Abstract Battle Engine

Values of a Unit

Combat Strength (CS): Describes the combat strength of a unit and is an abstraction of defensive and offensive capability. It is computed based on the CR of each creature in the unit. The total combat strength is the sum of the squared challenge ratings.

Modifiers: The possible modifiers are *flyer, cavalry, archers,* and *spellcaster*. These influence the rolls made for the final battle.

Morale (M): The mood of the unit. This value can be between -5 and +5.

Movement (MV): This is the number of miles the unit can move on a day in open terrain.

Upkeep (Up): This reflects the supplies needed per day.

Combat

When two units meet, combat ensues unless one unit is at least 1.5 times as fast as the other one, in which case that unit can choose to avoid combat by moving in a nearby 'hex'.

The two units are compared and the modifiers for the attack roll (1d20 + modifiers) are determined based on table 1. The roll is made on table 2 and the result reflects the outcome of the battle. The result values are explained next to the table. The battle contines on the next day unless one side breaks off and the other does not pursue or does not have enough speed to prevent it. A unit whose morale goes below -5 is routed, its troops either scattered or captured (roll percentile dice to determine ratio).

If player characters take part in the battle, they are added normally to the combat strength and the outcome of the battle is computed, *before* the battle starts (rolled secretly by the DM). The PCs will then be informed about the way the battle goes and can then chose to attack certain key units (e.g. flyers in order to negate that bonus). However,

Situation	Modifier
Attacker cavalry CS is double that of the defender	+2
Defender calvary CS is double that of the attacker	-1
Attacker archer CS is double that of the defender	+1
Defender archer CS is double that of attacker	-2
Attacker flyer CS is double that of the defender	+3
Defender flyer CS is double that of the attacker	-2
Attacker spellcaster CS is double that of the defender	+2
Defender spellcaster CS is double that of the attacker	-2
Attacker has CS in a category the defender does not have	+1
Defender has CS in a category the attacker does not have	-1
Add attacker's morale	+x
Subtract defender's morale	-x
Per 100 points of attacker's total CS	+x
Per total points of defender's CS	-x

Table 1: Combat Modifiers

up to 3	D:0% (M+2), A:30% (M-2)
4-8	D:10% (M+1), A:20% (M-1)
9-15	D:20%, A:20% (M+1)
16-18	D:20% (M-1), A:20% (M+1)
19-22	D:20% (M-2), A:10% (M+1)
23	D:30% (M-2), A:0% (M+2)

D: point loss of the defender (his choice in units)
A: point loss of the attacker (his choice)
M: Morale value change

Table 2: Combat Results

they will have suffered 1d4 * total bonus of the attacker points of damage (but cannot be killed this way). While the attack roll for the battle stands, the value is then recomputed according to the loss inflicted by the PCs. However, they should only be allowed 1d2 such actions (+1 if they can fly) as they become tied down in the general battle (which you should graphically describe).

Sample Equipment

Equipment beyond that which a unit of that type normally has can upgrade its contribution to the the CS. Some examples follow below.
Medium Armour: +1 CS but possibly bad effects on movement.
Heavy Armour: +2 CS and less movement

Sample Unit Computation

We want to assemble a goblin army consisting of 300 goblins, 50 level 2 warrior wolf riders, with an elite core unit of 10 level 4 warriors on wargs. This elite unit has heavy armour. The armies general is a level 8 sorcerer goblin on a wyvern.
Goblins: CS = $(0.5)^2*300 = 75$
Wolf Riders: CS = $1^2*50 + 1^2*50 = 200$ cavalry
Warg Riders: CS = $3^2*10 + 2^2*10 = 130$ cavalry
General: CS = $8^2*1 + 6^2*1 = 100$ flyer, spellcaster
Total strength is: 505, 100 flyer, 100 spellcaster, 330 cavalry

Another example army is this elven warband consisting of 150 swordsmen, 150 archers, and core unit of 50 level 2 fighters mounted on elven warhorses.
Swordsmen: CS = $(0.5)^2*150 = 37.5$
Archers: CS = $(0.5)^2*150 = 37.5$ archers

Elven Knights: CS = $2^2*50 + 2^2*50 = 400$
Total strength is: 475, 400 cavalry, 37.5 archer

Were the goblins to attack the elven warband (which they surpass in pure combat strength) they would get the following modifiers: -2 for the elven archers, +3 for its flyer, +2 for the spellcaster, +2 because the elves have no flyers or spellcasters whatsoever, -1 because the goblins have no archers. The combat strength of the goblins gives a solid +5, that of the elves -4. Therefore the roll modifier is +5, which puts the goblins at a solid advantage.

Assuming the PCs are members of the elven knight unit, the battle could be handled in the following way. The DM rolls a d20+5 getting a 16. He tells the players that the goblins seem to gain the upper hand due to their warg riders which press hard on the archers on the left flank but also due to the goblin general who throws fire and darkness on the elven knights from the sky (all this is pure fluff of course but identifies to powerful units that either result in a special bonus of have high CS concentrated on few people). The four PCs decide to go toe to toe with the warg riders, taking 5d4 points of damage going there (for the +5 combat modifier). While they do not manage to kill all, they eliminate 8, cutting the CS by 104 points, which reduces the attack bonus by 1. The table now shows a different result; while the elves still lose the battle, the daring attack of the PCs has at least kept the fighting morale high! Had they slain the general, the battle result would have been 8 (there is a lot of bonus tied up in the sorcerer) and the elves would have been victorious thanks to the uber-elven luck of the PCs.