

SWORDS & SPELLS

BY GARY GYGAX

FANTASTIC MINIATURES RULES
ON A 1:10/1:1 SCALE



For Use With

DUNGEONS & DRAGONS®



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SWORDS & SPELLS

RULES FOR LARGE-SCALE MINIATURES BATTLES BASED ON THE GAME DUNGEONS & DRAGONS

by Gary Gygax

Dedicated to all swords & sorcery gamers — past, present, and future.

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Foreword

There isn't much that I can say in this Foreword that the author doesn't say in his Introduction. What I can do is recommend how to approach these rules. The first thing to remember is that these rules are the grandson of CHAINMAIL. This final form is the result of a great deal of research and testing. Therefore, if in reading through them you find something you take exception to, bear with and continue on. The author has been developing these systems for quite some time, and they work very well.

The second thing to remember is that these rules deal with fantasy. If something is unclear as to how or why it works that way, remember that it is all fantasy. Fantasy is not bound to rigid rules and rationales. Fantasy is imaginative. If you feel that your fantasy is better than this in some aspect, that's fine. After all, it's your fantasy. Be warned, however, that unless certain balances are maintained, the game soon becomes very lopsided and very little fun. BALANCE is to be maintained at all times.

The third thing to remember is that this set of rules sets forth some new techniques that will be alien to most miniatures players in the U.S. For one thing, there is no luck in assessing casualties. 'X' number of men will do 'Y' number of damage points. For another, these rules mix scales. It is quite possible for a 1:1 figure to find itself squared off against 2 or more 1:10 scale figures. That eventuality was incorporated into the system from the onset. Because of the newness of some of these principles, read the entire rules all the way through the first time. Appendix A will make a lot of things fall right into place and perspective, but won't mean a whole lot, mechanically, on its own. I recommend that you at least skim through Appendix A, then start at the beginning and proceed. When you get to Appendix A again, it should all fall into place. The overall 'feel' of these rules is as critical as the individual mechanics.

Remember that this is D & D, and that in D & D the Dungeon-master/Referee has ultimate veto powers and interpretative authority.

Timothy J. Kask
22 July 1976
Lake Geneva, Wisc.

An Introduction by the author

These rules are as simple and straightforward as I could devise for a game system which involves "magical" and fantastic factors. The FANTASY SUPPLEMENT written for CHAINMAIL assumed a basic man-for-man situation. While it is fine for such actions, it soon became obvious that something for large-scale battles was needed. The question of how large then arose. After considerable contemplation a 10:1 ratio was decided upon. If this seems somewhat small for a supposedly large-scale set of rules, the following factors must be remembered: First, most fantasy battles which involve numbers too large to handle at 1:1 are still on a relatively small scale — hundreds and thousands rather than tens of thousands. More importantly, the **exceptional** creatures had to be allowed for, and this could not practically be done on a scale greater than 10:1.

At the scale of these rules a single man can be represented by a single figure on the table. So if one opponent has a lone hero (4th level fighting man) facing several figures of men-at-arms (or orcs or similar 1 hit die creatures), an actual melee can take place. The hero will inflict .40 of the damage shown for a 4th level creature on the combat tables and sustain damage until sufficient hits are scored upon the figure to kill the hero. Similarly, if a 12th level fighter is involved he will score 1.2 times the damage shown and so on.

Therefore, you will find that these rules are quite suitable for fantasy battles — even those where thousands are involved, for the ratio can be increased by a factor of 10 quite easily. That will mean, of course, that certain individual confrontations will have to be fought separately at 1:1, but that is probably what will often be done for special battles even when the general action is being fought at 10:1. In any case fantasy is a growing and flexible form of gaming, and referees must feel at home modifying and expanding upon rules as the situation dictates. Here are the basics upon which to build.

These rules have been a long time in coming because of the difficulty of doing a suitable set of rules for a game which has nearly endless variables. SWORDS & SPELLS should provide the means with which to fight large scale miniature fantasy battles based on DUNGEONS & DRAGONS far more suitably than does CHAINMAIL, for example. However, like anything else, it is not perfect by any means. Many compromises had to be made in order to provide a work of suitable length and reasonable level of complexity. Much had to be left out. Because of the great number of spells and monster types, these rules perforce assume that you own a copy of DUNGEONS & DRAGONS, along with its various supplements to use as adjuncts. As much as was desired, the whole of D&D combat could not be capsuled to include herein for want of space for the game system and necessary rules. Likewise, much of the immense variability in D&D had to be reduced to an easily handled form or merely referred to as a possibility. Thus, there is a spell chart which gives range, area of effect and duration, but players will have to refer to the D&D booklets for spell effects; similarly, the combat system assumes a fairly standard damage, but appendices give the necessary data for working up complete tables for varying damage based on weapon and monster attacks.

The rules are aimed primarily at enactments of battles which feature many relatively low-level fighters. Magic should be on the same scale as it is in a well-run campaign, i.e., few high-level magic-users and magical items. In like manner, monsters are meant to be few. The admonition regarding single creatures is important: If they meet, or are simply near each other, they should seek combat with each other rather than against inferior opponents, and this combat should be fought out at 1:1 in the normal D&D manner.

Finally, as with any set of rules done by any author and any publisher, these are for your playing enjoyment. If you find sections which do not bring you enjoyment, alter, expand or delete them as you see fit. Be careful, though, so as not to destroy the flavor of D&D!

SCALE

1:10 basic (1 figure = 10 actual, although special figures may be mounted to represent a single creature, i.e. 1:1)

1 turn = 2 minutes of scale time

1" = 10 scale yards

FIGURE MOUNTING

With the exception of those special figures which represent only one actual creature, all castings must be mounted on stands. This applies to figures which are mounted singly or in groups. The size of each stand depends on the type of creature mounted thereon and/or the weapon it employs. The base size is width, for the scale of the game is such that the depth of the stand must simply remain a function of the casting itself. Those figures representing only one creature will occupy more space on the table than they would actually occupy in scale in most cases; if they are mounted on stands for convenience, the stands may be overlapped by other stands, or they may overlap their stands. In no other circumstances may stands be overlapped. Stand sizes are:

5/8" width CREATURE TYPE	3/4" width CREATURE TYPE	1" width CREATURE TYPE	1-3/8" width CREATURE TYPE	1-5/8" width CREATURE TYPE
kobolds	hobgoblins	bugbears	ogres	giants
goblins	gnolls	gargoyles	trolls	pegasi
gnomes	lizard men	apes	centaurs	hippogriffs
dwarves	wolves	lions/tigers	bears	griffons
orcs	ponies	horses***	horses****	
elves				
men				

5/8" width WEAPON TYPE	3/4" width WEAPON TYPE	1" width WEAPON TYPE	1-3/8" width WEAPON TYPE
dagger	military pick	bastard swd.	2-handed swd.
hand axe	long sword	flail	
mace	battle axe	morning star	
hammer	pole arms**	halberd	
short swd.	sling		
spear			
pole arm*			
pike			
bow			
crossbow			

- * thrusting-type
- ** cutting type
- *** heavy horses, unicorns
- **** medium and light horses

For example, an elf with any of the weapons listed in the "5/8" width" column would be mounted on a 5/8" base, but if the elf were armed with a full-sized flail the stand would have to have a 1" width for each elf. Note that a small creature armed with a small weapon will probably classify under a lower-width heading than the weapon name implies even though the effect of the weapon will probably be the same as a full-sized one in many cases. For figure types not shown use the nearest approximation. It is suggested that troops be mounted on stands which accommodate ten figures, five files, two ranks, 100 scale creatures.

TURN SEQUENCE

Opponents alternate in the role of first-mover (side "A") and second-mover (side "B"). To determine which opponent moves first, a simple die roll will suffice, and the higher score gaining the first-move status on the first turn: they then alternate on subsequent turns. The parts of a turn are:

1. Sides "A" and "B" may opt to fire loaded missile weapons, cast ready spells, and/or discharge breath weapons; casualties from any such attacks are immediately removed.
2. "A" moves all, some, or none of its figures up to a maximum of one-half of normal movement, including split-movement.
3. "B" now moves all, some, or none of its figures up the maximum distance allowed, including charge bonus. At the mid-point of this movement, excluding charge bonus movement distances, mid-turn fire is taken. All missile fire, spell casting, and discharge of breath weapons desired and possible take place simultaneously on both sides.
4. "A" completes its movement, including charge bonus.
5. Both sides fire missile weapons, cast spells, and/or discharge breath weapons of those figures not meeled.
6. Melees are fought for one round, and retreats due to poor morale are made immediately.
7. Opponents alternate the role of "A" and "B" for steps 1. through 7. for the balance of the game.

Note: Morale checks necessitated by missile, spell or breath weapon attacks are taken as necessary immediately during the appropriate turn segment.

MOVEMENT

Movement is that distance indicated in the D&D rules for the moves of the various creatures. There are some exceptions, and these, along with a note about D&D movement distances are stated hereafter. All movement distances are given in inches.

Troop Type	Mass/ Line	Column	Unorganized or Open Order	Charge Bonus
Kobolds	4	-	8	2
Goblins	4	-	8	2
Orcs	6	-	12	3
Hobgoblins	6	-	12	3
Gnolls	6	-	12	3
Halfings	9	-	12	3
Gnomes	4	-	8	2
Dwarves	4	-	8	2
Fairies	9	-	15	3
Elves	9	12	15	3
Lt. Armor	12	15	18	4
Hv. Armor	7	10	12	2
Men	9	12	15	3
Lt. Armor	12	15	18	4
Hv. Armor	6	8	9	2
Lizard Men	6	-	9(24)	2
Centaur	15	-	18	6
Cavalry				
Light	18	21	24	9
Medium	15	18	21	7
Heavy	12	15	18	5
Pony	12	15	18	4
Wolf	12	-	15	6
Siege Artillery	-	-	3[6]	-

() *Swimming Speeds*

[] *Speed if drawn by draft animals*

Notes Regarding Movement:

The base movement rate for elves assumes that they have full leather armor and shield or the equivalent. Elves in chainmail are considered as heavily armored.

The base movement rate for men assumes chainmail and shield. Men in leather armor, with shield, are lightly armored; men in full plate are heavily armored.

Creatures not listed above move as per D&D, but they may add a charge bonus only when moving (not flying) into melee contact (see the following rule regarding charge movement for listed creatures). The bonus to add to their move is 33 1/3% of normal movement. Thus, an ogre has a bonus of 3", a basilisk gains 2", and a minotaur gains 4".

Special figures for fighters, magic users, clerics, etc. are considered as moving at the "Open Order" movement rate, and bonus for charge is applicable. If they are equipped with magical armor treat figures as if they had **no** armor.

Dismounted cavalry move at **line** movement rate of riders, adjusted for terrain.

Charge Bonus may be taken at any time, but if melee does not result at the end of a movement where it was taken, the troops so moving will be in an unorganized array or in open order with regard to those types of troops for which such formation is possible. For the effect of unorganized or open order troops in melee see the appropriate section. Mounted charges may follow a curve up to 30% left or right.

Movement Through Units: Troops in open order may move through other friendly units, but there is a 10% chance that such movement will cause the other unit to become unorganized. Exception: scale 1:1 figures may freely pass through friendly units, assuming the relative size of the two does not exceed a 2:1/1:2 ratio, i.e. a giant passing through the ranks of a unit of hobgoblins **would** disrupt the stand, and there is a 10% chance that the whole unit, if larger than a single stand would become unorganized.

TERRAIN EFFECTS UPON MOVEMENT

Movement rates are based on travel across relatively smooth terrain such as grassy fields, hard-packed earth, or even rock. Other types of terrain will usually have the effect of slowing movement. The following is a suggested modification system for the varying effects of other terrain types:

ROUGH/BROKEN GROUND — Slows formed movement 25% and prevents all charge bonus movement

MARSH/SWAMP — Slows all infantry movement 50% and no cavalry movement possible

LIGHT WOODS — Slows formed movement by 50% and prevents all charge bonus movement

WOODS/DENSE BRUSH — Prevents all formed movement and charge bonus movement, other movement is slowed 50%, no mounted movement possible

GENTLE SLOPES — Uphill movement is normal, but fatigue is 50% greater than normal, downhill is normal with charge bonus for melee doubled

AVERAGE SLOPE — Uphill slows movement 50%, including charge bonus movement, and fatigue is 50% greater than normal, downhill is at a 50% penalty with regard to formed movement and no charge bonus movement is allowed

STEEP SLOPE — Only unformed movement is possible, up or down, and no charge bonus movement is possible, movement is at 25% normal, no mounted movement possible.

STREAM — Treat as rough terrain when crossing, if banks are marshy slow all movement by 50%, on turn troops move across

RIVER — Mounted units of light cavalry cross at any point at 3" ahead, 1"* downstream/turn, others must cross at fords, with up- down-slope penalties applicable, and movement across the river at 2"/turn, no formed or charge movement possible in any event.

ABATIS — One turn for man types. Troll, ogre, etc. 1/2 turn cross w/ladder; — 50% movement; others without ladders, full turn

DITCH & RAMPART — Treat entering ditch as steep hill, and climbing up other side as climbing a steep hill. (If rampart palisaded, it cannot be crossed until the palisade is broken.)

*average current, if swift the drift would be 2", and if very swift it would be 3" or more



NOTE: *Very large creatures such as giants, or even trolls or ogres, would ignore many of the terrain restrictions given above, i.e. rough terrain penalty, dense brush penalties, average slopes become gentle, steep average, and very steep would be treated as steep. Similarly, most streams would be ignored, and river crossings would be made at any point at from 25% to 75% normal speed. Lizard men, of course, can swim at any point.*

TROOP CLASSIFICATIONS

In order to determine melee classifications, morale values, and point costs, use the following guidelines:

PEASANTS: Untrained troops with, at best, armor class 6 (no more than 10%) raised from the immediate area; for purposes of the game, peasants can use no missile weapons. They must be mounted with a 1" stand base per figure and can operate only in mass formations

LEVIES: Semi-regular troops with, at best, armor class 4 (no more than 10%). Levied troops typically have some training, so they are able to operate in most formations, but non-mass formations require three times the normal time to evolve. (Some garrison troops will actually classify as levies.)

REGULARS: Regulars are typical men-at-arms, garrison forces, and hired soldiers. They typically have armor class range from 6 to 4.

ELITE: These are troops who are specially selected and given above average training, or they are troops who have participated in several battles without sustaining above 50% losses in their unit in any one such battle. If purchased for a battle, no more than 20% of infantry should be elite-status troops. They typically have armor class from 5 to 2. All knights are elite.

GUARDS: Guard troops generally meet the basic qualifications of elite troops with regard to training, they are paid more, and they are indoctrinated as to their mission. Troops which are specially selected and trained, paid an additional wage, and properly indoctrinated would qualify for "Elite Guard" status. As a rule, guards should be limited to 10% of an army, and elite guards would surround the personage of the commander only, for example.

NOTE: Scale figures representing human/humanoid (and highly intelligent) creatures of 1st level or above or with 1+1 hit dice are always considered as having elite guard status. For example, the following types of troops are classified as elite guard status:

Veterans (1st level fighters)	Not considered as elite guards:
Elves	Bugbears
Hobgoblins	Ogres
Gnolls	Trolls

FORMATION

Only the following types of troops can be mounted in formation:

kobolds	halflings	men
goblins	gnomes	lizard men
orcs	dwarves	centaurs
hobgoblins	fairies	
gnolls	elves	

All other sorts of troops/creatures must be so mounted or placed so as to allow a minimum distance of one-quarter inch between their stand bases (assuming the figures are representing 10 actual creatures, of course) to simulate their lack of order.

The following formations are possible:

Formation:	Possible for:
Unorganized	all
Mass	all
Column Mass	all
Column	elves, men (regulars or better)
Line, echeloned line	dwarves, fairies, elves, men (regulars or better)
Open Order	halflings, fairies, elves, elite men afoot, light cavalry

Forming-Up and Formation Change:

From	To	Movement Cost
Unorganized	Any formation	2 moves
Mass	Column Mass	2 moves
Column Mass	Mass	2 moves
Column	Line	1 move
Line	Column	1 move
Organized	Open order or Unorganized	no cost
Open Order	Any formation	½ move
Mounting	Dismounting	¼ move

Movement to echeloned line or from echeloned line to line is simply a measured factor.

Unorganized troops are considered in a confused state of array. If two or more stands operating as a unit are unorganized, they should be placed so that there is not less than 1" between their respective stands; and in any event, unorganized units are always positioned so as to have their backs to the enemy in order to reflect their state of array.

Mass means a formation of troops at least 15 figures across and six ranks of figures deep, discounting casualties under 10% (fewer than 10 figures killed).

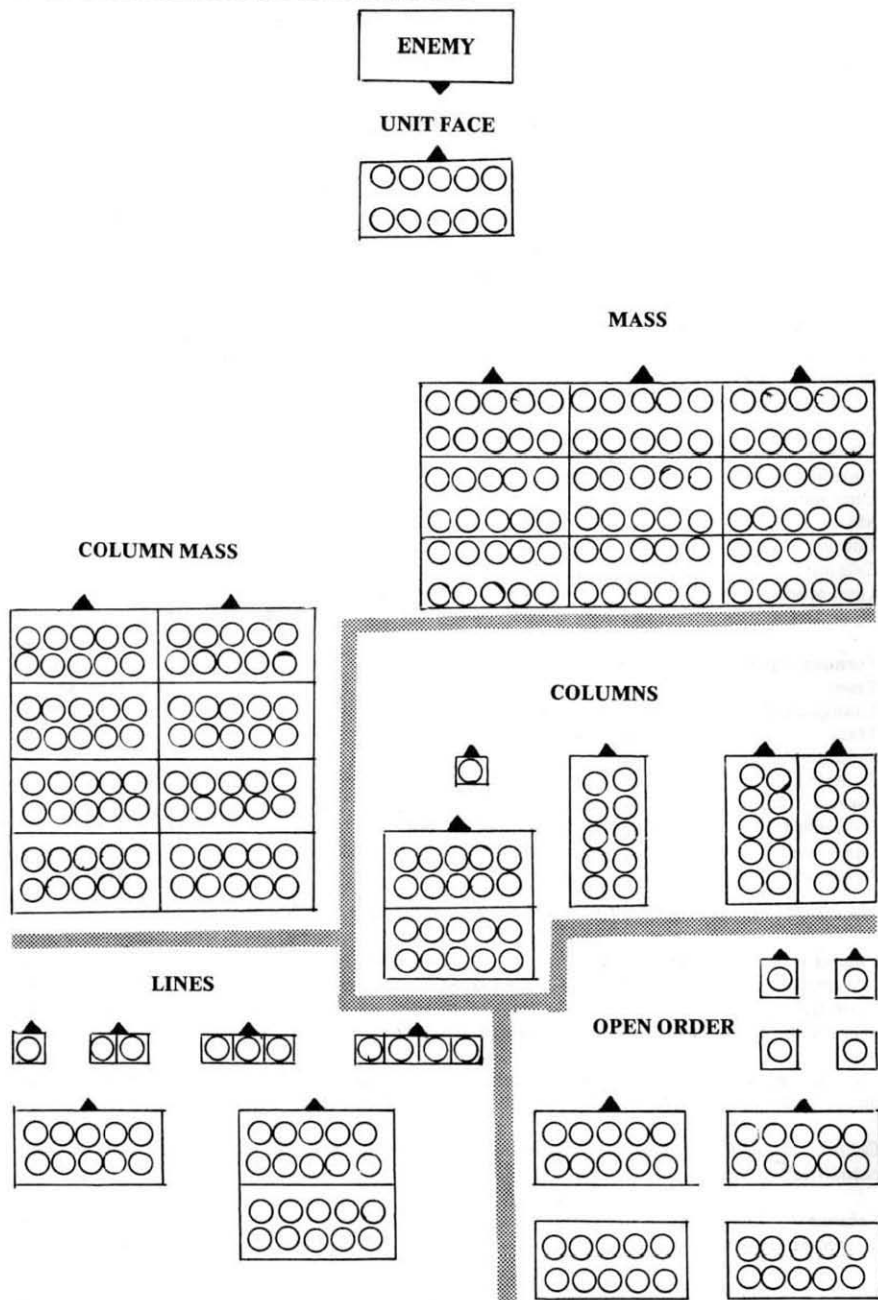
Column Mass is a formation at least ten figures across and eight ranks deep, discounting casualties under 10%.

Column is a formation one to five figures wide and as deep as desired. A single figure can be considered as in column.

Line is a formation of not less than five figures wide and one rank deep with regard to troops which are mounted on stands of five files, i.e. the entire front rank of the stand must be there for the unit to have a continuous front. Single figures can be considered as in line formation.

Open Order is an array which is represented either by separating the stands of the figures by one-quarter inch, or simply by announcement with the appropriate movement bonus taken.

These various formations are illustrated as follows:

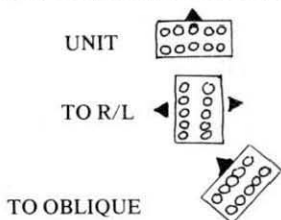


Bonuses for formation and penalties for lack of it are dealt with in sections regarding melee and morale.

FACING

Troops in an unorganized array or in open order may freely change direction (facing); troops in formation must pay a movement cost:

Facing	Movement Cost
Oblique	1/3 normal move
Left/Right	3/4 normal move
About Face	1/4 normal move



Troops making a formation change may be considered as facing any direction desired (except an oblique, as noted above), but the facing of a unit must be announced if the front sides of the figures involved cannot be so positioned as to indicate facing. If facing is not announced in the latter case, it will always be the direction towards which the front face of the figures faces.

Troop Facing: In order to **move** in a direction different from the unit facing, the troops must face, much as Unit Facing explained above.

Troop Facing	Movement Cost
Oblique*	1/8 normal move
Left/Right	1/4 normal move

*possible for elite units of men only

FATIGUE

In order to simulate the fatigue encountered in actual battle situations, creatures with two or fewer hit dice will be subject to fatigue if they meet certain conditions. These conditions are:

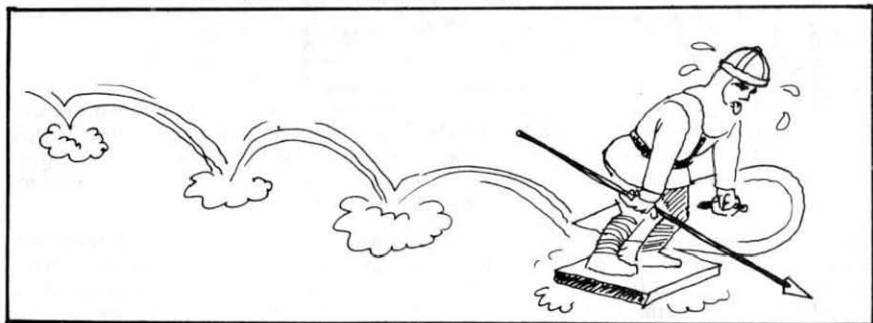
1. Moving at from 75% to 100% of normal movement for six consecutive turns
2. Three consecutive turns of movement and charge bonus or meleé

For cases involving mixtures of the various fatigue-causing conditions, simply apply the factors in a proportionate ratio. Thus, three turns of movement at 75% to 100% of normal speed (3 factors), plus one turn of movement plus charge bonus movement (2 factors), followed by any other action other than limited movement or rest will cause the troops to become fatigued.

Note: Formation and facing changes do not expend fatigue factors, but terrain penalties which slow movement do not restrict fatigue even though they reduce the distance moved.

FATIGUE PENALTIES:

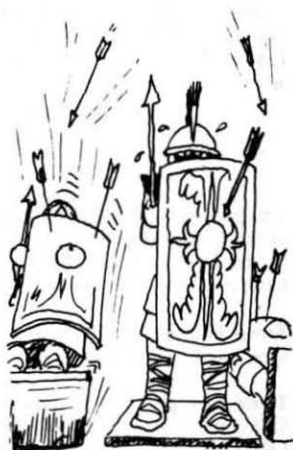
1. Charge movement is not possible
2. Meleé effectiveness drops 20% of base, cumulative, per turn



MISSILE FIRE

MISSILE WEAPON TYPE

	RATE OF FIRE	RANGE		
		SHORT	MEDIUM	LONG
Spear, Axe, Hammer	1	-	-	3
Javelin	2	1	4	8
Sling Stone	2	4	8	12
Sling Bullet	2	5	10	16
Short Self Bow	3	5	10	15
Short Composite Bow	3	6	12	18
Longbow	3	7	14	21
Large Composite Bow	3	6	12	21
Light Crossbow	1	6	10	16
Heavy Crossbow	1/2	8	16	24
Ballista	1/4	-	-	0-30
Light Catapult	1/4	-	-	15-30
Heavy Catapult	1/4	-	-	18-36
Trebuchet	1/4	-	-	24-48



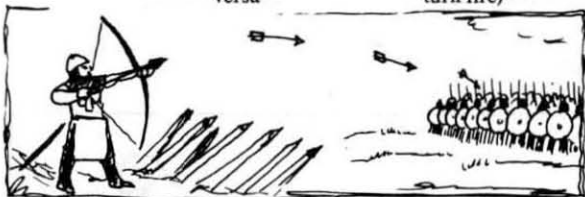
Rate of fire assumes the maximum number of times a figure is able to fire during any given turn without being engaged in melee. See the rule regarding rate of fire hereafter.

Ranges are given in inches. Artillery (ballista - trebuchet) fires **only** at long range, and cannot fire **less** than the distance shown by the first number, i.e. 15, 18, 24. Range effects casualties as shown on the tables for missile fire. Targets beyond "long" ranges shown are out of range.

Rate of Fire: Fire during a turn may be performed as follows:

FIRE RATE

1/2 Turn	1 Turn	2 Turn	3 Turn
Fire (stand)	fire & move 1/2 without reloading or vice versa	move 1/2 & fire or vice versa	move full & fire or vice versa
reload (stand)	fire & re- load or vice versa	fire (stand) & fire (end turn fire)	fire, move 1/2, & fire
			move 1/2, fire, (stand 1/2) & fire
			fire (stand 1/2), fire (stand 1/2), & fire



Exceptions: Troops in melee may not fire. Troops firing spears, axes or hammers may fire and move full or move full and fire, with bonus movement for charging included. Troops with javelins may perform likewise, or forego charge movement and fire twice. Changing face does not affect reloading, but it does count as a move function. Formation changes are treated as normal moves. Charging units may not fire.

Number of Ranks Firing: Up to two ranks of figures may normally fire missiles providing the first rank are armed with similar missiles. If a single rank fires the distance they are firing to hit their target is measured from the front stand, but if two ranks are firing the measurement is taken from the front of the rearmost stand. If missile troops **immediately** behind the second rank

are on an elevation sufficiently high to permit them to see over the heads of the intervening troops, then up to two additional ranks of figures may also fire, with distance measured from the second rank just as if that rank were the only other firing (the distance bonus being allowed to compensate for the advantage of greater elevation). Note that if the second rank of troops is similarly higher than the first rank, measurement is made from the front of the front stand. "Immediately behind" is considered up to 1" distance per 1" of rise.

Indirect Fire: Slingers, and archers (but not troops armed with crossbows) may arch fire over the heads of intervening troops or other obstacles not above ten scale feet in height. The intervening object(s) must be at least 3" distant from the missile troops and at least the same distance from the target. Indirect fire reduces the range of the firing unit by 25%, all such fire is considered to be at long range, and any overhead cover will negate the effects, i.e. trees, roofs, etc. make indirect fire impossible.

Arc of Fire:	Hand-hurled missiles	— 45% left or right
	Slingers	— 60% left or right
	Bows, footmen	— 45% left or right
	Bows, horsemen	— 180% left, 45% right

Use a compass to determine any questions regarding arc.

Split-Move and Fire: Certain specially trained horsemen armed with bows or crossbows (light), as well as elven bowmen afoot, can perform the tactic known as split-move and fire. Simply stated, the horsebowmen move up to one-half of their normal move, fire missiles during the appropriate firing break, and then they continue to move out the balance of their normal movement and take charge bonus movement if desired. At the firing break they shoot their missiles, and they are subject to possible return fire.

Pass-Through Fire: Troops not moved prior to the mid-turn fire break(s) may elect to fire "pass-through" fire at any enemy units which are within their missile range at the half-movement point. Targets include any split-moving troops, those by-passing the missile troops firing, and troops charging to, but not yet, meleeing them.

CASUALTIES: SEE MISSILE FIRE TABLES

Ammunition Supply: Typically, but one volley of spears, axes and/or hammers can be hurled; javeliners have up to four volleys; slingers have an unlimited number of stones, but no more than 20 bullets (of hardened clay, shaped stone or lead); bowmen have up to 20 arrows; and crossbowmen have up to 30 quarrels (or bolts). If desired, a side record of missile supply can be kept. Additional missiles can be transported to the battlefield in carts or wagons as was actually done on occasion.

Artillery: As the various artillery pieces represent but a single scale engine, only a single figure is needed to represent crew for each. However, as it requires a minimum number of crewmen to operate any such engine, if the number of artilleryists drops below the following actual minimums, the engine becomes inoperable until more crew are brought up. Note that it is strongly recommended that the number of available crewmen be sharply limited, as trained crews would be scarce.

Ballista —	3 men
Light Catapult —	4 men
Heavy Catapult —	6 men
Trebuchet —	8 men

Arc of fire for artillery is:

Ballista —	45° left or right
Light Catapult —	30° left or right
Heavy Catapult —	15° left or right
Trebuchet —	5° left or right

Ballista fire cannot be arched. All catapult/trebuchet fire is indirect. The highest point of the trajectory of a catapult/trebuchet is, for purposes of these rules, equal to 10% of its scale maximum distance, the apogee occurring at the mid-point of the trajectory.

Giants act as 20" range — light catapults with a fire arc of 45% left or right, but they must stand one-half move to fire.

Casualties for artillery fire weapons are found in the MISSILE FIRE TABLES section hereafter. Catapult hits are treated as non-normal hits, but score only one-half or no damage against creatures with 4 or more hit dice which cannot be hit by normal weapons.

Missile Fire at Artillery:

Small missiles allow artillery crew the effect of **light brush**, and they have no effect upon the artillery pieces themselves.

Ballista missiles have no effect on artillery pieces.

All artillery fire at other machines must be diced for as to whether it strikes the machine, dice 01-50, or whether it strikes the crew, dice 51-00. Artillery hits have the indicated chance of destroying the target, while crew hits score the number of points of damage shown on the chart in the MISSILE FIRE TABLE section. The artillery vs. artillery damage is also shown there:

Artillery vs. Artillery

Attacker is:	% chance to destroy		
	Lt. Cat.	Hv. Cat.	Trebuchet
Light Catapult	50%	40%	30%
Heavy Catapult	60%	50%	40%
Trebuchet	80%	60%	50%

Terrain Effects on Missile Fire: See MISSILE FIRE TABLES.

Missile Fire into Melees: Firing into melees is permitted, with damage divided proportionately into hostile and friendly figures. Large figures that protrude or are otherwise exposed can be fired at with no penalty.

Special Figures with Units: If a special (1:1) figure is with a unit receiving any sort of missile fire, the fire strikes the other figures first, not the special one.

SPELL CASTING

As a general rule, it requires some considerable amount of time to ready a spell for any purpose. Those spells which take effect immediately are shown below:

Immediate Effect	¼ Turn Preparation	Full Turn Preparation	1½ Turns Preparation
Wands	3rd level spells	7th level spells	Scroll spells of
Staves	4th level spells	8th level spells	7th-9th level
Rods	5th level spells	9th level spells	
Rings	6th level spells	Scroll spells of	
Power Words	Scroll spells of	3rd-6th levels	
Word of Recall	1st-2nd levels		
Other Devices*			
1st level spells			
2nd level spells			
Innate abilities			

*assuming no delay indicated by the magical item itself

Thus, if one opponent readies a spell on turn one, he can employ it at the latest on turn two — or turn three if preparation did not begin until the latter half of the turn.

Spell casting requires that the caster be motionless, although use of wands, staves and similar devices negates any such requirement. Similarly, a spell, even from a device, cannot be cast if the spell caster is engaged in melee. Spells/magical attacks must be designated as regards range and aiming point, when applicable.

The following list of spells is given for reference as regards range, area of effect and duration only. See D&D, etal, for effects.

Spell Damage: The number of points of damage inflicted by attack spells is basically that indicated by the D & D system, i.e. one 6-sided die of damage for each level the spell caster has attained, using wands as six dice and staves as eight dice when damage is thus necessary to determine. Damage dice remain at 6-sided, so the average damage per level is 3.5 points.

When spell damage is to be determined the number of scale creatures represented by the figure(s) affected by the spell/magic is important. If the figure represents but a single creature (of unusual nature, of course) then the possible maximum damage is simply the number of levels of the spell/magic times 3.5. However, if the figure represents ten scale creatures, the base damage possible is:

$$\text{level} \times 3.5 \times 5$$

Thus, a fire ball cast into the midst of attacking orcs will do the greater amount of damage, modified by the possibility of the orcs making their saving throw or throws if more than one figure of orcs are in the area of the fire ball. Assuming that there is a unit of 10 orc figures representing 100 scale orcs, and that a 10th level magic-user casts a fire ball into their midst which affects 8 of the 10 figures, a maximum damage of $3.5 \times 10 = 35 \times 5 = 165$ possible damage points. Each of the 8 orc figures would then be diced for to see if they received the full blast, and those that save take 1/16th of the total damage, those which fail take 1/8th, i.e. 11 points or 21 points respectively. Note that all remainders are rounded UP to the nearest whole.

If but a single figure of orcs were caught in such a blast they would be killed regardless of saving throw, but in the 10-figure example above, the affected figures would all have points of damage recorded against their unit, and for every 45 points of damage scored upon them a figure would be removed. Remember, a side record of damage taken by each figure or unit must be kept, so that casualties can be extracted when appropriate.

SPELL CHART

Spell	Range	Area Effect	Turn Duration
MAGIC USERS:			
Detect Magic	6"	1"	2
Hold Portal	1"	1 portal	2-12
Protection/Evil	touch	personal	6
Light	12"	3" dia.	6+ level*
Charm Person	12"	personal	—
Sleep	24"	1" dia.	4-16
Shield	touch	personal	2
Magic Missile	15"	personal	—
Ventriloquism	6"	object	6
Detect Invisible	1" level*	1" path	6
Levitate	touch	personal	6+ level*
Phantasmal Forces	24"	3" dia.	until dispelled
Locate Object	6" + level*	—	2
Invisibility	24"	personal	until dispelled
Wizard Lock	1"	1 closure	until dispelled
Detect Evil	6"	1" path	6
ESP	6"	personal	6
Continual Light	12"	24" dia.	until dispelled
Knock	6"	1 closure	—
Darkness, 5' radius	12"	1" dia.	6
Strength	touch	personal	full game
Web	1"	1" × 1" × 2"	until destroyed
Mirror Image	touch	3" dia.	6
Magic Mouth	touch	object	until mouth speaks
Pyrotechnics	24"	1"-6" cube	6
Fly	touch	personal	1-6 + level*
Hold Person	12"	3" dia.	6 + level*
Dispel Magic	12"	3" dia.	1
Clairvoyance	6"	personal	6
Clairaudience	6"	personal	6
Fire Ball	24"	4" dia.	—
Lightning Bolt	24"	6" × 3/4"	—
Protection/Evil, 10' r.	touch	2" dia.	12

Spell	Range	Area Effect	Turn Duration
MAGIC USERS:			
Invisibility, 10' r.	24"	2" dia.	until dispelled
Infravision	touch	personal	full game
Slow Spell	24"	6" × 12"	3
Haste Spell	24"	6" × 12"	3
Protection/Normal Missiles	3"	personal	12
Explosive Runes	touch	1 object	until exploded
Water Breathing	touch	personal	12
Rope Trick	touch	1 rope	6+ level*
Suggestion	6"	personal	full game
Monster Summoning I	1"	1-6 or 1-3 monsters	6
Polymorph Self	touch	personal	6+ level*
Polymorph Others	6"	1 monster	until dispelled
Remove Curse	touch	1 object	—
Wall of Fire	6"	6" × 2" or 3" dia.	until dispelled
Wall of Ice	6"	6" × 2" or 3" dia.	until dispelled
Confusion	12"	3" dia.	12
Charm Monster	12"	1 monster	—
Growth/Plant	12"	30" (square)	until dispelled
Dimension Door	1"	personal	—
Wizard Eye	touch	personal	6
Massmorph	24"	4" dia.	until dispelled
Hallucin. Terrain	24"	144" (square)	until dispelled
Ice Storm	12"	3" cube	1
Fear	24"	4" dia.	6
Monster Summoning II	1"	1-2 monsters	6
Extension I	matches extended spell		
Teleport	touch	personal	—
Hold Monster	12"	3" dia.	6+ level*
Conjure Elemental	24"	1 elemental	until dispelled
Trans. Rock to Mud	12"	30" (square)	full game
Wall of Stone	6"	10" (square)	until dispelled
Wall of Iron	6"	5" (square)	12
Animate Dead	1"	variable	until dispelled
Magic Jar	3"/12"	personal	until dispelled
Contact Higher Pl.	touch	personal	variable
Pass-Wall	3"	¼" × ¼" × 1	3
Cloudkill	1"	3" dia.	6
Feeblemind	24"	personal	until dispelled
Growth/Animal	12"	1-6 animals	12
Monster Summoning III	1"	1-2 monsters	6
Extension II	matches extended spell		
Stone to Flesh	12"	1 object**	until reversed
Reincarnation	touch	personal	—
Invisible Stalker	1"	1 monster	until destroyed
Lower Water	24"	variable	10
Part Water	12"	12" × 1"	6
Projected Image	24"	personal	6
Anti-Magic Shell	touch	1"	12
Death Spell	24"	6" × 6"	—
Geas	3"	personal	variable
Disintegrate	6"	1" cube	—
Move Earth	24"	80" (square)	6
Control Weather	table	table	until dispelled
Repulsion	12"	3" dia.	6
Monster Summoning IV	1"	1 monster	6
Extension III	matches extended spell		

Spell	Range	Area Effect	Turn Duration
MAGIC USERS:			
Delayed Blast F.B.	24"	4" dia.	1
Reverse Gravity	9"	3" cube	1
Limited Wish	variable according to wish		
Power Word — Stun	12"	3" dia.	2-12 to 1-6
Phase Door	1"	door-size	7
Charm Plants	12"	variable	until dispelled
Mass Invisibility	24"	4" dia.	until dispelled
Monster Summoning V	1"	1 monster	6
Mass Charm	12"	2" dia.	—
Power Word — Blind	12"	3" dia.	full game
Symbol	touch	1 object	until negated
Permanent Spell	touch	variable	until dispelled
Mind Blank	1"	personal	full game
Polymorph Any Object	24"	1 object	until dispelled***
Monster Summoning VI	1"	1 monster	6
Meteor Swarm	24"	6" cube, max.	—
Shape Change	touch	personal	10-15 + level*
Time Stop	1"	3" cube	1
Power Word — Kill	12"	3" dia.	—
Gate	1"	1 being	variable
Wish	variable according to wish		
Astral Spell	touch	personal	full game
Prismatic Wall	touch	2" dia.	60
Maze	6"	1 creature or 1 figure	1
Monster Summoning VII	1"	1 monster	6
CLERICS:			
Cure Light Wounds	touch	personal	—
Detect Evil	12"	1" path	6
Protection/Evil	touch	personal	12
Light	12"	3" dia.	12× level*
Find Traps	personal	6" dia.	2
Hold Person	18"	personal	9
Bless	6"	5" × 5"	6
Speak with Animals	3"	3" dia.	6
Silence, 15' r.	18"	1" dia.	12
Snake Charm	6"	1-6 points of snakes/level	2-5
Cure Disease	touch	personal	—
Prayer	3"	2" (square)	1
Speak with Dead	1"	personal	—
Neutralize Poison	1"	personal	1
Cure Serious Wounds	touch	personal	—
Turn Sticks to Snakes	12"	2-16 sticks	6
Speak with Plants	3"	2" × 1"	6
Create Water	1"	32 gallons	—
Dispel Evil	touch	6" dia.	1
Raise Dead****	12"	personal	—
Commune	touch	personal	—
Quest	3"	personal	variable
Insect Plague	48"	36" (square)	full game
Create Food	1"	variable	—
Animate Objects	6"	variable	6
Find the Path	touch	personal	full game
Blade Barrier	6"	3" dia.	12
Word of Recall	touch	personal	—
Speak with Monsters	touch	personal	—
Conjure Animals	3"	variable	10
Earthquake	12"	variable	1

Spell	Range	Area Effect	Turn Duration
CLERICS			
Aerial Servant	1"	1 monster	variable
Wind Walk	touch	2 personal	full game
Holy Word	touch	4" (square)	—
Part Water	24"	variable	variable
Restoration	touch	personal	—
DRUIDS			
Predict Weather	touch	game area	—
Locate Animals	6" × level	—	2
Detect Snares & Pits	personal	6" dia.	10+ level*
Faerie Fire	6"	1" sq. + level*	6
Produce Flame	3"	personal	2 × level*
Locate Plants	6" + level	—	2
Obscurement	touch	1" cube × level*	1 × level*
Heat Metal	3"	variable	—
Warp Wood	6"	variable	—
Protection from Fire	touch	personal	3+ level*
Call Lightning	24"	—	—
Hold Animal	6"	variable	1 + level*
Produce Fire	3"	10 sq. ft.	1
Protection/Lightning	touch	personal	6 + level*
Plant Door	touch	door-size	3+ level
Control Temp. 10' r.	touch	1" dia.	3+ level
Hallucinatory Forest	6"	variable	until dispelled
Control Winds	variable	variable	6 + level*
Pass Plant	touch	personal	—
Hold Plant	3" + level*	3" dia.	6 + level*
Commune with Nature	touch	personal	—
Anti-Plant Shell	touch	1"	12
Animal Summoning II	6"	variable	10
Conjure Fire Elemental	24"	1-3 monsters	until dispelled
Weather Summoning	touch	game area	full game
Transport via Plants	touch	personal	—
Anti-Animal Shell	touch	1"	3 + level*
Animal Summoning III	12"	variable	10
Turn Wood	2" × level*	12" wall	1 + level*
Fire Storm	3"	variable	1
Animate Rock	touch	variable	6
Creeping Doom	6"	variable	variable
Transmute Metal — Wood	6"	variable	—

* the level of the spell user

** volume of material transformed is unlimited on previously living object, 9 cubic feet/level otherwise

*** duration also subject to the relationship between the object polymorphed and its new form

BREATH WEAPONS AND OTHER

SPECIAL ATTACK FORMS:

When dealing with unusual attack forms, it must be kept in mind that the relative scales will often be different, i.e. the attacker at 1:1, the attacked at 1:10. Therefore, all breath weapons will have the usual area of effect, but those figures for which saving throws are made will take one-half damage distributed on a maximum of five figures, and in the case of gases, those saving will not be affected. Damage is applicable in full to all figures before saving throws, so that if a dragon is capable of discharging a 50 hit-point lightning bolt, each figure could take 50 points of damage.

Gorgon breath is a cone, ¼" wide at the monster's mouth, 1" wide at its greatest extent, and 6" long.

Missile weapons are simply treated as missiles of the appropriate type, fired in the appropriate number, by an attacker of the indicated level.

Touch weapons will affect but one figure at 1:10 scale per turn, and for purposes of the rules, if the saving throw is made all scale creatures avoid the attack, but if the saving throw is not made, all are affected.

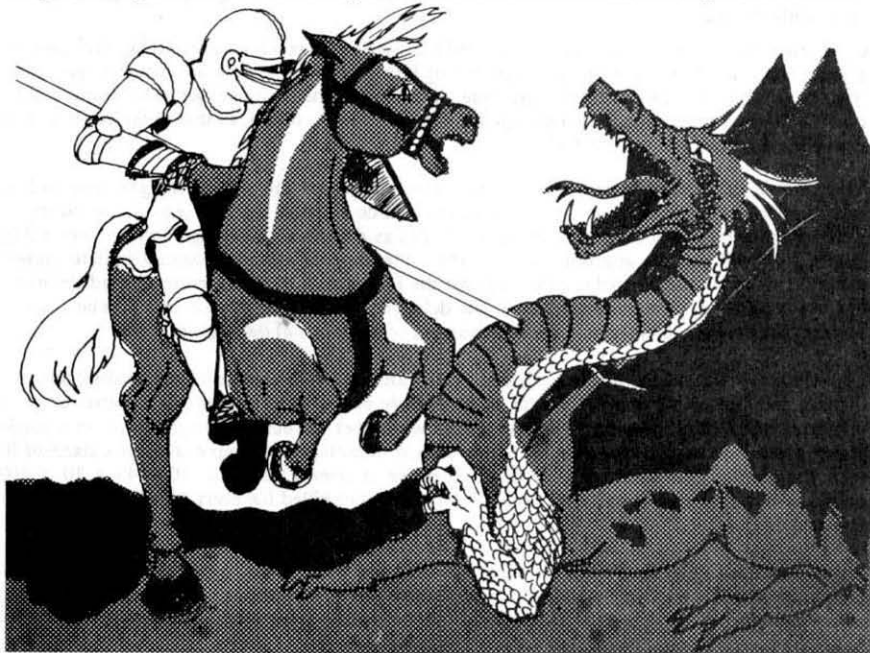
Gaze attacks will affect only the first rank of figures in a sight range of 3" deep by 3" wide. Saving throws are applicable.

SAVING THROWS

Class & Level		Ballista, Catapult, Trebuchet, Death Ray, or Poison	All Wands — Including Polymorph or Paralization	Stone	Dragon Breath	Staves & Spells
		Fighting-Men	1-3	12	13	14
Magic-User	1-5	13	14	13	16	15
Cleric	1-4	11	12	14	16	15
Fighter	4-6	10	11	12	13	14
Magic User	6-10	11	12	11	14	12
Cleric	5-8	9	10	12	14	12
Fighter	7-9	8	9	10	10	12
Magic-User	11-15	8	9	8	11	8
Cleric	9-12	6	7	9	11	9
Fighter	10-12	6	7	8	8	10
Magic-User	16+	5	6	5	8	3
Cleric	13+	3	5	7	8	7
Fighter	13+	4	5	5	5	8

Failure to make the total indicated above results in the weapon having full effect, i.e. turned to stone, take full damage from dragon's breath, etc. Scoring the total indicated above (or scoring higher) means the weapon has no effect (death ray, polymorph, paralization, stone, or spell) or one-half effect.

Other creatures generally qualify as Fighting-Men, level determined by hit dice (1st level = 1 hit die, 2nd level 2 hit dice, etc., with bonuses to hit dice ignored). If the creature is able to **employ** magic then it gains the benefit of being able to select the more favorable saving throw number.



MELEE

Once combat is joined it is assumed that a certain amount of damage will be inflicted each melee round. Rounds of melee will be computed as follows:

1. Moving over $\frac{1}{2}$ move to combat — 1 round
2. Moving less than $\frac{1}{2}$ move to combat — 2 rounds
3. Combat continuing from previous turn — 3 rounds

First Strike: When opponents have weapons (or reach) of considerable disparity, the opponent with the longer weapon (or reach) will inflict casualties first, and only after these casualties are removed will the opponent with the shorter weapon (or reach) be allowed to attack. Exception: Troops very much shorter than their opponent will be able to rush under the longer weapon (reach) and conduct simultaneous attack. If a disparity of two numbers exists, the weapon (or reach) will have the first strike stated above.

General Weapon Length Class or Length of Reach:

- | | |
|--|---|
| 1.
dagger
hand axe
mace
short sword
opponent to 3' tall | 2.
sword
battle axe
morning star
short spear
opponent to 5' tall |
| 3.
bastard sword
flail
opponent to 9' tall | 4.
spear
halberd
bardiche
pole arms to 8'
2-handed sword
opponent to 15' tall |
| 5.
long spears
pole arms of 12' and more
lances
pikes
opponents over 15' tall | |



Casualties: Base damage is shown on the MELEE TABLES hereafter. The damage is based on average damage of attacker times probability of hitting versus the various armor classes times ten (the number of scale creatures represented by a figure). The base number of hit points will be modified by a number of factors. Damage inflicted must be recorded, so that as sufficient points are accrued figures can be removed.



The amount of damage base (1-3, 1-6, etc.) is a function of the size of the attacker and/or weapon size. As a rule of thumb, small creatures will do 1-3 base damage (exception: dwarves). Those large creatures indicated in the D & D rules as doing above-average damage (ogres 3-8, giants 2-12) will use the appropriate base. Once the appropriate base damage is determined, simply cross index the level of attacker against the armor class of the defender to find the number of hit points of damage scored upon the defender. Thereafter, modify this number by any bonuses or penalties to determine the final number of hit points of damage inflicted.

The amount of damage various creature types can sustain is computed by multiplying the average number of hit points a single such creature can sustain by ten (the number of scale creatures represented by a single figure) times the number of such figures mounted on a single stand. Mounted troops include the hit points of their mounts. For example, assume a stand of 10 orcs: the average damage an orc can take is 1 die or an average of $4.5 \times 10 = 45 \times 10 = 450$ points, with a figure removed at 45 points, and a scale orc killed for every 4.5 points of damage inflicted on the unit.

Number of Ranks Fighting: Only a single rank of figures will fight, and only those figures whose stands are actually touching stands of enemy figures will be counted. Exception: Troops armed with weapons over 12" will gain a second rank in melee, providing the stands of the second rank

are directly behind and touching the stands of the first rank of figures involved in the melee, and the second rank of figures does **not** get a first strike.

When mounted troops are engaged in combat the mounts will not count in the first melee round. On the second and succeeding rounds of melee, however, mounts will fight as follows:

	Mount	Level	Base Damage	
	Ponies	1	1-3	
	Light Horses	2	1-3	
	Medium Horses	2+1	1-6	
	Heavy Horses	3	1-10	
	Wolves	2	1-6*	
	Unicorns	4	1-10 + 1-3 (when standing)**	
	Pegasi	2+2	1-10	
	Hippogriffs	3+1	1-10	
	Griffons	7	2-12	

* Wargs always get 1-6 base damage, no charge bonus when ridden.

** Unicorns do base 2-12 damage when charging.

Melee Contact: As soon as opposing units come in contact — their stands touch — all movement ceases, and melee takes place. Any unit not already engaged in melee may move a maximum of 1" right or left in order to confront and contact an opposing unit attempting to bypass or flank the unit.

Overlap: If one opponent in a melee has troops on either or both flanks which are not opposed by any enemy figures, these figures will be assumed to move into flanking positions **after** the first round of melee, thus gaining an additional attack bonus (see hereafter).

Units attacked in the rear do not return attacks for **two** turns.

Impetus: Figures representing a single scale creature and figures formed into open order or a close formation, but not unorganized units, gain a bonus for moving into melee at least the distance of their **charge movement bonus** as an announced charge. (See MELEE BONUSSES AND PENALTIES)

Removal of Casualties: Figures are marked off as casualties left to right, back rank first, including rear attacks upon the back rank.

Withdrawal from Melee: Only elite or guard units are able to withdraw from melee voluntarily. All other units must remain until victorious or defeated. Elite and guard units which opt for withdrawal must make a morale throw, and if they fail, their morale automatically drops one level. If they succeed, they may move back one-half move, facing the enemy. In the former case they take normal casualties and return casualties according to their lower morale level. In the latter case they inflict 10% normal casualties and receive none in return. Troops with a base movement rate at least 50% greater than their opponents can withdraw from melee at will with no penalty.

Other Weapons: Troops will all have one weapon plus either sword (pikemen, pole-armed troops, and missile troops) or dagger. Mounted troops will have their primary weapon plus sword in most cases. If figure castings show other weapons the casting can tell, if players so agree.

Special Melee: When two or more scale single figures of high level are near each other they must seek out combat amongst themselves rather than with low-level creatures. Such combat then takes place with the "Alternate Combat System" from D & D, with damage by weapon type and by monster attacks (if applicable) used. Such melees will be fought on a basis of 3 rounds for every round of scale 1:10 melee. Special figures may be withdrawn from melee at any time desired, but opponent figures are allowed an additional round of attack wherein the withdrawing figure does not strike back.

MORALE:

The morale of each figure or unit, excluding single-creature figures which represent player-character types or are too unintelligent to reason, must be checked when certain conditions are met. These conditions are:

1. Each 10% of casualties for units
2. Each 25% of total hit points for single creatures
3. When attacked in the flank
4. When attacked in the rear TWO checks must be made
5. When surrounded by superior forces (based on point value)
6. When charged by mounted forces if unit is itself unmounted and has fewer than an average of 2 hit dice per creature, or the proportion of mounted chargers hit dice (including the mounts) to that of the defender is at least a 2:1 ratio
7. When magically attacked by spells/devices which cause obvious harm other than actual physical damage
8. When facing a unit in melee which is virtually invulnerable to attack modes available to the unit in question
9. When unit standard captured by enemy
10. When army standard in sight is lost to enemy
11. When leader with unit killed
12. When army commander killed
13. Elite/guards withdrawing from melee
14. Mounted troops (other than warg or griffon mounted) staying in melee with unmounted troops able to return hits

BASIC MORALE SCORES

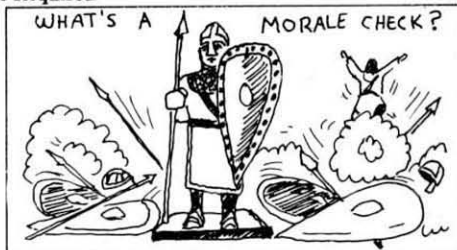
Creature's

Hit Dice

under 1
1-2
2+-3
3+-4
4+-6
6+-8
8+-10
10+-12
12+-14
14+ & up

Basic Morale Score Required

35
40
45
50
55
60
65
75
85
90



Scores **above** the (adjusted) scores required indicate morale failure.

ADJUSTMENTS TO BASIC MORALE (all cumulative)

Additions

Dwarves or men	+	5
Elves		10
Elite		5
Guards		5
Mounted		5
Medium Cavalry (Human)		5
Heavy Cavalry (Human)		10
In formation		5
In column formation		10
Each successful melee fought		5
Entrenched or fortified		5
Standard with unit		5
Army standard with unit		15
Unintelligent friendly creature fighting with unit against enemy		+½/level of the creature
Intelligent creature fighting with unit against enemy		+1/level of the creature

Additions

Army sub-commander with unit	10
Army commander with unit	30
Disordered enemy unit within 6"	5
Routed enemy unit within 6"	+ 10

Note: Elite/Guards bonus also applies to enemy troops of that status if adversely concerned, i.e. guard unit of enemy disordered within 6" means a +10 bonus.

Subtractions

Peasants	- 15
Kobolds, goblins or orcs in full daylight	10
Levied troops	5
Attacked in flank (first melee round only)	10
Attacked in rear (first two melee rounds only)	20
Surrounded	15
Each 10% of casualties sustained	5
Unit standard lost	10
Army standard lost	20
Creature fighting with unit killed	-1/level of the creature
Army sub-commander with unit leaves	10
Army sub-commander with unit killed	20
Army commander with unit leaves	20
Army commander with unit killed	40
Shaken	10
Disordered	20
Routed	30
Disordered friendly unit within 6"	5
Routed friendly unit within 6"	10

Note: Elite/Guard troops bonus applies as penalty, i.e. disordered friendly unit of elite troops within 6" brings 9-10 penalty.

MORALE FAILURE

Whenever a unit fails to make its adjusted morale score it drops one morale level. There are five morale levels:

- Elite** — Elite units (including guards or elite guards) which fail to make their morale score are treated as regular units during the next turn, and any morale checks are made accordingly. After one turn of **rest** the elite status is regained
- Regular** — Regular units, and elite units which have dropped a morale level, which fail to make their morale checks drop to a shaken status
- Shaken** — Shaken troops regain a morale level after one turn of **rest** provided they make a morale check and score appropriately OR if they have three full turns of rest. Shaken troops who fail morale checks drop to a disordered status
- Disordered** — Disordered troops regain a morale level after one turn of retreat (move away from the enemy one full move) followed by three consecutive full turns of rest. If unable to retreat the troops will stand until able to retreat
- Routed** — Routed troops must immediately make two full moves, including charge bonus movement, away from the enemy, and then rest three consecutive full turns, after which their morale level rises to disordered (although no further move need be made) Routed units which cannot retreat will immediately throw down their arms and surrender.

Notes: Shaken troops cannot change formation or face.

*Disordered and routed troops are **unorganized** (see MOVEMENT and FORMATION rules). They cannot change formation or face.*

If a unit with a morale level drop is joined by an army sub-commander, providing the sub-commander was not with the unit when its morale level dropped, the unit automatically goes up one morale level immediately.

If a unit with a morale level drop is joined by the army commander, providing the commander was not with the unit when its morale level dropped, the unit automatically is restored to its normal level.

Contact with Another Unit: If any unit in disordered or routed morale status moves so as to come into contact with a friendly/allied unit the following will happen:

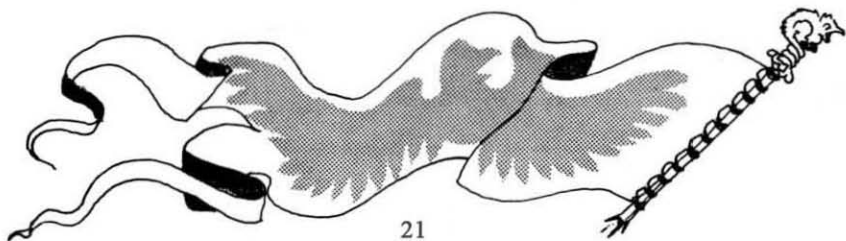
1. If the contacted troops are physically outnumbered by two or better to one by the troops with disordered or routed morale status they will automatically assume the same morale status as the contacting unit and proceed as that unit does. Exception: Troops with elite status who make a morale throw are passed through by the poor morale status troops but are left in an unorganized state; guards and elite guards can prevent continued poor morale as explained in 2. below unless outnumbered by four or better to one, in which case they are treated as elite troops as mentioned above.
2. If the contacted troops are physically outnumbered by less than two to one, and they do not outnumber the contacting unit by two to one, they are allowed a morale throw. If the contacted troops successfully score their morale total, they stand, and the troops in disordered or routed condition automatically stand where contact occurred. The disordered or routed troops also automatically go up in morale to **shaken** status, although they must face the unit they contacted in order to regain morale. Count 6 figures for every 5 actual elite troop figures, count guards as 5 for every 4 actual, and count elite guards as 3 for every 2 actual figures.
3. If the contacted unit outnumbers the disordered or routed unit by two or better to 1, they need not make a morale throw as called for in 2. above to stop the contacting unit and raise its morale to shaken status. Elite/guard bonuses noted in 2. above are applicable.

Morale Optional: There is a 1 in 6 chance that a shaken unit will fall back (facing the enemy) 3". There is a 1 in 6 chance that a disordered unit will drop its standard and weapons when retreating.

SPECIAL UNITS

Commanders: Army sub-commanders and the army commander may be assigned to armies, the latter in all cases, and the former if the forces involved warrant. They must be player-characters. Before the commencement of a game players should agree amongst themselves as to the basis for assigning of sub-commanders. All commanders should be considered as single figures, and if a guard is desired the commander can be placed in the midst of the stand of guards. Note, however, if all front rank figures are killed during a single melee round that there is an attack possible on the commander figure during the next melee round. Of course, the commander unit is free to leave any melee unless engaged by a similar figure or some other single powerful creature/monster.

Standards: Unit standards must be mounted in the middle of the front rank. If there are three simultaneous figure kills, the standard is lost, and in any event it will fall when the eighth figure in a standard-size unit is eliminated. Special standards, including the army standard, must be mounted on separate stands. Sub-commanders may have standards, and the army may have one; the former is mounted on a stand of four figures, with the standard to the left front, while the latter is mounted on a stand of six figures, with the standard in the center. The troops guarding the standard must be appropriate to the general composition of the entire army.



FORTIFIED POSITIONS

While full-blown sieges are not within the scope of these rules, some battles might involve strongly fortified positions. The basic system for dealing with such battles is drawn directly from CHAINMAIL.

Fortification Defense Values:	Point Value
Round towers	40-70
Bastions	40-50
Gatehouses and square towers	30-45
Curtain walls and stone buildings	25-40
Ramparts	20-30
Wooden structures and heavy palisades	5-15
Drawbridge	10
Portcullis	15
Gates	15
Large artillery pieces	5
Small artillery pieces	3
Attack Values of:	
Horn of Blasting	12
Trebuchet or earth elemental	4
Large catapult	3
Small catapult or ent	2
Ram, pick, or screw	
Fireball/lightning bolt	¼ per die

Note: Wooden structures may be set ablaze by magical fires with relative ease.

Covered Rams: Covered war machines enclosing rams, picks or screws can be moved at a rate of 1" for every figure representing ten first-level creatures inside pushing it. Maximum movement is 4"/turn. They will house a maximum of eight man-sized figures, or four ogre-sized figures. If no less than four figures of first-level creatures are available to operate the attack device, it will do 1 point of damage per turn, as indicated; however, if four figures with ogre-strength operate the device it will do double damage. The device must be flush against the construction being attacked in order to do damage. The defenders will permanently disable the device (assume the use of ram catchers and the like) when it is operating if they are able to score 76 or higher on a percentile dice roll.

Siege Towers: Siege towers move at a rate of 1" for every two figures representing ten first-level creatures inside pushing. Maximum movement is 4"/turn. The base will house the same number of figures as a covered ram. The drawbridge deck will house a maximum of four man-sized figures (two ogre-sized), and the top deck can accommodate a maximum of two man-sized figures. A maximum of four figures/turn can climb the ladder, two being able to go to the top, the other two making it to the drawbridge level.

Ladders: One figure representing ten first-level creatures is able to carry a ladder at one-half normal speed. One figure representing ten second-level creatures could carry the ladder at only the same speed, assuming the ladder was so constructed as to bear them. Two first-level figures, or second-level figures, or third level figures or a single fourth-level figure can carry the ladder forward at normal speed. In no event is charge bonus movement possible. Ladders can be destroyed, but consider that an endless supply is available to the attackers from their base position. On the first turn it is erected, two figures can climb a ladder; thereafter, up to three are able to climb it. Each figure that reaches the top of the ladder will have to fight any defender within melee range; and if there is no defender the figure may then move a maximum of 1" to a position atop the construction being scaled. If the defenders eliminate the first figure climbing the ladder there is a 50% chance that they will be able to push the ladder off and over. If a ladder is pushed over, the figure other figures on it take damage; the higher, if applicable, is eliminated and the lower, or only, takes 10% of possible hit points and is unable to move next turn.

Movable Mantlets: Movable mantlets are typically small sections of palisades or hide-covered wooden frames behind which attackers may move up to defending fortifications, or behind which missile troops may make reply to defender missile troops. They are moved 3" for every

figure pushing or carrying them, with a maximum movement of 6"/turn. This rate assumes that the mantlet is so constructed as to exactly shelter the size of creature moving them, and adjustments must be made if this differs. Each mantlet will provide cover for three figures: one Bowman can fire through a slit without being exposed; additional missile troops firing from behind the mantlet will receive protection equal to one-half cover.

Rocks: Defenders typically have a supply of large rocks and stone pieces on hand to drop upon attackers. The exact number must be determined by game participants. A rock dropped down a ladder will inflict 60 points of damage on the first figure climbing. It also has an 80% chance of dislodging the figure from the ladder. There is a 40% chance that a second climbing figure will be dislodged, and a 10% chance that a third climbing figure will be dislodged. Dislodged figures take 40% of total possible damage and 20% of total possible damage (based on original strength) and are unable to move on the following turn. Rocks thrown down upon attacking devices do 1 point of damage; if hurled by a figure representing ten fourth-level creatures, damage is doubled.

Boiling Oil: When poured or otherwise released from above, boiling oil will sweep a path 1½" wide downwards, to form a pool 3" wide by 1½" across at the base of the construction from which it was poured. The oil will inflict 70 points of damage on any figure in its path or in the pool (one-tenth damage for figures representing but a single creature. The oil will burn for three turns, continuing to inflict this amount of damage on any such figures. If the figures are able to quench the flames in some manner (being rolled in sand, covered by green hides, submersion in water, etc.) the damage is halted. Any wooden structure not covered with green hides will burst into flame when struck by oil. Covered structures without peaked roofs must be abandoned next turn, peaked-roof structures must be abandoned in three turns. The wooden construction will burn for three turns (five with regard to peaked-roof ones) and are then removed as destroyed. Structures covered with green hides have only a 20% chance of being set afire, and if they are set afire they are treated as peak-roofed ones.

Note: *Figures actively defending fortifications — such as operating a ram-catcher, dropping rocks, or pouring oil are able to claim only one-half protection at best with regard to missile and melee attacks.*

Breaches: Whenever attacking devices destroy a section of a fortification, a breach is caused — the size of which is equal to the general width of a construction such as a tower, gate, etc., or not less than 4" in a curtain wall. Attackers move through such openings at rough terrain movement restrictions. Defenders can block a breach with abatis in three turns, providing that there is one figure of first-level creatures per inch of breach to perform the operation. Abatis of this sort acts as movable mantlets with regard to protection and its defensive value. Such abatis can be rebuilt in the same manner it was placed if it is destroyed. Attackers may destroy it by various means as noted above, as well as by hand in the same method it was placed, providing the figures removing (destroying) the abatis are not meleed.

MISSILE FIRE ADJUSTMENTS

Additions

Target is five or more ranks deep or large	+ 20%
Magic bow, per scale bow, per +*	5%
Magic arrow/bolt, per scale missile, per +*	5%

Subtractions

Target is three ranks deep*	— 10%
Target is two ranks deep*	20%
Target is one rank deep or in open order	30%
Target is single creature, very large*	50%
Target is single creature, large*	70%
Target is single creature, about man-sized	90%
Cover equal to archer slit	90%
Cover about through chest*	50%
Cover about to waist, or woods (within 1" of edge)*	30%
Light brush covering target*	20%
Obscured or hidden	fire not possible

*Does not apply to artillery

Adjust armor class of defender downward by 1 level at medium range, by 2 levels at short range. All long and medium ranges base damage is 1-3 for all except heavy crossbow missiles.

MELEE BONUSES AND PENALTIES

Bonuses

Charging (1st round only)	+ 20%
Flanking (1st round only)	20%
Attacking unit in formation evolution	30%
Rear Attack (1st round only)	40%
Attacking down a gentle slope	20%
Elite or Guards	10%
Elite Guards	20%

Penalties

Fatigued	- 20%
Open Order	10%
Unorganized	30%
Shaken	40%
Disordered	60%
Routed	80%
Defender behind low wall or abatis	30%
Defender behind cover about chest-high	50%
Kobolds, Goblins, Orcs in full daylight	30%
Peasants	20%
Levies or Kobolds, Goblins, Orcs in near full daylight	10%

FOR MAGICAL WEAPON BONUSES ADD 1 POINT OF DAMAGE/ATTACK FOR EACH +1. THUS, A DAGGER +2 VERSUS ORCS IN THE HANDS OF A 10th LEVEL FIGHTER DOES $2.5 + 2 \times 10$ (his level) = 45 POINTS OF DAMAGE VERSUS ORCS. IF AGAINST SINGLE OPPONENTS THE BONUS IS NOT MULTIPLIED BY LEVEL.

COMBAT TABLE

HUMAN-TYPE ATTACKING

Points of Damage Per Scale 1:10 Figure

WEAPONS DOING 1-3/1-6 POINTS DAMAGE

Level of Attacker	Defender Armor Class											
	9	8	7	6	5	4	3	2	1	0	-1	-2
0	10/18	9/16	8/14	7/12	6/11	5/9	4/7	3/5	2/4	1/2	-	-
1- 3	11/19	10/18	9/16	8/14	7/12	6/11	5/9	4/7	3/5	2/4	1/2	-
4- 6	13/23	12/21	11/19	10/18	9/16	8/14	7/12	6/11	5/9	4/7	3/5	2/4
7- 9	16/28	15/26	14/25	13/23	12/21	11/19	10/18	9/16	8/14	7/12	6/11	5/9
10-12	18/32	17/30	16/28	15/26	14/25	13/23	12/21	11/19	10/18	9/16	8/14	7/12
13-15	20/35	19/33	18/32	17/30	16/28	15/26	14/25	13/23	12/21	11/18	10/18	9/16
16-18	20/35	20/35	20/35	20/35	19/33	18/32	17/30	16/28	15/26	14/25	13/23	12/21
19&+	20/35	20/35	20/35	20/35	20/35	19/33	18/32	17/30	16/28	15/26	14/25	13/23

Points of Damage
WEAPONS DOING 1-8(2-7)/1-12(4-9) POINTS DAMAGE

Level of Attacker	Defender Armor Class											
	9	8	7	6	5	4	3	2	1	0	-1	-2
0	23/33	20/29	18/26	16/23	14/20	11/16	9/13	7/10	5/7	2/3	-	-
1-3	25/36	23/33	20/29	18/26	16/23	14/20	11/16	9/13	7/10	5/7	2/3	-
4-6	29/42	27/39	25/36	23/33	20/29	18/26	16/23	14/20	11/16	9/13	7/10	5/7
7-9	36/52	34/49	32/46	29/42	27/39	25/36	23/33	20/29	18/26	16/23	14/20	11/16
10-12	41/59	39/55	36/52	34/49	32/46	29/42	27/39	25/36	23/33	20/29	18/26	16/23
13-15	45/65	43/62	41/59	39/55	36/52	34/49	32/46	29/42	27/39	25/36	23/33	20/29
16-18	45/65	45/65	45/65	45/65	43/62	41/59	39/55	36/52	34/49	32/46	29/42	27/39
19&+	45/65	45/65	45/65	45/65	45/65	43/62	41/59	39/55	36/52	34/49	32/46	29/42

0 Level is normal man-type (i.e., 1 die or less, and not able to progress upwards in levels.)

For armor classes better than shown, deduct 5% of hit points scored per armor class.

COMBAT TABLE

MONSTER ATTACKING

Points of Damage Per Scale 1:10 Figure
WEAPONS DOING 1-3/1-6 POINTS DAMAGE

Monster Hit Dice	Defender Armor Class											
	9	8	7	6	5	4	3	2	1	0	-1	-2
0	10/18	9/16	8/14	7/12	6/11	5/9	4/7	3/5	2/4	1/2	-	-
1-+1	11/19	10/18	9/16	8/14	7/12	6/11	5/9	4/7	3/5	2/4	1/2	-
2-3	12/21	11/19	10/18	9/16	8/14	7/12	6/11	5/9	4/7	3/5	2/4	1/2
3+4	14/25	13/23	12/21	11/19	10/18	9/16	8/14	7/12	6/11	5/9	4/7	3/5
4+6	15/26	14/25	13/23	12/21	11/19	10/18	9/16	8/14	7/12	6/11	5/9	4/7
6+8	16/28	15/26	14/25	13/23	12/21	11/19	10/18	9/16	8/14	7/12	6/11	5/9
8+10	17/30	16/28	15/26	14/25	13/23	12/21	11/19	10/18	9/16	8/14	7/12	6/11
10+12	18/32	17/30	16/28	15/26	14/25	13/23	12/21	11/19	10/18	9/16	8/14	7/12
12+14	19/33	18/32	17/30	16/28	15/26	14/25	13/23	12/21	11/19	10/18	9/16	8/14
14+&+	20/35	19/33	18/30	17/28	16/26	15/25	14/23	13/21	12/19	11/18	10/16	9/14



Points of Damage
WEAPONS DOING 1-10(3-8)/2-12 POINTS DAMAGE

Monster Hit Dice	Defender Armor Class											
	9	8	7	6	5	4	3	2	1	0	-1	-2
to 1	30/35	27/32	24/28	21/25	18/21	15/18	11/14	8/11	6/7	3/4	-	-
1+ 1	33/39	30/35	27/32	24/28	21/25	18/21	15/18	11/14	8/11	6/7	3/4	-
2- 3	36/42	33/39	30/35	27/32	24/28	21/25	18/21	15/18	11/14	8/11	6/7	3/4
3+- 4	41/49	39/46	36/42	33/39	30/35	27/32	24/28	21/25	18/21	15/18	11/14	8/11
4+- 6	44/53	41/49	39/46	36/42	33/39	30/35	27/32	24/28	21/25	18/21	15/18	11/14
6+- 8	47/56	44/53	41/49	39/46	36/42	33/39	30/35	27/32	24/28	21/25	18/21	15/18
8+-10	50/60	47/56	44/53	41/49	39/46	36/42	33/39	30/35	27/32	24/28	21/25	18/21
10+-12	52/63	50/60	47/56	44/53	41/49	39/46	36/42	33/39	30/35	27/32	24/28	21/25
12+-14	54/67	52/63	50/60	47/56	44/53	41/49	39/46	36/42	33/39	30/35	27/32	24/28
14+&+	55/70	54/67	52/63	50/60	47/56	44/53	41/49	39/46	36/42	33/39	30/35	27/32

For Armor Classes better than shown, deduct 5% of hit points scored per armor class.

Note: Damage indicated assumes 1:10 scale figure to represent 10 men. In event of casualties; i.e., figure is actually worth only 6 men, assess 60% of casualty damage indicated.

ARTILLERY MISSILE FIRE TABLE

	Armor Class of Target											
	9	8	7	6	5	4	3	2	1	0	-1	-2
BALLISTA												
Size of Target												
Man	9	8	7	6	5	4	3	2	1	-	-	-
Larger	15	14	13	12	10	9	7	6	4	3	2	1
STONE												
CASTERS												
Target About -												
Man-sized												
Larger												
Small Catapult					30					15		
Large Catapult					40					20		
Trebuchet					50					25		

If target is within range and arc of fire the indicated number of points of damage are scored upon it. Above numbers are hit points scored.

Artillery vs. Artillery	% chance to destroy		
Attacker is:	Lt. Cat.	Hv. Cat.	Trebuchet
Light Catapult	50%	40%	30%
Heavy Catapult	60%	50%	40%
Trebuchet	80%	60%	50%

CASUALTY ADJUSTMENT (OPTIONAL):

As the difference in level (or hit dice with regard to monsters) will also affect the variability of hit points eliminated as shown on the COMBAT TABLES, the CASUALTY ADJUSTMENT reflects not only a probability variance but also the same variance expanded to show the effect of the difference in levels.

Determine CASUALTY ADJUSTMENT prior to using the COMBAT TABLES.

Difference in Level/ Hit Dice	Die					
	1	2	3	4	5	6
-9 & less	-30%	-20%	-20%	-10%	-10%	0
-8, -7	-20%	-20%	-10%	-10%	0	0
-6, -5	-10%	-10%	-10%	0	0	0
-4, -3	-10%	-10%	-10%	0	0	+10%
-2, -1	-10%	-10%	0	0	0	+10%
0	-10%	0	0	0	0	+10%
+1, +2	-10%	0	0	0	+10%	+10%
+3, +4	-10%	0	0	+10%	+10%	+10%
+5, +6	0	0	0	+10%	+10%	+20%
+7, +8	0	0	+10%	+10%	+20%	+20%
+9 & up	0	+10%	+20%	+20%	+30%	+30%

APPENDIX A

VARIABLE DAMAGE & WEAPON DAMAGE

For those who wish to add the additional factors of damage by weapon type (with or without adjustment for type of armor being attacked) and monster type (including number of attacks by monster) a table showing average damage (Average Damage Matrix) times ten in five percent increments by progressively greater average damage amounts is given. Note that the various average damage amounts correspond to the numerous varying damage amounts stated in the D&D game system. Also included is a table showing the base probability by weapon type to score damage on various types of armor (Weapon Type/Damage Matrix).

In order to compute damage by attackers with a higher level (or greater number of hit dice) simply use the factors given below. The probability of striking an armor class better than the best shown is minus five percent per class; thus the probability of striking -3 armor class is 95% of the probability of striking -2 armor class.

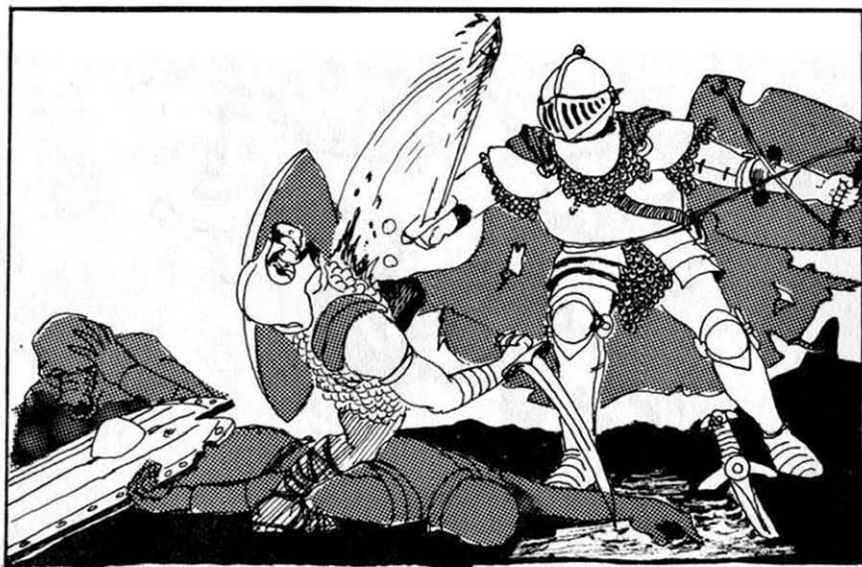
Adjustments for Higher Level/Hit Dice

Men Level	
1-3	+5%
4-6	10%
7-9	15%
10-12	10%
13-15	10%
16-18	15%
19 & up.	5%

Monsters Hit Dice	
1+1	+5%
2-3	5%
3+-4	5%
4+-6	10%
6+-8	5%
8+-10	5%
10+-12	5%
12+-14	5%
14+ & up	5%

Multiply number by 100%+ the % shown above to determine damage. Note percentages are cumulative.





Average Damage Matrix

If not used in conjunction with Weapon Type/Damage Matrix, use Base % to hit figures. Ex: if ignoring weapon type vs. armor class modifications, a sword (1-8 pts) would have a 30% base percentage to strike armor class 5 targets. Go down left side of Average Damage Matrix to 30, then cross over to 1-8 column, and you find that 14 pts of damage are inflicted. 30% base percentage was derived from top line of Weapon Type/Damage Matrix (Base % to hits). 14 pts are inflicted per 10 actual men, or 1 scale casting. This assumes no casualty adjustments.

Points of Damage per Weapon or Monster Attack Type

Average Damage	1-3	1-4	2-5	1-8	2-8	1-10	1-12	2-12	3-12	2-16	4-16	3-18	2-20	5-20	2-24	3-24
	2	2.5	3.5	4.5	5	5.5	6.5	7	7.5	9	10	10.5	11	12	13	13.5
5	1	1	2	2	3	3	3	4	4	5	5	5	6	6	6	7
10	2	3	4	5	5	6	7	7	8	9	10	11	12	12	14	14
15	3	4	5	7	8	8	10	11	11	14	15	16	16	18	20	20
20	4	5	7	9	10	11	13	14	15	18	20	21	22	24	26	27
25	5	6	9	11	13	15	16	18	19	23	25	26	30	30	32	34
30	6	8	11	14	15	18	20	21	23	27	30	32	36	36	40	41
35	7	9	12	16	18	21	23	25	26	32	35	37	42	42	46	47
% 40	8	10	14	18	20	24	26	28	30	36	40	42	48	48	52	54
45	9	11	16	20	23	27	29	32	34	41	45	47	54	54	58	61
50	10	13	18	23	25	30	33	35	38	45	50	53	60	60	66	68
55	11	14	19	25	28	33	36	39	41	50	55	58	66	66	72	74
60	12	15	21	27	30	36	39	42	45	54	60	63	72	72	78	81
65	13	16	23	29	33	39	42	46	49	59	63	68	78	78	82	88
70	14	18	25	32	35	41	46	49	53	63	70	74	82	84	92	95
75	15	19	26	34	38	44	49	53	56	68	75	79	88	90	98	101
80	16	21	28	36	40	47	52	56	60	72	80	84	94	96	104	108
85	17	22	30	39	43	50	55	60	64	77	85	89	100	102	110	115
90	18	23	32	41	45	52	59	63	68	81	90	95	104	108	118	122
95	19	24	33	43	48	54	62	67	71	86	95	100	108	114	124	128
100	20	25	35	45	50	55	65	70	75	90	100	105	110	120	130	135



4-24 6-24 3-30 7-28 4-32 8-32 3-36 6-36 4-40 5-40 7-42 10-40 4-48 6-48 5-50 8-48 12-48 9-56 5-60
5-30 11-44

14	15	16.5	17.5	18	20	19.5	21	22	22.5	24.5	25	26	27	27.5	28	30	31.5	32.5
7	8	8	9	9	10	10	11	11	11	12	13	13	14	14	14	15	16	16
14	15	17	18	18	20	20	21	22	23	25	25	26	27	28	28	30	32	33
21	23	25	26	27	30	29	32	33	34	37	38	39	41	41	42	45	47	49
28	30	33	35	36	40	39	42	44	45	49	50	52	54	55	56	60	63	65
35	38	41	44	45	50	49	53	55	56	61	63	65	68	69	70	75	79	81
42	45	50	53	54	60	59	63	66	68	74	75	78	81	83	84	90	95	98
49	43	58	61	63	70	68	74	77	79	86	88	91	95	96	96	105	110	114
56	60	66	70	72	80	78	84	88	90	98	100	104	108	110	112	120	126	130
63	68	74	79	81	90	88	95	99	101	110	113	117	122	124	126	135	142	146
70	75	83	88	90	100	98	105	110	113	123	125	130	135	138	140	150	158	163
77	83	91	96	99	110	107	116	121	124	135	138	143	149	151	154	165	173	179
84	90	99	105	108	120	117	126	132	135	147	150	156	162	165	168	180	189	195
91	98	107	114	117	130	127	137	143	146	159	163	169	176	179	182	195	205	211
98	105	116	123	126	140	137	147	154	158	172	175	182	189	193	196	210	221	228
105	113	124	131	135	150	146	158	165	169	184	188	195	203	206	210	225	236	244
112	120	132	140	144	160	156	168	176	180	196	200	208	216	220	224	240	252	260
119	128	140	149	153	170	166	179	187	191	208	213	221	230	234	238	255	268	276
126	135	149	158	162	180	176	189	198	203	221	225	234	243	248	252	270	284	293
133	143	157	166	171	190	185	200	209	214	233	238	247	257	261	266	285	299	309
140	150	165	175	180	200	195	210	220	225	245	250	260	270	275	280	300	315	325

% CHANCE TO HIT AT LEVEL 0*
WEAPON TYPE/DAMAGE MATRIX

ARMOR CLASS

WEAPON TYPE	9	8	7	6	5	4
Base % to hit	50	45	40	35	30	25
Dagger	60	50	40	35	25	20
Hand Axe	55	50	45	35	25	20
Mace	50	45	40	35	30	25
Hammer	50	45	40	35	35	25
Sword	55	45	40	35	30	25
Military Pick	50	45	40	35	35	35
Battle Axe	50	45	40	35	35	30
Morning Star	60	55	45	40	40	30
Bastard Sword**	55	50	45	40	40	35
Flail	55	50	45	40	40	30
Spear	50	45	40	35	25	20
Voulge	50	45	40	40	35	30
Bardiche***	65	60	50	45	35	25
Glaive	55	50	40	35	35	25
Guisarme	50	45	35	30	25	20
Fouchard	60	55	45	35	25	20
Glaive-Guisarme	55	50	40	35	35	25
Guisarme-Voulge	65	60	50	45	40	30
Bill-Guisarme	60	55	45	40	30	20
Partisan	50	45	40	35	30	25
Spetum	55	50	45	40	30	20
Ranseur	50	45	40	35	30	20
Lucern Hammer†	50	45	40	35	35	25
Halberd	55	45	40	40	40	35
Two-hand Sword	60	55	50	45	45	40
Mounted Lance	65	60	55	50	45	35
Pike	50	45	40	35	30	25
Quarterstaff	55	50	50	35	30	15
Sling (Stone)	55/45/35	50/40/30	45/35/25	30/20/10	25/15/5	10/5/—
Sling (Bullet)	65/55/45	60/50/40	55/45/35	45/35/25	40/30/20	30/20/10
Short Self Bow	60/55/50	55/50/45	50/45/40	40/35/30	30/30/25	25/20/15
Short composite bow	65/60/55	55/50/45	50/45/40	40/35/30	30/30/25	25/20/15
Long composite bow	65/60/55	60/55/50	55/50/45	50/40/35	40/30/25	25/20/15
Long Self bow	65/60/55	60/55/50	55/50/45	50/45/40	40/35/30	25/25/15
Light crossbow	65/60/55	60/50/45	55/45/40	45/40/30	30/30/25	25/20/15
Heavy crossbow	70/65/60	65/55/50	60/50/45	50/40/35	45/35/30	35/25/20
Hurled Axe	45	40	40	30	20	10
Hurled Hammer	40	35	30	25	20	15
Hurled Spear	45	40	35	35	20	10
Javelin	50/40/30	40/30/20	40/30/20	30/20/10	20/10/—	10/5/0

* or monster with 1 or less hit die

** when used two-handed; otherwise treat as sword

*** If hammer-backed add 5% vs. armor classes 3, 2 and 1.

† Includes bec du Corbin

ARMOR CLASS

3	2	1	0	-1	-2
20	15	10	5	0	-5
15	5	—	—	—	—
15	5	—	—	—	—
25	15	10	5	—	—
25	15	10	5	—	—
15	5	—	—	—	—
35	25	20	15	10	5
20	10	5	—	—	—
20	15	10	5	—	—
25	15	10	5	—	—
30	25	20	15	10	5
15	5	0	—	—	—
20	10	5	—	—	—
15	5	—	—	—	—
15	5	—	—	—	—
10	5	—	—	—	—
15	5	—	—	—	—
15	5	—	—	—	—
20	10	5	—	—	—
15	5	—	—	—	—
10	5	—	—	—	—
15	5	—	—	—	—
15	5	—	—	—	—
25	20	15	10	5	—
35	25	20	15	10	5
30	20	15	10	5	—
30	20	15	5	—	—
20	15	10	5	—	—
5	—	—	—	—	—
5/-/-	—	—	—	—	—
15/ 5/-	5/-/-	—	—	—	—
10/ 5/-	—	—	—	—	—
10/ 5/-	—	—	—	—	—
20/10/5	10/-/-	—	—	—	—
20/15/5	10/ 5/-	—	—	—	—
10/ 5/0	5/-/-	—	—	—	—
25/15/5	15/ 5/-	5/-/-	—	—	—
—	—	—	—	—	—
15	5	—	—	—	—
5	—	—	—	—	—
—	—	—	—	—	—

Weapon Type/Damage Matrix

Ex: 23 axe-wielding men attack a band of orcs in class 7 armor. Modified % to hit, for an axe vs. a.c. 7, is 40% for level 0 men. Go to Average Damage Matrix to 40%; cross over to 1-8 column, and you find that 18 pts. are inflicted per 10 men. In this case then, the orcs suffer 42 pts. ($18 + 18 + (.3 \times 19) = 5.4$, rounded up = 6 pts). Again, this assumes no adjustments. Had the men been charging, for instance, they would do an additional 20% damage; i.e., an additional 8.4 rounded up to 9 pts.

- * or monster with 1 or less hit die
- ** when used two-handed; otherwise treat as sword
- *** If hammer-backed add 5% vs. armor classes 3, 2 and 1.
- † Includes bec du Corbin

APPENDIX B

SUGGESTED POINT VALUES

If some prior determination of opposing forces has not been made, it is possible to select such forces by point values, although some arbitration may well be necessary due to the highly variable nature of swords & sorcery potentials. All values are based on a 1:10 ratio, and should be adjusted by that factor for single figures. All points are cumulative.

Although it takes a considerable amount of time to select armies by the point value method, it is suggested that this method be used if a neutral third party is not available to design a balanced game setting. A small game will require about 10,000 points. An example of opposing forces selected by point value is given hereafter.

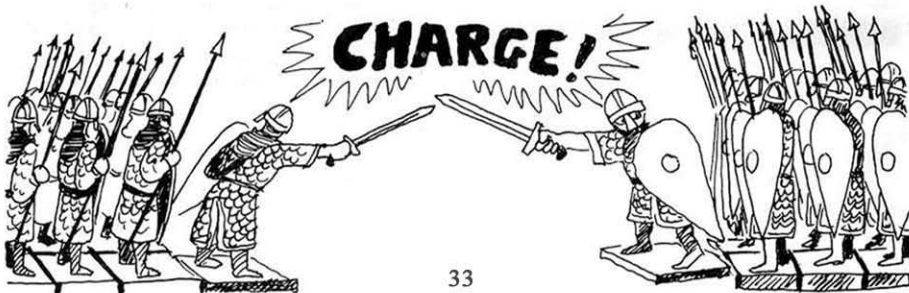
Troop Values		Armor Values	
Peasants	-20	9	-10
Levies, Kobolds, Goblins, or Orcs	-10	8	0
Regulars	0	7	+10
Guards	+10	6	+20
Elites or Elves	+10	5	+30
Per Hit Point	+ 1	4	+40
		3	+50
		2	+60
Weapon Values		per additional class	+50
Sling	+30	Ring of Protection,	
Short Self Bow	+20	per +1*	+50
Long Self Bow			
Short Comp. Bow	+40	Special	
Long Comp. Bow	+30	Magical Weaponry*	
Lt. Crossbow	+40	per + of hitting	+100
Hv. Crossbow	+20	Magical Missiles	
Ballista*	+20	per + of hitting	+50
Lt. Catapult*	+ 5	Regenerating	**
Hv. Catapult*	+ 8	Breath Weapon	***
Trebuchet*	+10	Spell Ability	****
Weapon over 9' length, or oversized weapon	+12	Flying*	+25
		Other Special*	+10 & up
	+10	Unit Standard	+10
		Army Standard	+50
		Army Sub-Commander	+50
		Army Commander (CO)	+100
		Per level above ? or die above 1+1 hit dice	+50

* based on a 1:1 ratio only

** add 50% of hit point value

*** add 75% of hit point value per usage, if unlimited add 300% value

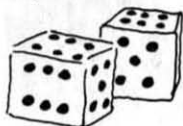
**** add 10 points per spell level per spell per scale creature, i.e. a single magic user with but a first level spell is worth but an additional 10 points.



EXAMPLE OF ARMY SELECTION BY POINT VALUE

FORCES OF THE WIZARD:

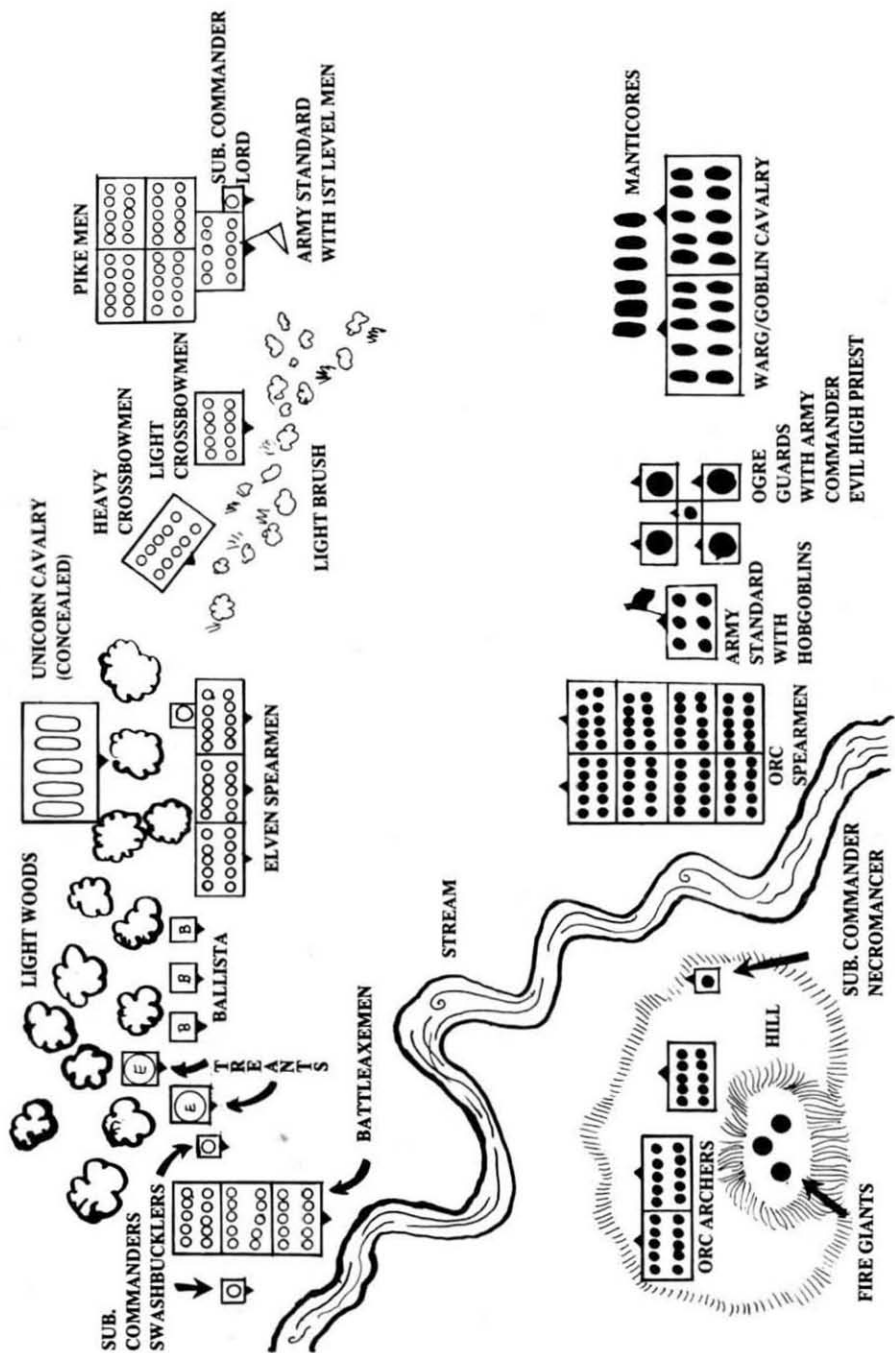
Unit	Troop Value	Armor Value	Weapon Value	Special Value	TOTAL
40 (400) pikemen (armor class 3)	1400	2000	400	—	3,800
6 (60) elite guard infantry (1st level, armor class 2)	150	360	—	300	810
Army standard	—	—	—	50	50
Lord (sub-CO 10th level, +5 sword, +2 armor & shield)	50	206	—	150	406
20 (200) crossbowmen (armor class 5, half have heavy crossbows)	700	600	400	—	1,700
30 (300) elven spearmen (armor class 4, 12' ash spears)	1350	1200	300	—	2,850
The Wizard (+1 ring of protection)	28	49	—	665	742
5 (50) unicorn/1st level warrior maiden cavalry (riders have armor class 4, lances)	900/ 225	300/ 200	—/ 50	750/ 250	2,675
3 ballistas	—	—	15	—	15
3 (30) crewmen	105	90	—	—	195
2 treants	72	12	2	100	186
30 (300) battleaxe man (armor class 2)	1050	1800	—	—	2,850
Swashbuckler (javelin of lightning (two), + 1 armor & shield)	23	106	—	100	229
Swashbuckler (sub-CO magic bow +1, 10 magic arrows, +1 armor & shield)	23	106	—	225	354



FORCES OF THE EVIL HIGH PRIEST:

Unit	Troop Value	Armor Value	Weapon Value	Special Value	TOTAL
20 (200) wolf/goblin cavalry (wolves are armor class 6, 2 dice)	1600+ 700	200+ 400	—	—	2,900
6 manticores	168	24	—	450	642
4 (40) ogres	760	120	40	800	1,720
The Evil High Priest (CO, 12th level, with +3 mace, +1 armor & shield)	30	160	—	850	1,040
6 (60) hobgoblins (elite guards with 9' + pole arms)	450	360	60	—	870
Army standard	—	—	—	50	50
80 (800) orcs (armor class 4)	2800	3200	—	—	6,000
Necromancer (sub-CO with displacer cloak)	25	-1	—	580	604
30 (300) orcs with short self bows (armor class 5)	1050	900	600	—	2,550
3 fire giants	159	12	3	324	498
					16,874





APPENDIX C

EXAMPLE OF GAME PLAY

The map shows the forces listed in the EXAMPLE OF ARMY SELECTION BY POINT VALUE. It assumes that the Wizard's army has elected to remain relatively stationary and partially concealed, while the forces of the EHP have opted to advance. Movement this turn was:

Side A: (Wizard): Battleaxemen advance $\frac{1}{2}$ move, no fire

Side B: All troops advance full move except:

— wolf/goblin cavalry led by manticores moves $\frac{1}{2}$ only

— Necromancer moves $\frac{1}{2}$ only

— orc archers move in unorganized formation, taking charge bonus movement in order to gain hill position, no fire

Side A: Elven spearmen advance from woods $\frac{1}{2}$ move and battleaxemen advance $\frac{1}{2}$ move, no fire

The Wizard hopes to deceive the enemy into making two errors:

1. believe the main attack will be from the Wizard's right flank where the axemen, high-level fighters, treants and ballistas seemingly pose a threat; and
2. use the strong mass of orcish spearmen in the center, supported by the ogre guards and the EHP personally, to strike the apparently weak elven unit in the center.

Note that the giants will be withheld if the EHP believes that the enemy right is the attacking arm of the Wizard's army, and a plan to strike the center would be a very effective countermeasure if this were so.

The pikemen on the left of the Wizard's array cannot easily shift to support the center, due to the intervening brush. The warg/goblin cavalry would pose an immediate threat to the flank of any such move, in addition. Meanwhile, the manticores could easily move to support a center attack, while still threatening the pikes. The manticores and the crossbowmen would, at worst, neutralize each other. The ogres would gain the flank of the elves when they were locked in combat with the orcs, and roll up the whole unit. When this happened the Wizard's forces would be cut in two and ripe for defeat in detail. If, as the orcs advanced, the axemen were moved so as to threaten the flank of the orcish advance, the former would be exposing its own flank to devastating missile attack from the orc bowmen and fire giants, not to mention the necromancer, and they would also screen the fire of their own ballistas. The Evil High Priest finds that this is the plan he will follow.

Next turn he will send his right flank cavalry forward slowly, the manticores will move full to engage the crossbowmen, while the orcish spearmen along with his ogres move towards the elves (probably with little harassing fire from the crossbows), and the archers and giants will begin missile attacks against the enemy right (where he imagines more ents and supposes that the single-figure fighters are probably at least 10th level). The EHP will move with his guards, for the necromancer will engage the Wizard in a long-range duel. End turn fire now takes place, and thereafter the next turn will begin, for there will be no melees to conduct.

Fire:

SIDE A —

1. Wizard casts continual light spell to maximum range in air straight toward enemy center
2. Ballistas fire at fire giants on hill crest
3. Heavy crossbows fire at orc spearmen
4. Light crossbows fire at ogres

SIDE B —

1. Necromancer casts cloud kill at 1'' to his right front

Results of Fire and Commentary:

SIDE A: The light spell (1.) was cast to counter the darkness of the day, as well as to convince the enemy that an attack in the center was most feared. Ballista fire at the giants scores 9 points of damage on each fire giant. The heavy crossbows firing into the orcs score 120% of damage on armor class 5 targets, for the nearest corners of the two units are just under 16" (medium range) — damage scored: $110 + 22 (20\%) = 132$, and 2 orc figures are marked dead, with 42 points noted as additional casualties, and when 3 more points of damage are scored another figure will have to be removed. The light crossbows firing at ogres are at long range, and the 20% addition for the ogres being "large" is counterbalanced by the ogres being in only two ranks, so the fire scores 100% damage vs. armor class 5 targets, or 60 points. This damage is noted on the record of the unit of ogres, as sufficient hits to remove a figure were not scored.

Note that neither the orcs nor the ogres took casualties equal to 10% from missile fire, so morale need not be checked.

SIDE B: The necromancer's spell was the only missile/spell/breath attack which could be made by the EHP's advancing army. The cloud kill was selected because it had several apparent advantages considering the plan of attack: the spell could wipe out the ten figures on the right wing of the elven spearmen unit, as well as the left-most ballista crew, unless something is done to counter it, and retreat seemed unlikely in the position held by the Wizard's host; this strongly suggests that the Wizard will have to attempt to dispel the cloud kill next turn, allowing the necromancer to use some more violent attack mode, while his commander advances unhindered, and the attention of the Wizard is again fixed on the wrong place.

During the next two turns the Wizard's forces completely surprise the EHP. The orc archers fire, putting a few hits on the axemen, the giants advance to get in range of the ballistas to hurl rocks at them, the center orcs continue their advance, as do the hobgoblins and ogres (with the EHP), the manticores take to the air aiming at the light crossbow unit, while the wolf/goblin cavalry move ahead. The Wizard's army doesn't perform as expected: The crossbowmen and the elves do an about face; and at the mid-point of their facing the orcs again score a few hits while the giants loose their rocks at the ballista, and the Necromancer tosses a fire ball into the midst of the elves. No morale throws are necessary, despite a fair number of hits being scored on both units now. Also at the mid-point of the turn, the manticores loosed 36 missiles at the crossbowmen at medium range. The pikes advance towards the warg cavalry, while the guard unit with the standard and the lord move obliquely to interpose themselves between the manticores and the crossbowmen. The axe unit and elves move away from the enemy, the latter nearly vanishing from sight amidst the trees. The pikemen continue their slow progress ahead. Puzzled but determined, the EHP decides to adhere to his plan, and all of his forces continue to move forward also, save the orc archers and the giants.

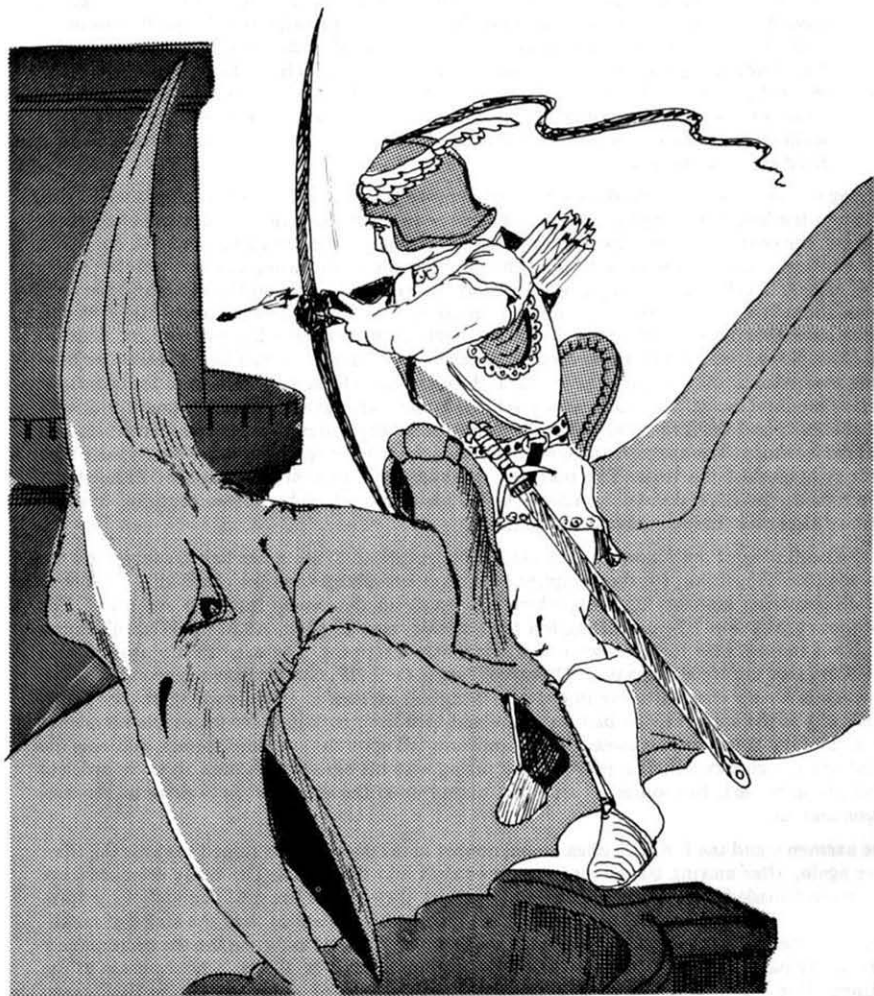
At the beginning of the following turn the EHP is surprised to see a fire ball crashing into the ranks of the hobgoblins, for the deceptive fellow has entirely ignored the cloud kill — his elves are disappearing amongst the trees which will break up the deadly fumes in any event. The hobgoblins take over 20% casualties, but their morale remains good. All of the Wizard's forces remain standing, save the elves who now completely disappear. The axemen are again facing about towards the orcish bowmen. "Onwards!" urges the EHP, and his troops respond. The orc bowmen move up one-half move in order to bring the axemen in range once again, the giants hurl rocks at the two surviving ballista at the mid-turn fire break in order to completely silence them. The orc center presses ahead. The manticores fall upon the standardbearers, and only the wolves do not go forward. The EHP himself, along with his ogre guards, also stand in order to allow the anti-cleric to conjure up an insect plague upon the enemy so as to drive it into confusion and rout.

The axemen stand the fire. The elves, unbeknownst to the enemy, have turned towards the front once again, after moving but one-quarter movement into the woods. The heavy crossbows are still being reloaded, and the lights have no target, for they cannot fire until the end of the turn. By that time the pikes have charged ahead into melee with the wolves, and the melee of manticores and their fellows prevents fire into the ranks of the ogres. At end-turn fire the necromancer hurls a fire ball at the treants, and when the EHP reconsiders, he throws a hold person at the Wizard. This attack is answered by a fire ball from the Wizard which strikes the EHP's own guard.

Next turn tells the tale, for during its course the wings remain about as they were, but in the center the elves come forth in echelon to meet the ores (the cloud kill rolling over the ballista, but then dispersing in the woods), and the unicorn cavalry suddenly appears in the rear of the ogre unit, charging into attack from this position. None of the EHP's forces can immediately help, although the necromancer and the giants then move towards the fray. Melee there goes as follows:

Both morale checks indicate the ogres' morale is good. The charging unicorns, plus lances do: $35/23$ per figure, or $175 + 115 = 290 \times 160\% = 464$ points of damage! The two rearmost figures of ogres are slain, and they cannot return the attack this turn or next. Knowing that his fate is sealed if he remains, the EHP uses a word of recall spell.

Some confused fighting remains, but as word of what happened spreads, the EHP's forces break off the battle and flee. The immobile figure of their leader, staunchly braving the worst the enemy can throw at him inspires the Wizard's forces to great bravery, and they inflict many casualties upon the retreating enemy before the latter manage to escape.



UNIT INFORMATION SHEET

UNIT COMPOSITION:

Type of Creatures
Total Number of Stands
Total Number of Figures

Armor Class
Ave. (Weapon) Damage
Ave. Hit Points

HIT POINTS PER FIGURE

UNIT TOTAL HIT POINTS

DAMAGE TAKEN

MORALE CHECKS —
Morale Base
Modified by:

Checks

10%
20%
25%
30%
40%
50%
60%
70%
(75%)
80%
90%

Turn Modifiers

Other (reason)

CURRENT MORALE STATUS

Turn & Level

MOVEMENT

Troop Type	Mass/ Line	Column	Unorganized or Open Order	Charge Bonus
Kobolds	4	—	8	2
Goblins	4	—	8	2
Orcs	6	—	12	3
Hobgoblins	6	—	12	3
Gnolls	6	—	12	3
Halflings	9	—	12	3
Gnomes	4	—	8	2
Dwarves	4	—	8	2
Fairies	9	—	15	3
Elves	9	12	15	3
Lt. Armor	12	15	18	4
Hv. Armor	7	10	12	2
Men	9	12	15	3
Lt. Armor	12	15	18	4
Hv. Armor	6	8	9	2
Lizard Men	6	—	9(24)	2
Centaur	15	—	18	6
Cavalry				
Light	18	21	24	9
Medium	15	18	21	7
Heavy	12	15	18	5
Pony	12	15	18	4
Wolf	12	—	15	6
Siege Artillery	—	—	3[6]	—

() *Swimming Speeds*
[] *Speed if drawn by draft animals*

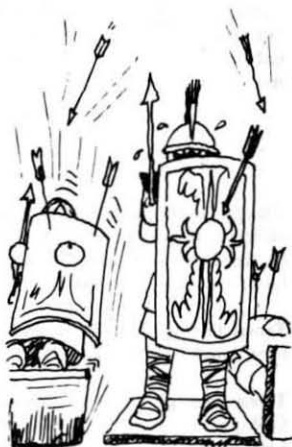
SAVING THROWS

Class & Level		Ballista, Catapult, Trebuchet, Death Ray, or Poison	All Wands — Including Polymorph or Paralization	Stone	Dragon Breath	Staves & Spells
Fighting-Men	1-3	12	13	14	15	16
Magic-User	1-5	13	14	13	16	15
Cleric	1-4	11	12	14	16	15
Fighter	4-6	10	11	12	13	14
Magic User	6-10	11	12	11	14	12
Cleric	5-8	9	10	12	14	12
Fighter	7-9	8	9	10	10	12
Magic-User	11-15	8	9	8	11	8
Cleric	9-12	6	7	9	11	9
Fighter	10-12	6	7	8	8	10
Magic-User	16+	5	6	5	8	3
Cleric	13+	3	5	7	8	7
Fighter	13+	4	5	5	5	8

MISSILE FIRE

MISSILE WEAPON TYPE

MISSILE WEAPON TYPE	RATE OF FIRE	RANGE		
		SHORT	MEDIUM	LONG
Spear, Axe, Hammer	1	-	-	3
Javelin	2	1	4	8
Sling Stone	2	4	8	12
Sling Bullet	2	5	10	16
Short Self Bow	3	5	10	15
Short Composite Bow	3	6	12	18
Longbow	3	7	14	21
Large Composite Bow	3	6	12	21
Light Crossbow	1	6	10	16
Heavy Crossbow	1/2	8	16	24
Ballista	1/4	-	-	0-30
Light Catapult	1/4	-	-	15-30
Heavy Catapult	1/4	-	-	18-36
Trebuchet	1/4	-	-	24-48



FIRE RATE

1/2/Turn

Fire (stand)

reload (stand)

1/Turn

fire & move
1/2 without
reloading or
vice versa
fire & re-
load or vice
versa

2/Turn

move 1/2 &
fire or vice
versa
fire (stand)
& fire (end
turn fire)

3/Turn

move full &
fire or vice
versa

fire, move
1/2, & fire

move 1/2, fire,
(stand 1/2) &
fire

fire (stand
1/2), fire
(stand 1/2), &
fire

Artillery vs. Artillery

Attacker is:	% chance to destroy		
	Lt. Cat.	Hv. Cat.	Trebuchet
Light Catapult	50%	40%	30%
Heavy Catapult	60%	50%	40%
Trebuchet	80%	60%	50%

MISSILE FIRE ADJUSTMENTS

Additions

Target is five or more ranks deep or large	+ 20%
Magic bow, per scale bow, per +*	5%
Magic arrow/bolt, per scale missile, per +*	5%

Subtractions

Target is three ranks deep*	- 10%
Target is two ranks deep*	20%
Target is one rank deep or in open order	30%
Target is single creature, very large*	50%
Target is single creature, large*	70%
Target is single creature, about man-sized	90%
Cover equal to archer slit	90%
Cover about through chest*	50%
Cover about to waist, or woods (within 1' of edge)*	30%
Light brush covering target*	20%
Obscured or hidden	fire not possible

*Does not apply to artillery

Notes

Notes

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