no fumble roll; the opportunity is simply lost.*

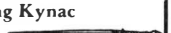
NOTE: The offensive bonuses and defensive subtractions given to monsters, animals and martial artists are based upon I.C.E.'s systems. In these systems, a fighter can have an offensive bonus as high as 80 or 90 at around 5th level. For use with other systems, the OB's and DB's given should be examined for their relation to character bonuses. It may be that the bonuses given should be cut to ½ or ⅔ for some systems.

EXAMPLE: If a lion attacks a man, he would first attack on the Claw/Talon (C) Attack Table with an Offensive Bonus of 85 and a maximum result at the Large point (L). If the Lion obtained a critical result of A, B, C, D, E, or F, it would make a second attack the same round *on the Bite table with a 85 OB and a maximum result at the Large point. If the Lion obtained a second critical, it would attack the* next round *on the Claw/Talon table with an 120 OB. If the lion failed to get a critical on either of the first two attacks mentioned, it would attack the next round on the Claw/Talon table with a 85 OB. (The Tertiary Attack represents the Lion biting the foe and clawing at it with all four paws).*

11.42 SUMMARY OF HISTORICAL WEAPONS

NAME OF WEAPON	TYPE	WT.	LEN	F	RANGE MOD. (in feet) 10	25	50	100	150	TABLE USED	ARMOR MODIFICATIONS 20-17	16-13	12-9	8-5	4-1	SPECIAL
Axe (woodsman's)	2H	4-6	2.5-3	4	-30	-	-	-	-	Handaxe	-5	-5	-5	-5	-5	Normally used as a tool.
Bastard Sword (Hand & a Half)	1HS	4.5-6	3-4	4	-	-	-	-	-	Broadsword	+5	0	-5	-10	-10	
	2H			5	-	-	-	-	-	2H-Sword	-5	-5	-5	-10	-10	Maximum result is 140.
Blackjack	1HC	1-2	.5-1	1	-	-	-	-	-	Barefist	0	0	0	0	0	E-criticals are treated as D-criticals.
Blow Gun	MIS	1.5-2	3-6	5	0	0	-20	-40	-	Sling	-5	+10	0	+5	+10	All criticals are Punctures.
Boar Spear	PA	5-7	4.5-6	5	-15	-30	-	-	-	Spear	+5	+5	0	0	-5	Animals cannot push up shaft if impaled.
Bola (replaces Bola Table)	TH	2-3	3.5-4	7	0	0	0	-20	-40	Envelop	0	0	0	0	0	Maximum result is Large.
Boomerang	TH	.5-1	1.5-2	4	0	0	0	-20	-30	Club	-5	-5	-5	-5	-5	If user trained, it returns.
Cat of Nine Tails	1HC	1-2	2.5-3.5	7	-	-	-	-	-	Whip	-15	-10	-5	0	+10	
Claymore	2H	6-8	3.5-2.5	4	-	-	-	-	-	2H-Sword	-5	-5	-5	+5	+5	Scottish 2H-Sword.
Cudgel	2H	2-3	2-3	3	-35	-	-	-	-	Club	+5	+5	+5	+10	+10	Large walking stick.
Cutlass	1HS	2.5-3.5	2-3	3	-20	-	-	-	-	Broadsword	+5	0	-5	-5	-5	
Darts (throwing)	TH	.5-1	.5	5	0	-10	-20	-	-	Dagger	-10	+5	0	0	0	
Dirk	1HS	.5-1	.5-1	1	-15	-30	-40	-	-	Dagger	+5	+5	0	-5	-5	Scottish Dagger.
Fist (bare)	1HC	-	--	1	-	-	-	-	-	M.A. Striking	0	0	0	0	0	Maximum result is Rank 1.
Fist (armored)	1HC	--	--	1	-	-	-	-	-	Bare Fist	0	0	0	0	0	Bare Fist Table is used for this now.
Foil	1HS	1.5-2	2.5-3.5	3	-	-	-	-	-	Dagger	+10	+10	+10	+10	+10	All criticals are Punctures.
Harpoon	PA	4-5	6-7	4	-5	-20	-	-	-	Javelin	-5	-5	-5	-5	-5	Hard to remove.
Jo	2H	1.5-2.5	4-5	5	-	-	-	-	-	Q-staff	0	0	0	0	0	Japanese staff.
	1HC			3	-	-	-	-	-	Club	+5	+5	+5	+5	+5	
Katana	1HS	4-6	3.5-4	3	-	-	-	-	-	Broadsword	0	0	+5	+5	+5	Japanese sword.
Lance (medieval)	PA	8-12	10-15	7	-	-	-	-	-	Lance	+10	+10	+5	0	0	If jousting, all criticals are A's.
Lasso	TH	6.5-10	1-2	6	-	-	-	-	-	Entangle	0	0	0	0	0	Maximum result is Medium.
Long Sword	1HS	3.5-5	2.5-3.5	4	-	-	-	-	-	Broadsword	+5	+5	0	-5	-5	
Net (gladiator's)	TH	1.5-3	4-6	5	0	-	-	-	-	Entangle	+5	+5	+5	+5	+5	Maximum result is Large.
Net (fishing)	TH	2-4	5-8	8	-5	-	-	-	-	Entangle	-5	-5	-5	-5	-5	Maximum result is Medium.
No-Dachi	2H	7-9	5-6	5	-	-	-	-	-	2H-Sword	+5	+5	+5	+5	+5	Japanese 2H-Sword.
Nunchaku	1HC	2-3	2.5-3	7	-	-	-	-	-	Morning Star	-5	-5	-5	-5	-5	Okinawan cereal beater.
	2H	2-3	2.5-3	7	-	-	-	-	-	Flail	-5	-5	-5	-5	-5	
Pick	2H	5-8	3-4	6	-	-	-	-	-	Mattock	-10	-10	-10	-10	-10	Normally used as a tool.
Pilum	PA	4.5-5	5.5-6	5	0	-20	-30	-	-	Javelin	+5	+5	+5	+5	+5	Roman throwing spear.
Sabre	1HS	3-4	2-3	3	-	-	-	-	-	Broadsword	0	-5	-5	-5	-5	
Sai (parrying weapon)	1HS	2-3	1-2	2	-20	-20	-	-	-	Maine Gauche	-5	-5	-5	-5	-5	+25 vs. melee if not used to attack.
Shuriken	TH	.25-.5	.2-.75	5	0	0	-20	-30	-	Dagger	+5	+5	+10	+10	+10	Japanese throwing star.
Trident	PA	4-6	5-8	5	-15	-30	-40	-	-	Spear	0	+5	+5	+10	+10	
Tomahawk	1HS	3-4	1-2	2	-5	-15	-30	-	-	Handaxe	-10	-10	-10	-10	-10	
Tonfa	1HC	1.5-2	2-2.5	4	-	-	-	-	-	Club	+10	+10	+10	+10	+10	Okinawan rice husking rod.

11.43 SUMMARY OF FANTASY WEAPONS

	TYP	WT.	LEN	F	RANGE MOD. 10	25	50	100	150	TABLE USED	ARMOR MODIFICATIONS 20-17	16-13	12-9	8-5	4-1	SPECIAL
Baw 	1HS	4-5	2-3	5	-	-	-	-	-	Handaxe	+15	+15	+10	+10	+10	Can be used as an ice axe.
Cabis 	1HS	2-3	1.5-2.5	4	0	0	-10	-25	-	Handaxe	-10	-10	-10	-10	-10	Basically a throwing weapon.
Dag	1HS	5-6	3-4	6	-	-	-	-	-	Falchion	+10	+10	+10	+10	+10	A very large bladed weapon.
Ge 	TH	4-6	4-5	8	as Bola					Bola (2x Dam.) (a super bola)	+10	+10	+10	+10	+10	Treat any criticals as both K and G. If fumbled, roll a "DG" on the thrower.
Irgaak 	2H	5-6	5-6	3	-	-	-	-	-	2H-Sword	+15	+15	+15	+15	+10	Roll any critical twice applying all results.
Kynac 	1HS	1-2	1-2	2	0	0	0	-25	-40	Rapier	-5	-5	0	0	0	A great throwing dagger.
Long Kynac 	1HS	2-3	2-3	3	-20	-20	-20	-50	-	Rapier	+15	+15	+15	+15	+15	A great long dagger.
Shang 	1HS	1-2	1-2	1	0	-10	-	-	-	Scimitar (a parrying sword)	-10	-10	-10	-10	-10	+30 vs. melee if not used to attack.
Typh 	1HC	4-5	3-4	6	0	0	-10	-	-	Flail	-10	-10	-10	-10	-10	If fumbled, roll a "DK" on thrower
Yarkbalka 	1HS	4-5	3-4	6	-	-	-	-	-	2H-Sword	-10	-10	-10	-10	-10	If fumbled, roll a "CS" on thrower.

KEY

TYP : 2H = Two-Handled Weapon; 1HS = One-Handed Slashing Weapon; 1HC = One-Handed Concussion Weapon; MIS = Missile Weapon (not usable in melee); PA = Pole Arm; TH = Thrown Weapon (not usable in melee).

WT. : Weight of weapon in pounds.

LEN : Length of weapon in feet.

F : Fumble range (a fumble occurs if roll ... or equal to this number).

RANGE MOD. : Modifications apply to use at ... less than or equal to the given distance (only one modifier applies). (- means not allowed.)

... to resolve the attack.

... upon the armor of the defender.

11.52 SUMMARY OF ANIMAL COMBAT CAPABILITIES

ANIMAL NAME	ADULT SZ	Hits	AT(DB)	MS	AQ	LVL	PRIMARY ATTACK TY	Max	Add	Prob	SECONDARY ATTACK TY	Max	Add	Prob	TERTIARY ATTACK TY	Max	Add	Prob	SPECIAL
Alligator (Crocodile)	L	120	7(0)	M	M	2	B	L	60	100									DB = +20, AB = +20 if in water.
Baboon	M	50	3(10)	M	F	3	G	M	40	70	B	M	60	◄	B	M	40	30	Usually in tribal groups.
Barracuda	M	40	1(40)	VF	VF	2	B	M	45	100									
Bat	S	4	1(60)	VF	VF	1	B	S	20	100									
Bear (Grappling)	L	170	8(10)	MF	MF	5	G	L	70	100	C	L	60	◄	B	M	20	◄	Attack Mode is based on situation.
(Charging)							Ba	L	60	100									
Bees	T	1	1(40)	M	VF	1	S	S	-10	100		Swarm - - - - - -			-S	S	20		Poison does hit 1 hit/bee.
Bird (small)	T	5	1(70)	VF	F	1	T	-	0	100		6 or more - - - -			-C	S	0		Sparrows, doves, etc.
(large)	S	8	1(50)	F	F	1	P	S	0	100		3 or more - - - -			-C	M	20		Gull, ravens, etc.
Boa Constrictor (15')	M	50	3(0)	S	S	2	G	M	60	100	G	L	75	↙					
Boar	M	120	4(30)	F	M	3	H	L	40	100	Ba	M	30	◄	TS	M	20	◄	Unpredictable, ill-tempered.
Bull (oxen, etc.)	L	150	4(10)	MF	MF	3	H	M	35	80	Ba	L	40	20	TS	L	30	◄	
Cat (Leopard, etc.)	M	100	3(40)	VF	VF	3	C	M	40	40	Ba	M	60	60	B	M	60	↙	Good stalkers, and ambushers.
Cheetah	M	70	3(50)	BF	VF	3	C	M	45	80	B	M	65	◄	B	M	45	20	Little endurance.
Condor	L	90	1(30)	VF	MF	4	C	L	50	100	P	M	45	↙					
Crab	T	8	2(10)	VS	M	1	T	-	0	100		6 or more - - - -			-P	S	35		
Deer (Stag, etc.)	M	70	3(40)	VF	F	2	H	M	20	90	TS	M	20	10					Males only.
Dolphin	M	80	1(40)	VF	F	8	Ba	M	50	100									Intelligent.
Eagle	M	30	1(30)	F	F	3	C	M	45	100	P	S	35	↙					
Elephant (male)	L*	450	12(10)	F	F	7	H	H	90	70	Ba	H	80	30	TS	H	75	◄	Could grapple if trained.
(female)	L*	450	12(10)	F	F	7	Ba	H	80	100	TS	H	75	◄					Could grapple if trained.
Elk (male)	L	200	8(10)	F	F	3	H	H	100	100	Ba	L	90	◄	TS	L	60	◄	Loner except during mating season.
Falcon	S	25	1(60)	VF	BF	2	C	M	30	100	P	S	20	↙					
Gorilla	L	120	3(0)	M	F	4	G	L	45	80	B	M	70	◄	B	M	50	20	
Hawk	S	25	1(60)	VF	VF	2	C	M	40	100	P	S	25	↙					
Horse (charging)	L	150	3(20)	F	F	3	Ba	L	50	100	TS	L	35	◄					Medium-sized warhorse, adds would vary
(rearing)							K	M	50	70	TS	L	45	↙	B	M	30	30	for heavier or lighter horses.
Housecat	S	10	1(40)	F	F	1	T	-	10	60	T	-	0	20	Both - - - - - - -			20	
Hyenas (Jackals, etc.)	M	70	3(40)	VF	F	2	B	M	45	100									Large packs, cunning.
Killer Whale	L*	600	8(20)	VF	VF	8	B	H	120	80	G	H	150	◄	G	H	100	20	Intelligent, voracious.
Kraken (squid-like)	L*	200	8(0)	MF	VF	8	G	H	100	100	P	H	70	↙					P-attack due to beak.
Lion	L	150	4(20)	F	MF	5	C	L	85	100	B	L	85	◄	C	L	120	↙	3rd attack as long as criticals are obtained.
Lizard (general class)	T	8	1(80)	BF	VF	1	T	-	0	100		6 or more - - - -			-P	S	10	↙	
(large)	S	16	1(50)	F	MF	1	P	S	10	100		3 or more - - - -			-P	S	40		If poisonous, 1st attack is 50%.
Lobster	S	10	12(10)	VS	M	1	P	S	20	100									
Manta Ray	M	35	1(40)	VF	VF	3	Ba	S	30	100									
Mongoose	S	35	3(70)	F	BF	2	B	S	50	100									DB unusually large due to AQ.
Moose	L	120	4(20)	F	MF	3	H	L	30	100	Ba	L	40	◄	TS	L	60	↙	Males only.
Moray Eel	M	75	3(0)	S	MF	2	B	L	100	100									Ambush attacks on sea floor.
Octopus (large)	M	40	1(30)	F	F	2	G	M	60	100	P	S	40	◄					
Owl	M	35	1(30)	F	F	1	C	M	40	100	P	S	40	↙					Primarily nocturnal.
Pike	M	45	1(40)	VF	VF	2	B	S	30	100									
Piranha	T	4	1(70)	VF	VF	1	T	-	25	100		6 or more - - -			-B	S	25		+20 when water bloody.
Rats	S	5	1(30)	M	MF	1	B	S	0	100		3 or more - - -			-B	S	30		
Rhonoceros	L	240	12(0)	M	MF	7	H	H	130	100	Ba	H	110	◄	TS	H	110	↙	Blind charge, poor eyesight.
Sabertooth Tiger	L	250	8(30)	VF	VF	5	B	L	110	70	C	L	70	20				10	
Scorpion	T	2	1(40)	M	VF	1	S	S	10	100		6 or more - - -			-S	S	50		Very Poisonous, 1-50 hits.
Shark	L	250	4(20)	F	F	5	B	L	100	100									+30 when water bloody.
Snake (non-constrict)	S	10	1(50)	F	VF	1	T	-	25	100		6 or more - - -			-H	S	0		
(large, non-constr.)	M	20	1(30)	F	VF	1	H	S	10	100		3 or more - - -			-H	S	25		
Spider (Ants, etc.)	T	-	1(10)	C	F	1	T	-	-50	100		Swarm - - - - -			-T	T	0		Innocuous, possibly poisonous.
Squid (large)	S	20	1(50)	F	F	1	G	S	50	100	P	S	0	↙					
Tiger	L	150	4(30)	VF	VF	5	C	L	75	40	Ba	L	90	60	B	L	110	↙	Rushes from short range.
Turtle (large)	M	80	12(30)	C	S	3	P	M	20	100									
(large sea)	L	120	12(40)	F	M	3	P	M	40	100									If not in water, as above.
Weasel	S	35	1(50)	F	VF	1	B	S	50	100									Vicious.
Whale (Sperm Whale)	L*	700	8(50)	MF	MF	8	G	H	60	50	Ba	H	75	50					G-critical of E means target is swallowed.
Wildcat (many types)	S	60	3(60)	VF	VF	3	C	M	30	30	B	S	20	30	Both - - - - - - -			40	Loners, ambushers.
Wolf	M	110	3(30)	F	F	3	B	L	65	100									Pack hunter, intelligent.
Wolverine	S	45	3(50)	F	VF	2	B	M	50	40	C	M	45	10	Both - - - - - - -			50	Extremely vicious and bellicose.

KEY SZ = Adult animal size T = Tiny, S = Small, M = Medium, L = Large, H = Huge

L* = Any criticals against this creature are resolved using the Large Creatures rules from Arms Law.

H* = Any critical against this creature are resolved using the Super-Large Creatures rules from Arms Law.

Hits = Number of concussion hits that the adult animal can absorb and remain conscious.

AT = Arms Law armor type (types 1-20).

DB = Defensive Bonus (this number is subtracted from any physical attack rolls).

MS = Movement Speed (rate at which the animal is capable of traveling).

AQ = Attack Quickness (speed of animal's attack, see speed chart for relation to First Swing Points in Arms Law).

LVL = Approximate adult level for such purposes as resistance rolls vs. spells.

TY = Type of attack (see Attack Type Chart).

Max = Maximum result allowed on attack table (S = small, M = Medium, L = Large, H = Huge -- Special for Tiny attacks).

Add = Offensive Bonus (this number is added to the animal's attack roll).

Prob = Probability of attack being used (% chances of various attacks).

If ◄ : attack occurs in the *same* round of combat as the attack described to the left, only if the attack on the left has obtained a non-Tiny critical.

If ↙ : attack occurs the round immediately *following* the round that an attack of the type described to the left has obtained a non-Tiny critical.

If opt : creature may use this attack (usually weapon) if it desires (determined by gamesmaster.)

* = Defensive Bonuses (DB) so marked are obtained from the normal process with an extra bonus for especially tough hides, quickness, stature, and general factors concerning the fearsomeness of the creature.

2X DAMAGE = Target receives double the hits and critical damage normally indicated by the tables. Criticals are not rolled twice, the damage from one critical is doubled.

11.62 SUMMARY OF MONSTER COMBAT CAPABILITIES (SUGGESTED NORMS)

NAME	ADULT SZ	Hits	AT(DB)	MS	AQ	LVL	PRIMARY ATTACK TY	Max	Add	Prob	SECONDARY ATTACK TY	Max	Add	Prob	TERTIARY ATTACK TY	Max	Add	Prob	SPECIAL
Ant (Giant)	S	25	17(30)	M	MF	1	P	S	15	100									Assumes ant is 1 to 2 feet long.
(Giant Warrior)	S	40	19(40)	MF	F	2	P	M	35	100									Assumes ant is 2 to 3 feet long.
Ape (Giant)	L	120	8(10)	MF	F	5	C	M	55	100	G	L	70	◄	W	-	60	↙	Can use simple hand weapons.
Basilisk	L	110	12(10*)	M	M	6	H	L	60	100									Has special abilities.
Beetle (Giant)	M	50	16(10)	MF	F	2	P	L	60	100									Assumes beetle is 3 feet long.
Centaur	L	80	4(30)	VF	VF	5	Ba	L	50	100	TS	L	40	◄	W	-	50	opt	Intelligent centaurs may use weapons.
Chimera	L	180	4(30*)	F	F	10	B	L	90	50	C	L	90	30	H	M	40	20	Has unusual abilities.
Cockatrice	S	30	3(50)	VF	MF	5	P	M	50	100									Has unusual abilities.
Crab (Giant)	M	60	16(20)	MF	MF	3	P	L	75	100									Assumes crab is 4 feet wide.
Demon (Pale I)	M	35	1(20)	MF	F	2	Ba	M	20	100	K	M	50	↙	W	-	30	opt	Types as given in Spell Law. Demons from
(Pale II)	M	60	3(30)	F	F	4	Ba	L	40	100	K	L	80	↙	W	-	50	opt	other systems may be placed into these
(Pale III)	M	90	4(50*)	VF	F	8	Ba	L	70	100	K	L	105	↙	W	-	70	opt	classes.
(Pale IV)	M	120	4(60*)	BF	F	13	Ba	L	100	100	K	L	130	↙	W	-	90	opt	
(Pale V)	L*	180	8(50*)	VF	F	18	Ba	L	125	100	K	H	150	↙	W	-	120	opt	2x damage with weapon.
(Pale VI)	L*	250	12(60*)	VF	F	30	Ba	H	150	100	K	H	170	↙	W	-	165	opt	2x damage with weapon.
Doppleganger	M	80	4(40)	VF	BF	8	C	M	70	70	B	M	40	30	W	-	60	opt	If in proper form, it can use weapons.
Dragon (typical adult)	H*	450	16(50*)	VF	F	25	B	H	200	60	C	H	170	30	Ba	H	120	10	Different dragons have unusual abilities.
Eagle (Giant)	L	150	3(40*)	VF	VF	8	C	L	80	100	P	L	60	↙					Trained rider could also attack.
Efreet	M	110	1(70)	VF	VF	8	Ba	L	80	50	G	L	70	◄	W	-	60	50	Ba criticals are Heat if Spell Law is used.
Elemental (weak-AIR)	M	80	1(40)	VF	F	10	Ba	L	40	100	G	L	40	↙					Ba criticals are Impact if Spell Law is used.
(weak-EARTH)	M	80	1(40)	VF	F	10	Ba	L	70	100	G	M	50	↙					
(weak-FIRE)	M	80	1(40)	VF	F	10	Ba	L	50	100	G	M	50	↙					Ba criticals are Heat if Spell Law is used.
(weak-WATER)	M	80	1(40)	VF	F	10	Ba	L	60	100	G	M	60	↙					Ba criticals are Impact if Spell Law is used.
(powerful-AIR)	L*	120	1(30)	VF	F	20	Ba	H	70	100	G	L	60	↙					Ba criticals are Impact if Spell Law is used.
(powerful-EARTH)	L*	120	1(30)	VF	F	20	Ba	H	120	100	G	L	80	↙					
(powerful-FIRE)	L*	120	1(30)	VF	F	20	Ba	H	90	100	G	L	70	↙					Ba criticals are Heat if Spell Law is used.
(powerful-WATER)	L*	120	1(30)	VF	F	20	Ba	H	100	100	G	L	75	↙					Ba criticals are Impact if Spell Law is used.
Gargoyle	M	80	16(30*)	MF	F	5	C	L	60	60	B	M	40	◄	Both	-	-	-10	If intelligent, can use simple weapons.
Genie	M	90	1(40)	VF	VF	6	Ba	M	75	30	G	M	65	◄	W	-	70	70	Has unusual abilities.
Giant (small)	L*	150	4(20)	F	F	6	Ba	L	35	100	K	L	50	↙	W	-	60	opt	2x damage with weapons.
(medium)	L*	250	8(20*)	F	MF	12	Ba	H	65	100	K	H	90	↙	W	-	80	opt	3x damage with weapons.
(large)	H*	350	12(30*)	F	MF	20	Ba	H	75	100	K	H	100	↙	W	-	120	opt	4x damage with weapons.
Goblin	M	15	1(10)	M	MF	1	T	-	20	100	W	-	25	opt					Wears armor, weapon OB varies with level.
Golem (Flesh)	L	100	1(15*)	M	M	10	Ba	M	100	100	K	L	50	◄					Golems usually have very little intelligence.
(Clay)	L*	120	1(20*)	M	M	10	Ba	L	110	100	K	L	60	◄					The sizes for the golems need not be L and
(Stone)	L*	170	16(20*)	M	M	10	Ba	L	130	100	K	L	70	◄					H; the L* and H* are given to indicate the
(Iron)	H*	200	20(30*)	M	M	10	Ba	H	150	100	K	L	80	◄					critical charts used when the golems are
(Mithril)	H*	250	20(50*)	M	M	10	Ba	H	200	100	K	H	100	◄					attacked.
Gorgon	L	110	9(20*)	MF	VF	6	H	M	40	100	Ba	L	60	◄	TS	L	50	↙	Has unusual abilities.
Griffin	L	130	7(30)	VF	VF	8	C	L	70	40	B	L	60	40	Both	-	-	-20	Has unusual abilities.
Harpy	M	50	2(10)	M	M	6	C	M	30	100	W	-	30	opt					Has unusual abilities.
Hippogriff	L	160	8(10)	MF	F	9	C	L	90	35	P	L	75	30	Both	-	-	-35	Has unusual abilities.
Hobgoblin	M	25	1(10)	M	F	2	T	-	30		W	-	35	opt					Wears armor, weapon OB varies with level.
Hydra	L*	150	16(20*)	M	F	10	B	M	60	100									4-7 heads, each head gets an attack.
Lich	M	150	1(75*)	BF	BF	20	W	-	70	100									Has very unusual abilities (good luck).
Medusa	M	60	1(20)	MF	VF	5	W	-	30	100									Has unusual abilities.
Ogre (small)	M	90	1(20)	MF	F	4	Ba	M	75	90	C	M	40	◄	W	-	30	10	Weapon capability rises with intelligence.
(large)	L*	140	1(10)	MF	F	8	Ba	L	120	85	C	L	80	◄	W	-	60	15	Weapon capability rises with intelligence.
Orc (non-combatant)	M	15	1(10)	M	MF	1	W	-	15	60	T	-	20	40					Women, children and general non-fighters.
(fighter)	M	45	1(10)	M	MF	3	W	-	35	85	T	-	25	15					Uses weapon and armor.
(leader)	M	75	1(10)	M	MF	6	W	-	60	95	T	-	30	5					Leads squads of fighters.
(commander)	M	110	1(10)	M	MF	10	W	-	90	99	T	-	35	1					Rules large clans or groups of orcs.
Pegasus	L	75	3(30)	VF	F	6	K	M	35	70	TS	M	35	◄	B	M	30	30	Has unusual abilities.
Roc (huge bird)	L	200	4(30*)	VF	F	10	C	H	90	100	P	L	80	↙					Trained rider could also attack.
Sphinx	H*	250	8(30*)	VF	VF	12	C	H	170	50	B	H	150	25	Both	-	-	-25	Extremely vicious physical fighter.
Titan	H*	250	8(20)	VF	VF	15	Ba	H	110	100	K	H	200	◄	W	-	120	opt	4x damage with weapons, use at will.
Troll (classical, small)	L	110	11(20*)	MF	F	5	Ba	L	100	70	C	L	80	30	B	M	40	◄	Semi-intelligent.
(classical, large)	L*	170	11(20*)	MF	F	10	Ba	H	160	70	C	H	110	30	B	L	65	◄	Semi-intelligent.
(civilized, small)	L	100	11(20*)	MF	F	5	W	-	100	opt	Ba	M	50	70	C	M	40	30	Uses weapons and armor (unless disarmed).
(civilized, large)	L*	165	11(20*)	MF	F	10	W	-	140	opt	Ba	L	80	70	C	L	60	30	Uses weapons and armor (unless disarmed).
Undead (Class I)	M	25	1(10)	M	F	1	Ba	S	25	90	W	-	15	10					Classes as given in Spell Law. Specific un-
(Class II)	M	50	1(20)	MF	F	3	Ba	M	40	60	W	-	45	40					dead from other systems may be placed into
(Class III)	M	100	1(30)	F	F	7	Ba	M	60	50	W	-	50	50					one of these classes. The sizes for Classes V
(Class IV)	M	135	1(40*)	VF	VF	10	W	-	95	60	Ba	L	70	40					and VI need not be L and H; the L* and
(Class V)	L	165	1(40*)	VF	BF	15	W	-	110	70	Ba	L	90	30					H* are given to indicate the critical charts
(Class VI)	H*	200	1(40*)	VF	BF	20	W	-	180	80	Ba	H	90	20					used when these undead are attacked.
Unicorn	L	90	4(40)	BF	VF	10	H	L	100	100	Ba	M	30	◄	TS	M	50	◄	Has unusual abilities.
Werewolf	M	130	4(50*)	VF	VF	7	B	L	65	35	C	L	50	30	Both	-	-	-35	Has unusual abilities.
Werebear	L	190	8(40*)	F	VF	8	G	L	85	100	C	L	70	◄	B	L	70	◄	Has unusual abilities.
Wyvern	L	150	16(35*)	VF	F	10	P	L	90	60	C	L	60	20	Ba	L	60	20	Has unusual abilities.

KEY

(See key for Animal Combat Capabilities Summary)

11.71 GUIDELINES FOR USE OF MARTIAL ARTS

MARTIAL ARTS IN GENERAL

In Claw Law, the martial arts rules have been designed to maximize playability while maintaining as many facets of real martial arts as possible. The summary of martial arts combat capabilities gives the combat capabilities of a sample of the martial arts existing in our world. Any other capabilities of martial artists are dependent upon the character system being used. Combat capabilities are described in terms of 2 attack tables and 2 critical tables devoted to martial arts (terminology used is from the rules in Arms Law). All rules in Arms Law apply — if they are not specifically superceded by Claw Law.

The martial arts forms given are broad generic classifications and represent no specific style. The gamesmaster may modify any or all of the statistics given to simulate a specific martial art form. The forms given are primarily intended to provide an example of how the system can be used.

We suggest that any player-character wishing to run a martial artist (warrior monk) be allowed to choose (or be assigned) one of the forms given. The fantasy role player level values (experience or skill level) would determine the rate of progression of combat capabilities. Level capabilities that are not given can be easily extrapolated. It is suggested that non-trained characters be treated as novice boxers and novice wrestlers.

Kung Fu is the source of most martial art forms (it has no belt system, but belts are included for comparison purposes). Kung Fu requires spiritual and mental training as well as physical training and thus the stats given are superior to the other forms (Kung Fu progresses equally in striking and sweeps and throws). It is suggested that characters wishing to be Kung Fu martial artists be given certain restrictions. Suggested restrictions include: (1) a background (youth) spent in a religious order or retreat; (2) a specific mission in life due to the background; (3) personal enemies due to affiliation with the religion; *and/or* (4) a very, very strict alignment of good (or evil).

The combat capabilities given include bonuses for expertise and level, but not for personal characteristics (strength, agility, etc.). A gamesmaster should examine the normal Arms Law offensive bonuses of his standard characters and compare them to the stats given. If there is a large difference, merely reduce the offensive bonuses given by 25-50%. The stats given are those obtained when using I.C.E.'s character development system (to appear in the summer of 1982).

Example: Consider a martial artist with a 3rd degree black belt in Japanese style karate. He could choose to fight using any one of his 8 rank abilities (4 striking, 4 sweeps and throws), or he could attempt to grapple with an offensive bonus (OB) of 50 (maximum result on the Grapple attack table of Small). With striking rank 4 and all four sweeps and throws ranks, he could only fight one target per round with the OB given. However with striking rank 3, he could:

1) Fight one foe with a 70 OB.

or 2) Fight 2 foes (within a 90° arc) with a 50 (70-20) OB against each.

With striking rank 2 he could:

1) Fight one foe with a 85 OB.

or 2) Fight two foes with a 65 (85-20) OB against each.

With striking rank 1 he could:

1) Fight one foe with a 100 OB (1 attack).

or 2) Fight one foe with a 70 (100-30) OB (2 attacks).

or 3) Fight two foes with a 80 (100-20) OB (1 attack each).

or 4) Fight three foes with a 60 (100-20-20) OB (1 attack each).

His DB of 60 applies to all foes that he is aware of. This example ignores weapon KATA.

NOTE: The offensive bonuses and defensive subtractions given to monsters, animals and martial artists are based upon I.C.E.'s systems. In these systems, a fighter can have an offensive bonus as high as 80 or 90 at around 5th level. For use with other systems, the OB's and DB's given should be examined for their relation to character bonuses. It may be that the bonuses given should be cut to ½ or ⅔ for some systems.

NOTE: If you are using a weapon that falls into a column found on the Fumble Table (see Arms Law), *roll and refer to the appropriate result. Weaponry that doesn't fall into a "fumble category" (e.g. bare fist, hooves, etc.) makes no fumble roll; the opportunity is simply lost.*

EFFECT OF WEAPON KATA

Certain martial artists use weapons as part of their KATA (kata are patterns of attack and defense that form the basis for the various forms of martial arts). Weapon kata may be used if a −20 modification is made to the OB of the particular rank being used. Normal martial arts weapons include knives (daggers), *jo sticks, nunchakus, tonfas,* various swords, and other exotic weapons. A gamesmaster may wish to limit which types of weapons may be used and at which level of development in martial arts training their use should begin. It is suggested that knife kata be allowed at striking ranks with an offensive bonus (OB) of at least 50, and stick kata be allowed for sweeps and throws ranks with an OB of at least 50. It is further suggested that each martial artist be allowed to pick two other appropriate weapon kata that can be utilized by a rank that has an OB of 90 or more.

A weapon kata attack is resolved in the follow manner:

1) A normal attack is conducted on the appropriate martial arts attack table (striking *or* sweeps and throws). The OB modification of −20 is applied.

2) The weapon being used may be fumbled as specified in Arms Law. However, the fumble range is decreased by 1 for each increment of 10 that the OB is over 50 (round down and the range can never be reduced below 2).

3) The number of concussion hits indicated on the martial arts attack table is increased by: the difference between the *maximum* number of hits the weapon can give [to the armor type (AT) being attacked] and the *maximum* number of hits that can be given to the AT being attacked by the martial arts attack table being used. The result is the actual number of concussion hits inflicted by the weapon kata.

4) In addition to the normal (if any) critical strike indicated by the martial arts attack table, a weapon kata also inflicts a second critical of one severity level less [e.g. a result of C on the martial arts (m.a.) striking attack table would also inflict a B slash (or puncture) if a knife kata were used]. IMPORTANT: *Only one die roll is made to resolve both criticals.* The type of extra critical is always Unbalancing for sweeps and throws weapon kata; while, the extra critical type can be Slash, Puncture, or Krush for striking weapon kata. If more than one type of critical is appropriate for for a given striking weapon kata, the attacker should choose which is to be applied — *before the attack roll.*

Example:

Consider a martial artist with a rank 1 striking OB of 110. He decides to use a weapon kata utilizing a morning star against a foe with an armor type (AT) of 9 (−30). His OB is reduced to 90 (110-20) due to using a weapon kata (−20 found on Offensive Bonus Modification Chart). A morning star normally fumbles on 1-8; but his OB is 40 more than 50, so he would fumble on an attack roll of 1-4. He makes an attack roll of 45, thus his net attack roll is 45 (attack roll) + 90 (OB) − 30 (defender's DB) = 105 (if he had made a higher attack roll, it would not have changed the result because the maximum result for a rank 1 attack is 105). The result from the martial arts striking attack table is 10B. *The maximum number of concussion hits that a morning star can inflict upon AT 9 is 27, the maximum for martial arts (m.a.) is 19; so the actual number of concussion hits inflicted is 10 (normal striking damage) + (27 − 19) = 18 hits. A single critical roll is made, and the results for both a* B martial arts striking critical *and a* A krush critical *are applied to the defender. Thus, if the martial artist rolled a critical result of 52; the m.a. striking critical (B) would stun the foe for 1 round and inflict 6 concussion hits, while the krush critical (A) would force a parry at −25 for one round and inflict 5 more concussion hits. The grand total of damage would be: 18 + 6 + 5 = 29 concussion hits, stunned one round, and forced to parry at −25 the next round (the worst damage inflicted is applied first).*

OFFENSIVE BONUS MODIFICATIONS (cumulative)

−20 = For each foe over 1 engaged during a given round.

−30 = For using two attacks versus one foe in a given round.

−20 = For using a weapon kata.

				RANK STATISTICS FOR STRIKING				RANK STATISTICS FOR SWEEPS & THROWS				
Form	Belt/Degree	FRP LVL	DB	Rank 1	Rank2	Rank 3	Rank 4	Rank 1	Rank 2	Rank 3	Rank 4	Grapple
				OB #1/#2/#3	OB #1/#2/#3	OB #1/#2/#3	OB #1/#2/#3	OB #1/#2/#3	OB #1/#2/#3	OB #1/#2/#3	OB #1/#2/#3	
Karate	Yellow	½	5	10	-25	-25	-25	0	-25	-25	-25	S 5
(Japanese)	Purple	2	20	30	20	-25	-25	5	-25	-25	-25	S 10
(Okinawan)	Brown	4	30	50	40	20	10	10	5	-25	-25	S 20
	Black 1st D.	6	40	70 1/2/ 90°	60	45	30	20	10	-25	-25	S 30
	2nd Degree	8	50	90 1/2/180°	75 1/2/ 90°	60	45	30	15	5	-25	S 40
	3rd Degree	10	60	100 2/3/180°	85 1/2/180°	70 1/2/90°	55	40	20	10	5	S 50
	4th Degree	13	63	110 2/4/180°	100 1/3/180°	85 1/2/180°	65 1/2/180°	50 1/2/ 90°	25	15	10	M 55
	5th Degree	15	65	120 2/5/180°	110 2/4/180°	95 1/3/180°	75 1/2/180°	60 1/2/180°	30	25	20	M 60
Karate	Yellow	½	5	10	-25	-25	-25	5	-25	-25	-25	S 10
(Korean)	Green	1	10	20	5	-25	-25	10	5	-25	-25	S 20
	Blue	3	25	40	25	10	-25	20	10	-25	-25	S 30
	Brown	4	30	50	40	20	10	30	15	-25	-25	S 40
	Black 1st D.	5	35	60 1/2/ 90°	45	30	15	40	20	10	5	M 50
	2nd Degree	7	45	80 1/2/180°	65	50	35	50 1/2/ 90°	25	20	10	M 60
	3rd Degree	9	55	95 1/3/180°	80 1/2/ 90°	60	50	60 1/2/180°	30	25	15	M 70
	4th Degree	11	61	105 2/4/180°	90 1/2/180°	70 1/2/ 90°	60	70 1/3/180°	40	30	20	M 80
	5th Degree	13	63	110 2/5/180°	100 1/3/180°	80 1/2/180°	70 1/2/ 90°	80 1/3/180°	50 1/2/ 90°	40	30	M 85
Judo	Yellow	1	10	10	-25	-25	-25	20	5	-25	-25	S 10
	Green	2	20	20	-25	-25	-25	30	20	-25	-25	S 30
	Brown	4	30	30	-25	-25	-25	50 1/2/ 90°	40	30	20	M 40
	Black 1st D.	6	40	40	-25	-25	-25	70 1/2/180°	60 1/2/ 90	50	40	M 50
	2nd Degree	8	50	50	-25	-25	-25	90 1/3/180°	80 1/2/180°	70 1/2/ 90°	60	M 60
	3rd Degree	10	60	55	-25	-25	-25	100 2/3/180°	90 1/3/180°	80 1/2/180°	70 1/2/ 90°	M 70
	4th Degree	13	63	60	-25	-25	-25	110 2/4/180°	100 1/3/180°	90 1/3/180°	80 1/2/180°	M 80
	5th Degree	15	65	65	-25	-25	-25	120 2/5/180°	110 2/4/180°	100 1/3/180°	90 1/3/180°	M 90
Kung Fu	Yellow	1	10	20	5	-25	-25	20	5	-25	-25	S 20
	Green	3	30	40	30	15	-25	40	30	15	-25	S 40
	Brown	5	50	60 1/2/ 90°	50	40	30	60 1/2/ 90°	50	40	30	M 50
	Black 1st D.	7	60	80 2/2/180°	70 1/2/ 90°	60	50	80 2/2/180°	70 1/2/ 90°	60	50	M 60
	2nd Degree	10	70	100 2/3/180°	90 1/2/180°	80 1/2/ 90°	70	100 2/3/180°	90 1/2/180°	80 1/2/ 90°	70	M 70
	3rd Degree	15	75	120 2/4/180°	110 2/3/180°	100 1/2/180°	90 1/2/ 90°	120 2/4/180°	110 2/3/180°	100 1/2/180°	90 1/2/ 90°	M 90
	4th Degree	20	80	130 2/5/180°	120 2/4/180°	110 1/3/180°	100 1/2/180°	130 2/5/180°	120 2/4/180°	110 1/3/180°	100 1/2/180°	M 100
	5th Degree	25	82	140 2/6/180°	130 2/5/180°	120 2/4/180°	110 1/3/180°	140 2/6/180°	130 2/6/180°	120 2/4/180°	110 1/3/180°	M 110
Wrestling	Novice	1	0	5	-25	-25	-25	10	-25	-25	-25	S 20
	Beginner	3	5	10	-25	-25	-25	20	-25	-25	-25	S 30
	Intermediate	5	10	15	-25	-25	-25	40	10	-25	-25	M 50
	Trained	7	15	20	-25	-25	-25	50	20	-25	-25	M 70
	Expert	10	20	25	-25	-25	-25	70	30	10	-25	M 90
Boxing	Novice	1	5	20	-25	-25	-25	5	-25	-25	-25	S 5
	Beginner	3	10	40	-25	-25	-25	5	-25	-25	-25	S 5
	Intermediate	5	15	60	20	-25	-25	5	-25	-25	-25	S 5
	Trained	7	20	80	40	-25	-25	5	-25	-25	-25	S 5
	Expert	10	25	100	60	20	-25	5	-25	-25	-25	S 5
Sumo Wrestling	Expert	15	20	15	-25	-25	-25	60	20	10	-25	L 120

KEY

FORM - The style of martial arts as it is known in our world today. This is a very general, generic classification.

BELT/DEGREE - Ranking in the particular style.

FRP LVL - Fantasy Role Playing Level: the equivalent level of an average character with these abilities (useful for resistance rolls and player characters).

DB - Defensive Bonus: defined in Arms Law rules. Applies to all attackers that the martial artist is aware of.

RANK # - Rank # limits the maximum possible result on the attack table used. Rank statistics for striking use the Martial Arts Striking attack table. Rank statistics for sweeps and throws use the Martial Arts Sweeps and Throws attack table. The ranks represent increasingly complex and deadly forms of attack.

GRAPPLE - Statistics of handling grappling or wrestling a foe (can be used for subdual).

S, M, or L - The maximum result allowed on the Grapple/Envelope attack table (i.e. Small, Medium, or Large).

(Grapple) - Offensive Bonus when grappling.

OB #1/#2/#3 - Each rank one set of these combat statistics; each round the combatant must choose one of these sets of statistics to use. If #1, #2, and #3 are left out they are assumed to be 1/1/--.

OB - The Offensive Bonus (OB) as defined in the Arms Law rules. The OB can be used for parry *or* attack *or* part on both. However, the same proportions must be used on attack and parry for all foes fought and all attacks made.

#1 - The number of attacks which may be made against one target in a given round (if two attacks are made against the same target the OB for both attacks is decreased by 30).

#2 - The number of different foes which can be attacked in a given round (the OB is decreased by 20 for each foe over 1 engaged).

#3 - The maximum allowed angle of separation for different foes engaged in a given round (i.e. 90° means all foes must be within an arc of 90°, 180° means that the foes engaged can be in any relative position around the martial artist). Of course, all foes engaged must be adjacent to the martial artists.

(9.0) SECOND AND THIRD EDITION RULE ADDITIONS

COMMENTARY

Due to suggestions from our customers and our own observations, there are several areas of the first edition **Arms Law** rules which need to be altered or expanded. These include **mounted combat, pole arms, two-handed arms, shields, two-weapon combinations, animal attacks** and **conversion factors** for the more common game systems.

(9.1) MOUNTED COMBAT

A combatant faces none of the combat movement restrictions when riding an animal (i.e., the animal moves). However, the combatant must be trained in controlling the horse and fighting from horseback in order to be effective. Depending upon his training and background, a mounted combatant could have anywhere from 0% to 100% of his normal offensive (and defensive) bonus (certain rare types of fighters might be more effective). This restriction is not in effect if the horse is completely stationary (not bucking or moving at more than a slow walk). Certain weapons are at maximum effectiveness only when used mounted on a moving animal. The mounted lance falls into this category. As a result, the spear table should be used if a lance is used on foot or on an animal that is not moving faster than a walk. A full gallop should give a +20 added to an attack by a mounted lance. The table below includes some suggested percentages and modifications for certain levels of training and qualities of horses:

untrained rider	−30 and 0% of add	wild horse	−20
		farm horse	−10
novice rider	0% of add	riding horse	+5
trained rider	50% of add	war horse	+20
expert rider	80% of add	very intelligent horse	+10

(9.2) POLE ARMS OPTIONS

Combatants in the second line should be allowed to strike past friendly combatants (front line) if they are using pole arms. This serves to simulate the effectiveness of organized groups of fighters with pole arms. The gamesmaster should determine whether the front line combatants and second line combatants are adequately trained for this type of combat.

(9.3) THROWN WEAPONS AND MISSILES IN MELEE

If a stationary combatant is trained with a particular type of throwing weapon, he may throw that weapon at 80% effectiveness and still melee in the same round with only a −20 to his offensive bonus. Such a combatant may only use a one-handed weapon or one-handed weapon and shield on that round (he is assumed to be holding his melee weapon in his non-throwing hand). A combatant cannot throw or fire missiles (bow) while engaged in melee.

(9.4) TWO WEAPON COMBINATIONS

A combatant may use a weapon in each of his hands. He is assumed to be right-handed (the same rules apply in reverse for left-handed combatant). Any weapon that he trains (or learns) to use must be learned as being used right-handed or left-handed (or both at twice the effort). Any weapon used in the left hand automatically gets a −20 modification to the combatant's offensive bonus with that weapon. The combatant may attack with both weapons in the same round, or he may attack with only one and use the other for its bonus versus melee (see Table 8.25). A combatant must direct both his attacks (and parry) against the same target. If a combatant uses part of his offensive bonus for parrying he must decrease *both* of his weapon offensive bonuses by that amount.

(9.5) BOW PREPARATION TIME

The time required between missile attacks is dependent upon the type of bow, the quickness of the bowman or slinger, and how accurate the firer is attempting to be. The table below gives the number of rounds of preparation required for each weapon, given a subtraction that the firer must take from his offensive bonus.

	PENALTIES			
WEAPON	**0**	**-10**	**-20**	**-30**
Short Bow	1	0	–	–
Composite Bow	1	–	0	–
Long Bow	1	–	–	0
Light Crossbow	2	–	1	–
Heavy Crossbow	3	2	–	1
Sling	1	0	–	–

The act of firing the weapon always takes one round (as specified earlier in the rules), a combatant preparing a shot may still move 20% of his movement. These times assume the bow is strung and arrows (or quarrels or pellets) are available in quiver (or pouch). If a bow has to be strung the following rounds are added to the preparation time: **Short Bow** (+2), **Composite Bow** (+3), **Long Bow** (+3).

(9.6) CHANGES TO TABLES

Certain weights for weapons on the old tables include carrying weight, for scabbards, quivers, straps, harnesses, etc. The weights for the new tables have been modified to include only the weapon itself. Several lengths have also been slightly altered.

First swing bonus for a pole arm is +40 on the first round (8.28). Agility and quickness bonuses range from −35 to +35 (8.29).

On Table 8.25, all bonuses versus melee apply only if the shield or weapon is not used in an attack and is towards the attacker. Main Gauche is added and has a bonus of +15 versus melee and +0 versus missile. Two-handed arms may now parry one-handed weapons at up to 50% of offensive bonus. Pole arms may now parry one-handed weapons and two-handed weapons at up to 50% of offensive bonus.

(9.7) CLAW LAW

Two changes to the use of **Arms Law** tables may be used when using **Claw Law.** The Bola table will result in Grapple criticals 50% of the time and it gets a +10 bonus versus armor types 13-20. The bare fist table is no longer used with **Claw Law.** Even without **Claw Law** criticals should be limited to **B**s (**C**s, **D**s and **E**s become **B**s) on the bare fist table.

(9.8) CONVERSION NOTES

Substitute the **Arms Law** tables for the normal Hit & Damage Procedure.

(9.81) To Hit:

Adds give a bonus of +5 on the **Arms Law** tables (1-100) for every +1 in the D20 AD&D® system.*

(9.82) Damage Bonuses:

Each +1 damage bonus (the damage bonus is not added to the damage given) gives a +1 on the **Arms Law** combat rolls.

(9.83) Level Adds:

Fighters should be given a general +5/level offensive bonus, clerics +3 or +4/level, thieves +2 or +3/level, and magic users +1/level.

(9.84) Weapon Proficiency:

In order to incorporate expertise in individual weapons into AD&D® use the weapon proficiency picks. Allow multiple picks for a single weapon, with each pick increasing the offensive bonus for that weapon by +5. A weapon used with no proficiency picks has a penalty of −25.

(9.85) First Swing Points:

Use the table provided; convert 3-18 stats to 1-100 by multiplying by 5 and adding 5 to the total (result 20-95, average 55-60). It is important that quickness or dexterity be expressed in terms of a 1-100 (or equivalent) range, because the other figures are based on that assumption.

(9.86) Stat Bonuses:

We suggest that the Greyhawk® bonuses for strength be used, and that increased dexterity bonuses be given (remember that a +1 to hit bonus translates to +5).

(9.87) **Defensive Bonuses:**

Bonuses for Armor, Dexterity, Spells, Bracers, etc. do not shift the armor type column. Determine the physical composition of the armor being worn under the **Arms Law** armor descriptions and that is the column used in defense. Each + 1 under AD&D® rules gives a defensive bonus of + 5 which is subtracted from incoming attacks, when appropriate.

EXAMPLE: *+2 breastplate and greaves (under AD&D;® AC 3(+2) = AC1): under* **Arms Law** *column 18 is still used, with a −10 subtraction from all attacks.*

Bracers give a defensive bonus of the number of columns they shift in AD&D® multiplied by 5. AC2 bracers shift from AC10 to AC2, so they would give the wearer armor type 1 with a −40 subtraction; AT 1 (−40).

(9.88) **Hit Points:**

Arms Law is designed for a system in which a normal fighter will take almost 100 hits by 10th level. Since the average for AD&D® is about 50, we suggest that you halve all hits given under **Arms Law** when using it with AD&D® (round down if generosity amuses you).

(9.89) **General:**

For conversion to any system, remember: the effectiveness, flexibility and power of an attack is entirely contained within the offensive bonus of an attacker. So the offensive bonus should represent the potential of the attacker for inflicting damage.

*

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9.9 THIRD EDITION MODIFICATIONS

All of the 3rd edition modifications are in organization and format (a saddle-stitched book with the individual tables perforated for those who wish to remove them); except for the following suggestions:

1) HEALING

We suggest that concussion hits heal at a rate of 1 each hour if resting, and every 3 hours if active.

2) SLAYING WEAPONS

If a critical strike is obtained when using a weapon of slaying for a man-sized creature (e.g. an orc-slaying sword used againt an orc), the normal critical is resolved and then a second critical is resolved on the slaying column of the large creature critical strike table (8.14).

3) ARMOR BONUSES

Superior or magic armor may have two types of bonuses: **toughness** (i.e. increased protection) or **lightness** (i.e. decreased encumberance and restrictedness). A toughness bonus would increase a defensive bonus (DB) as described in section 4.3; for example, a − 10 **(tough)** metal breastplate would increase a DB by 10. A lightness bonus would decrease the armor penalties given in table 8.24 by the amount of the bonus; for example, a + 10 **(light)** metal breastplate would result in a maneuver penalty of − 5 for a fully-trained wearer and no missile attack penalty or quickness penalty. Armor may also have both of these bonuses; for example, a metal breastplate could have bonuses of + 5 **(tough)** and + 10 **(light)**.



(10.0) FOURTH EDITION CLARIFICATIONS AND OPTIONAL RULES

This Fourth Edition combines *Arms Law* with *Claw Law*, a supplement covering unarmed combat (Martial Arts and animal/monster attacks). This section includes optional rules and clarifications to the rules based upon questions and comments from people who have been utilizing *Arms Law* and *Claw Law* in their fantasy role playing games.

USING *ARMS LAW/CLAW LAW* WITH *ROLEMASTER* – *Rolemaster* is I.C.E.'s complete fantasy role playing system, combining *Arms Law* (AL), *Claw Law* (CL), *Spell Law* (SL), and *Character Law* (ChL). *Campaign Law* (CaL) is an optional *Rolemaster* product intended to aid a Gamemaster in designing and running a campaign game. The rules in *Character Law* are intended to coordinate and combine all of these individual systems. Thus the rules in ChL should take precedence over the rules in the other systems when using *Rolemaster* as a complete system.

For example, *Arms Law* indicates that physical prowess (AL 5.22), expertise (AL 5.23), and experience (AL 5.24) can affect a character's Offensive Bonus. *Character Law* gives specific rules for determining these values: physical prowess is represented by stat bonuses, expertise by skill rank bonuses, and experience by character class (professional) bonuses. Similarly, the bonuses for rider classifications given under "Mounted Combat" (AL 9.1) are replaced by the "Riding Animals" skill rank bonus when using the complete *Rolemaster* system. Martial arts capabilities are another good example; see 10.1.

10.1 MARTIAL ARTS

When using the complete *Rolemaster* system, the *Character Law* rules for developing skill in the "Martial Arts" skills (the 4 ranks in "striking" and the 4 ranks in "sweeps and throws") and the "Adrenal Defense" skill take precedence over the guidelines provided in *Claw Law* 11.71 and 11.72. Specifically Table 11.72 is **not** used when *Character Law* is used. The *Claw Law* guidelines are intended for people who use *Arms Law/Claw Law* with a level-based character system **other** than *Character Law*. The *Claw Law* rules on weapon kata are still applicable when using *Character Law*.

When used against large and super-large creatures, martial arts attacks utilize the same rules and tables for standard weapon attacks.

If a weapon used in a "weapon kata" (*Claw Law* 11.71) has maximum concussion hit damage less than that of the normal martial arts attack, the number of concussion hits delivered by the attack is determined solely by the martial arts attack and is not affected by the weapon.

10.2 CRITICAL RESULTS

The *Arms Law* statement that "stunned" characters may not "move, or attack, or change facing" is modified as follows when the complete *Rolemaster* system is used. As stated in *Character Law*, "stunned" characters may not attack but they may still parry with half of their offensive bonuses. In addition, they may attempt to move and maneuver by making maneuver rolls modified by **at least** -50 (ChL Table 15.32).

If a target takes a critical result that lasts for a certain number of rounds and he has not yet performed his action for the current round, the current round counts as one of the rounds affected by the result. Otherwise, the effects begin the round after the critical is received.

Below we provide some further clarifications and modifications of some of the other critical/fumble results:

+ # hits – This many hits (#) are taken in addition to the normal hit result derived from the attack table used (e.g. + 5 hits).

 # hits per round – Each round after the critical is taken, the target takes this many (#) additional hits due to pain and bleeding (e.g. 3 hits per round).

- # % – All of the target's bonuses (except defensive bonus and resistance rolls) are lowered by this number (#); that is, subtract the (#) itself from each applicable bonus. These penalties are cumulative. Certain of these penalties apply only to specific skills (e.g. fighting, running, etc.). Alternatively, the Gamemaster may elect to treat these penalties as a percentage modification of the target's bonuses (i.e. reduce each bonus by (#) %).

Must parry # rounds – For this number (#) of rounds, the target may not attack; though he may parry with all of his offensive bonus, and in order to take any other action, a maneuver modified by -25 must be made.

Stunned # rounds – For this number (#) of rounds, the target may not attack, he may only parry with half of his offensive bonus, and the only other actions allowed are movement and maneuvers, both modified by at least -50.

Stunned and unable to parry # rounds (Stunned-No Parry) – For this number (#) of rounds, the target may not attack, he may not parry (his normal Defensive Bonus due to Quickness, shield, etc. is not affected), and the only other actions allowed are movement and maneuvers, both modified by at least -70.

Down (or out) for # rounds – For this number (#) of rounds, the target may not perform **any** actions.

10.3 NOTE ON CANCELING ACTION

During a round an action may be canceled before it would otherwise be resolved. A character who has canceled his action may perform one of the following alternative actions: melee with half of his normal offensive bonus, move half his 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.

10.4 EFFECTS OF "STUN" ROUNDS

During play a combatant may be "stunned" for a number of rounds due to critical strikes (this includes all "Stunned" rounds, all "Stunned No Parry" rounds, and all "Down or Out" rounds). All "stuns" due to multiple critical strikes are cumulative. Normally the total number of rounds of "stuns" decreases by one each round, with the most severe type of "stun" taking effect first.

A combatant will lose consciousness if his total number of accumulated rounds of "stuns" exceeds: **[the combatant's hits divided by 10] plus 5** (round off). If not rendered unconscious by some other means, the combatant will regain consciousness when his total rounds of "stuns" falls below the number at which unconsciousness occurs.

10.5 POSITION BONUSES

Unless stated otherwise, position bonuses are cumulative. For example, a surprise rear attack would get a total position bonus of at least +55: +20 for surprise, +20 for rear attack, and +15 for a flank attack. A non-surprise rear attack would get a total position bonus of +35.

10.6 THE IMPORTANCE OF PARRYING

Arms Law/*Claw Law* is based upon the assumption that characters will use the option of parrying (AL 4.4) to protect themselves. In a face to face battle, only berserkers, idiots, and desperate characters always use their entire offensive bonus in attack. Such characters usually do not last long unless they have something special going for them (e.g. incredible armor, incredible luck, super healing facilities, etc.). In most situations a character will and should use part of his offensive bonus to attack with and the rest to increase his defensive bonus and thus protect himself. Of course, in certain situations it is often wise for a character to attack with his entire offensive bonus. For example, when attacking a foe who cannot attack back; or perhaps, when facing multiple opponents.

10.7 MISSILE RANGES

The missile ranges given on each of the attack tables are the **maximum** ranges for which each of the given modifications apply. For example on the composite bow table (8.52), 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.

10.8 OPTIONAL ARMOR DAMAGE RULE

A gamemaster should be careful when deciding whether or not to use this optional rule. It does add quite a bit of record keeping. Armor can take a certain total number of "points of damage" before it falls apart; we will call this total the armor's endurance. A set of armor's endurance is equal to (50 times the armor's type) plus (20 times the armor's defensive bonus). Thus a +10 chain hauberk (AT 16) would have an endurance of 1000 = (50 x AT 16) + (20 x (+10 defensive bonus)).

Armor damage is determined by damage taken by the character wearing the armor. Each hit taken by the character is one point of damage to the armor, an "A" crit causes 10 points, a "B" crit causes 20 points, a "C" crit causes 30 points, a "D" crit causes 40 points, and an "E" crit causes 50 points. Due to normal wear and tear, armor recieves 2 points of damage for every week (or portion of a week) that it is worn.

The amount of damage that a set of armor has taken can cause an increase in the severity of critical taken by the wearer. If the damage taken totals 0%-19% (round off) of the armor's endurance the severity of any criticals is not affected. Between 20% and 39% the severity of any criticals is increased by one to a maximum severity of "E" (i.e. A's become B's, B's become C's, C's become D's, D's become E's, and E's are unaffected). Between 40% and 59% the severity is increased by 2, between 60% and 79% the severity is increased by 3, and between 80% and 99% the severity is increased by 4. For example if a set of armor has taken damage equivalent 45% of its endurance, A's become C's, B's become D's, and C's D's and E's become E's. Certain animal attack criticals can become "F"'s.

If the total damage taken by a set of armor is less than or equal to 20%, a character may repair it himself at a rate of 1% for each 2 hours spent. We suggest a cost of materials of 1% of the armor's cost for each 10% of damage repaired. If the total damage taken is over 20% a special craftsman and equipment are required for repairs. The craftsman and equipment must be appropriate for the type of material involved; normally a smith for standard metal armor and a leather-worker for standard leather armor. We suggest a time requirement of 1 day per 10% repaired, and a cost of 1% of the armor's cost for each 2% of damage repaired. For damage above 60% we suggest 1 day per 5% repaired and a cost of 3% of the armor's cost for each 2% of damage repaired. These prices are based upon the normal price for a standard set of that type of armor. A gamemaster may wish to make allowances for special or magical armor.

For characters with "smithing" or "leather-working" skill access to proper equipment and material should be required. In addition, the character should have to make a maneuver roll each day to see if his repair attempts have been successful.

10.9 SHIELD BASH

When using this optional rule, a character may use his shield to attack (called a "shield bash"). This attack is treated as a Small (or possibly Medium) "Bash" attack (*Claw Law* attack table 11.16). If using skill development for expertise, skill with this attack must be developed seperately from the weapon used in the right hand and all of the two weapon rules (*Arms Law* 9.4) apply.

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