Mass Combat Rules

For Dungeons and Dragons 3rd Edition, 3.5 Edition and Pathfinder

Throughout this document the term 'you' means you the reader, I assume you are the games master too.

When to use these rules

The general rule of thumb which I follow is if you would need to roll attacks for more than 10 NPCs, then you could use these rules, if you are rolling for 20 or more NPCs then these rules will (hopefully) be of a great benefit to you.

Step1 – The initiative roll

The basic principle

As per the normal rules roll this once for each unit in the combat

For each unit of troops, roll a single d20. Apply the average initiative bonus for the unit.

Example

So if you have 20 warriors fighting another 20 warriors, you need to roll five times for each side, so divide the warriors into a unit of 4 warriors. Roll initiative for each group, a total of 10 rolls. Be sure to note which group is on which side of the battle.

Lets say the average initiative bonus is +0 for all of the warriors in the battle, and lets say the results of the initiative rolls are as follows:
Army1: 4, 15, 11, 19, 6
Army2: 14, 11, 9, 12, 7

Arrange the battle order and activate each unit just like you would any NPC in a combat round.

Step2a – Movement

The basic principle

The difficulty is to ensure that everyone moves in the same scale as everyone else. Thus we need to agree upon a scale, and represent each unit somehow. This must be done by the GM prior to the battle.

Examples

For small skirmishes you could use a single miniature and treat a 5' square as a 20' square. For larger battles you could continue that logic and upgrade the scale with the numbers of troops in each block.
If you have the means, you could use a wargaming table, scenery and wargaming miniatures. In my experience this is a popular choice for one or two of your players, but not for the entire group and play will be very very slow.
For very large battles my preference is to use a map of around A2 size which I draw or print before the battle. I then use simple cardboard shapes to represent the units of troops. On which I note the various applicatble stats, in some cases I only write an identity code which corresponds to my notepad. With this method I generally use a 2:3 ratio rectangle for foot troops, a triangle for cavalry and lines for archers (who I think would stand 2 or 3 deep).

In the regular scale combat a unit of troops is a single person, and for them if their base is touching another base then you can assume they are in strike range. For a block of warriors which are 10 deep that is not really accurate. For the basic rules we need to ignore this, however we can apply an advanced rule later if it is an issue.

Other than this scale adjustment the movement rules from the main rulebook does not change.

Time

When you uprate a scale, apply an equivalent increase to the duration of each round.

Example

You have a miniature representing a unit of four warriors, and you have decided to convert the scale from the regular 5' squares so that each square is 20'. Therefore each round of the battle is 4 regular rounds long.

Step2b - The Attack Roll

The basic principle

For each unit of troops, roll a single d20. Treat that d20 as the centre point for the average roll the troop has made.

If the unit size is 20 or greater then the dice roll made for that unit can be assumed to be the same for every member of the unit. Add the average attack bonuses from all feats and equipment to the result and if this equals the AC of the opponent consider this a hit and move to Step3 – Damage.

If the unit size is less than 20. Add the average attack bonuses from all feats and equipment to the result and look the result up below to see how many of the unit have hit. Then move to Step3 – Damage.

Attack Roll Deviation Tables

Unit Size 2	
below AC-4	= miss
AC-4 to AC	= miss
AC to (AC+4)-1	= 1 hit
AC+4 and above	= 2 hits

Unit Size 3	
below AC-4	= miss
AC-4 to AC	= 1 hit
AC to (AC+4)-1	= 2 hits
AC+4 and above	= 3 hits

Unit Size 4	
below AC-3	= miss
AC-3 to AC	= 1 hit
AC to (AC+3)-1	= 3 hits
AC+3 and above	= 4 hits

Unit Size 5	
below AC-3	= miss
AC-3	= 1 hit
AC-1	= 2 hits
AC	= 3 hits
AC+1	= 4 hits
AC+3 and above	= 5 hits

Unit Size 6	
below AC-2	= miss
AC-2	= 1 hit
AC-1	= 2 hits
AC	= 4 hits
AC+1	= 5 hits
AC+2 and above	= 6 hits

Unit Size 7	
below AC-2	= miss
AC-2	= 1 hit
AC-1	= 3 hits
AC	= 4 hits
AC+1	= 6 hits
AC+2 and above	= 7 hits

Unit Size 8	
below AC-2	= miss
AC-2	= 1 hit
AC-1	= 3 hits
AC	= 5 hits
AC+1	= 7 hits
AC+2 and above	= 8 hits

Unit Size 9	
below AC-2	= miss
AC-2	= 1 hit
AC-1	= 3 hits
AC	= 6 hits
AC+1	= 8 hits
AC+2 and above	= 9 hits

Unit Size 10	
below AC-2	= miss
AC-2	= 2 hits
AC-1	= 4 hits
AC	= 6 hits
AC+1	= 8 hits
AC+2 and above	= 10 hits

Unit Size 11	
below AC-2	= miss
AC-2	= 2 hits
AC-1	= 4 hits
AC	= 7 hits
AC+1	= 9 hits
AC+2 and above	= 11 hits

Unit Size 12	
below AC-2	= miss
AC-2	= 2 hits
AC-1	= 4 hits
AC	= 8 hits
AC+1	= 10 hits
AC+2 and above	= 12 hits

Unit Size 13	
below AC-1	= miss
AC-1	= 4 hits
AC	= 9 hits
AC+1 and above	= 13 hits

Unit Size 14	
below AC-1	= miss
AC-1	= 4 hits
AC	= 10 hits
AC+1 and above	= 14 hits

Unit Size 15	
below AC-1	= miss
AC-1	= 4 hits
AC	= 11 hits
AC+1 and above	= 15 hits

Unit Size 16	
below AC-1	= miss
AC-1	= 4 hits
AC	= 12 hits
AC+1 and above	= 16 hits

Unit Size 17	
below AC-1	= miss
AC-1	= 3 hits
AC	= 14 hits
AC+1 and above	= 17 hits

Unit Size 18	
below AC-1	= miss
AC-1	= 2 hits
AC	= 16 hits
AC+1 and above	= 18 hits

Unit Size 19+	
below AC	= miss
AC and above	= size hits

Example

A group of 40 human town militia who are all identical
level 1 human warrior, AC14, BAB* +1
are ambushed by 56 Goblins
level 1 goblin warrior, AC12, BAB* +0, RAB +2
The Goblin's have the initiative and half of them attack with short bows, while the other half run in and engage the humans in melee combat.

The GM divides the humans into four groups of 10, and the goblins into four groups of 14.
The Archer Goblins go first and roll: 13, 7
lookup on Unit Size 14, only 3 hits (damage is rolled as per step 3)
The Melee Goblins go next and roll: 9, 15
lookup on Unit Size 14, 14 hits cause damage (damage is rolled as per step 3)
Finally it is the humans turn, but one of the groups is reduced from 10 down to 6 men. The GM nominates to roll for this group first as they are in a desperate situation.
The humans roll: 10, 11, 15, 9
lookup on Unit Size 6, 1 hit is delivered. Lookup on Unit Size 10, one group delivers 10 hits, while another manages only 4 hits (damage is rolled as per step 3)
At the end of the first round the results are fairly even, and the battle rages on

NOTE *: BAB = Base Attack Bonus
NOTE **: RAB = Ranged Attack Bonus

Step3 – Damage

The basic principle

Just like after any attack roll a damage roll is required. And just like the attack rolls each group should roll only between 1 and 10 dice.

Damage dice type

The most common weapon used in the unit is the units weapon, look this weapon up in the Player's Guide to find its damage dice.

Dealing with 11 or more hits

The key to this step are the totals, and you will need a calculator.
If 11 or more hits are delivered roll 10 dice of the appropriate type for the weapon used. Add the total up. Divide that by 10, then multiply the result by the number of hits.

Roll 10 weapon damage dice
Total the result
Divide the total by 10
Multiply this by #hits

Assigning Damage

The damage is then assigned to the Unit as a single entity

Unit HP

The total HP of a Unit equals the sum of the HP in the Unit minus the total number of troops in the unit.

Unit HP = SUM(individual HP) – Unit Size

Knocked out of the Battle, possibly dead

If the Unit has 0 or less hits remaining, it is out of the fight. Remove it from the game map. The keen eyed reader may have already realised, if the unit has exactly 0 HP then there is a good chance that each member of the unit has been reduced to 1 HP. At this point they may still be able to escape.

Step4 – Moralle

If a unit has suffered damage, it knows how many HP it might take in the following round. If that total is enough to take the unit below 0 HP. It will use its movement to move away from the fighting. If that is not possible it will stay on the field.

Step5 – Repeat

Repeat the combat until the battle is resolved.

Aftermath

In most fantasy worlds survivors from the opposing side are slain, even a good army may execute the survivors from a hoarde of goblins while they lie helpless on the battlefield. However if the army is comprised of a large bandit group and the attacking force are town guards, then the bandits will probably surrender and accept a jail sentence after only a couple of hits. Those who can escape will run if they see the battle is going badly. And if bandits defeat the town guards, they will probably flee rather than stick around to add murder to their list of crimes.

The aftermath therefore can not be included in these rules, it depends on the situation.

Advanced / Optional Rules

Quick Warrior Level-up

A warrior (see the DMG) is a class which gets d8 HP per level, and +1 BAB each level. This class only gets a feat when it levels up (there are no class feats at all).

A trained soldier is a warrior class and will be of at least 2nd level. A soldier's first feat is always Endurance, which allows him to sleep in armour.

A trained soldier will have attributes of Str 11, Dex 11, Con 11, Wis 10, Int 10, Cha 10, plus his racial modifications.

A trained soldier will be equipped with basic armour, a long spear (d8), a dagger and a shield. He may replace his armour, shield and long spear with lighter armour and a long bow.

As a general rule of thumb, Orcs and Goblinoids will have less armour and use hand axes. These races generally have more HP to compensate for the difference.

Adding Leaders

Depending on the size of the unit the unit will have a different kind of leader. Generally a small group of 4-6 men will be led by a corporal or an equivalent rank for the group. This individual will be identical to his comrades, however he may have one or two items which are different, better boots, studded leather rather than plain leather armour, etc.

A unit of 8-12 men will be led by a leader who is 1 level higher than the rest of the troops. This means you need to add one additional hit dice to the unit total. His +1 BAB increase will have no effect on the outcome of the battle. This leader is equivalent to a Sergeant.

For every four multiples of this the Leader is an officer. The first officer rank is equivalent to a Leftennant (Lieutenant). This officer is a fighter of the same level as their troops, but typically have better equipment and a have trained for the role since childhood. A sword and

shield rather than a spear and a different spread of attribute points. Str 12, Dex 12, Con 10, Wis 10, Int 10, Cha 12. Granting +1 STR, +1 AC and +1 CHA +1.

For every four Leftennants, a Captain will be the leader. A Captain will be 2 levels higher than his troops and have better equipment.

If the Army is large enough to have four Captains, then two of them will actually be Majors (or forward centurians). This group will be led by a Leftennant Colonel or a Colonel depending on the average level of the troops. A Colonel is 2 levels higher than a Captain, a Major might be the same as a Captain. Some Major's and all Lt.Colonel's will be 1 level higher than a Captain. However any Major or above rank will be a hero fighter class and should really be rolled as an individual character.

Racial bonuses
Apply as normal

Critical Rolls
The standard rules state that if a critical threat is rolled it needs to be confirmed. Rather than do this roll a second attack for that unit, chances are you will get a different number of hits. Add these hits to the total hits for the unit before damage is rolled.

Critical Failures
If a unit rolls a natural 1 treat it a an automatic miss (even if that would cause some hits).

Damage dice of multiple types
Each weapon has its own damage code, it makes sense to group units by these weapons where possible, but there are cases where that is not possible. Perhaps a commander has rallied some troops and formed a unit which is now randomly equipped, some with short spears, some with swords and some with great axes. A simple method of dealing with this is to apportion the hits with a mixture of damage dice so that the percentage that each weapon is present in the group is represented.

Advanced Damage Assignment
In some cases you may want to track the HP for each member of the unit individually. Perhaps there are NPC allies in amongst a unit who you already know the HP total for. Or perhaps you want to roll each hit dice individually for a more detailed battle. The damage is still distributed evenly throughout the unit but, after the even spread has been calculated and there is some unassigned damage, then assign this damage through the unit evenly starting with the members who have the most hit points.

If this method is used you may also wish to resize the unit after each round.

Appendix A – Working out the Attack Roll

Reference Example to work from

For these examples I am assuming that all combatants are 1st level human warriors with attributes assigned randomly from this limited set (11,11,11,10,10,10). They all have 8 HP and as non-hero's they only gain feats from levels (see the warrior class in the DMG). At 1st level they get +1 to hit. Each warrior wears AC14 armour.

If you have 20 warriors fighting another 20 warriors, you need to roll five times for each side, so you would divide the troops into groups of 4 on each side. Each d20 roll gives a median of the roll which that group has made, rather than a straight forward attack roll.

A possible results set of 10x d20 rolls with a +1 BAB added to each roll might be this
Army1: 12, 8, 17, 6, 11
Army2: 14, 7, 15, 13, 16

From this we could assign results to the attack roll for the entire battle, the deviation of a unit with only 4 in a group would be very high. I have given it a deviation of +/-3 either side of this centre point. And replaced the middle result with a +/-1.

Knowing the deviation we can instantly see that any roll of 11 or less is a clear miss. That means that and none of the warriors in that unit have hit their foe. This minimum is calculated as:

AC – Highest Deviation.

We also can instantly see that any roll of 18 or higher will mean that all of the warriors in the unit have hit. This is calculated as:

AC + Highest Deviation.

Any number in between needs a little more thought. Looking at the results set again and comparing it to the AC
Army1: 12(15, 13, 11, 9) , 8(11, 9, 7, 5), 17(20, 18, 16, 14), 6(9, 7, 5, 3), 11(14, 12, 10, 8)
Army1: 12(1 hit) , 8(miss), 17(4 hits), 6(miss), 11(1 hit)
Army2: 14(17, 15, 13, 11),7(10, 8, 6, 4),15(18, 16, 14, 12),13(16, 14, 12, 10),16(19, 17, 15, 13)
Army2: 14(2 hits), 7(miss), 15(3 hits), 13(2 hits), 16(3 hits)

I can represent these results in a lookup table for reference in the game. After each roll I compare the result to see how many warriors in each unit have hit AC14.

below minimum (0 to 10)		= miss
minimum (11)	to AC-2 (12)	= 1 hit
AC-1 (13)	to AC (14)	= 2 hits
AC+1 (15)	to maximum-1 (16)	= 3 hits
maximum and above (17+)		= (unit size) hits

In this example I have used a unit size of 4 to show an additional complication, if the unit size does not allow an equal spread, some fudging of the table must be done.

Given the spread of the deviation for 20x d20 rolls. ie. if you add up all of the results and divide by the number of dice rolled you get an almost perfect average. That is to say it is very unlikely that any result other than between 200 (average 10) and 220 (average 11) will be rolled. Because of this I have assumed an upper cap for the number of tables that I need. Thus if a unit size is 20 or higher then I can assume that the entire unit will roll the same number.

Following this principle I divided the unit sizes into deviation groups.

Unit size	Deviation
1	0
2-3	+/- 4
4-6	+/- 3 complex
7-12	+/- 2 complex
13-18	+/- 1
19-20	0

I realised through playtesting that the low unit sizes are very random and needed something a little more chaotic to represent this.

Deviation +/-4

Unit Size	Represents	Hit calculation odds and chart
2	+4 / -4	Odds of hitting with a roll below AC: # above 0/ unit size(50%) below AC-4 = miss, AC-4 to AC = miss, AC to (AC+4)-1 = 1 hit, AC+4 and above = 2 hits
3	+4 / 0 / -4	Odds of hitting with a roll below AC: # above 0/ unit size(33%) below AC-4 = miss, AC-4 to AC = 1 hit, AC to (AC+4)-1 = 2 hits, AC+4 and above = 3 hits

Deviation +/-3 complex

Unit Size	Represents	Hit calculation odds and chart
4	+3 / +1 / -1 / -3	Odds of hitting with a roll below AC: unit size-2/ unit size(50%) below AC-3 = miss, AC-3 to AC = 1 hit, AC to (AC+3)-1 = 3 hits, AC+3 and above = 4 hits
5	+3 / +1 / 0 / -1 / -3	Odds of hitting with a roll below AC: unit size-2/ unit size(40%) below AC-3 = miss, AC-3 = 1 hit, AC-1 = 2 hits, AC = 3 hits, AC+1 = 4 hits, AC+3 and above = 5 hits

For unit sizes above 5 the table can be simplified a little more

Deviation +/-2 complex

Unit Size	Represents	Hit calculation odds and chart
6	+2/+1/0/0/-1/-2	Odds of hitting with a roll below AC: # above 0/ unit size(33%) below AC-2 = miss, AC-2 = 1 hit, AC-1 = 2 hits, AC = 4 hits, AC+1 = 5 hits, AC+2 and above = 6 hits
7	+2/+1/+1/0/-1/-1/-2	Odds of hitting with a roll below AC: # above 0/ unit size(42%) below AC-2 = miss, AC-2 = 1 hit, AC-1 = 3 hits, AC = 4 hits, AC+1 = 6 hits, AC+2 and above = 7 hits
8	+2/+1/+1/0/0/-1/-1/-2	Odds of hitting with a roll below AC: # above 0/ unit size(38%) below AC-2 = miss, AC-2 = 1 hit, AC-1 = 3 hits, AC = 5 hits, AC+1 = 7 hits, AC+2 and above = 8 hits
9	+2/+1/+1/0/0/0/-1/-1/-2	Odds of hitting with a roll below AC: # above 0/ unit size(33%)

below AC-2 = miss, AC-2 = 1 hit, AC-1 = 3 hits, AC = 6 hits, AC+1 = 8 hits, AC+2 and above = 9 hits

10 +2/+2/+1/+1/0/0/-1/-1/-2/-2 Odds of hitting with a roll below AC: # above 0/ unit size(40%)
below AC-2 = miss, AC-2 = 2 hits, AC-1 = 4 hits, AC = 6 hits, AC+1 = 8 hits, AC+2 and above = 10 hits

11 +2/+2/+1/+1/0/0/0/-1/-1/-2/-2 Odds of hitting with a roll below AC: # above 0/ unit size(36%)
below AC-2 = miss, AC-2 = 2 hits, AC-1 = 4 hits, AC = 7 hits, AC+1 = 9 hits, AC+2 and above = 11 hits

12 +2/+2/+1/+1/0/0/0/0/-1/-1/-2/-2 Odds of hitting with a roll below AC: # above 0/ unit size(33%)
below AC-2 = miss, AC-2 = 2 hits, AC-1 = 4 hits, AC = 8 hits, AC+1 = 10 hits, AC+2 and above = 12 hits

Deviation +/-1

Unit Size	Represents	Hit calculation odds and chart
13	+1/+1/+1/+1/0/0/0/0/0/-1/-1/-1/-1	Odds: # above 0/ unit size(31%)
	below AC-1 = miss, AC-1 = 4 hits, AC = (unit size -4) hits, AC+1 = (unit size) hits	
14	+1/+1/+1/+1/0/0/0/0/0/0/-1/-1/-1/-1	Odds: # above 0/ unit size(29%)
	below AC-1 = miss, AC-1 = 4 hits, AC = (unit size -4) hits, AC+1 = (unit size) hits	
15	+1/+1/+1/+1/0/0/0/0/0/0/0/-1/-1/-1/-1	Odds: # above 0/ unit size(27%)
	below AC-1 = miss, AC-1 = 4 hits, AC = (unit size -4) hits, AC+1 = (unit size) hits	
16	+1/+1/+1/+1/0/0/0/0/0/0/0/0/-1/-1/-1/-1	Odds: # above 0/ unit size(25%)
	below AC-1 = miss, AC-1 = 4 hits, AC = (unit size -4) hits, AC+1 = (unit size) hits	
17	+1/+1/+1/0/0/0/0/0/0/0/0/0/0/0/-1/-1/-1	Odds: # above 0/ unit size(18%)
	below AC-1 = miss, AC-1 = 3 hits, AC = (unit size -3) hits, AC+1 = (unit size) hits	
18	+1/+1/0/0/0/0/0/0/0/0/0/0/0/0/0/0/-1/-1	Odds: # above 0/ unit size(11%)
	below AC-1 = miss, AC-1 = 2 hits, AC = (unit size -2) hits, AC+1 = (unit size) hits	

Deviation +/-0

Unit Size	Represents	Hit calculation odds and chart
19+	No modifications	Odds: # above 0/ unit size(0%)
	below AC = miss, AC and above = (unit size) hits	