

OPERATION COSTS TABLE

(Numbers in parentheses refer to diagonal moves — directions 2, 4, 6, and 8. Ignore the numbers and letters printed in blue for the BASIC game. P = Prohibited.)

TERRAIN	INF./DIS. CAV.	CAV.	LIMB. ART.	UNLIMB. ART.
Clear	2(3)	1(2)	2(3)	P
Town	6(9)	3(5)	3(5)	P
Woods	5(7)	2(3)	2(3)	P
Cornfield	3(5)	2(3)	2(3)	P
River	P	P	P	P
Stream	P	P	P	P
Ford	4(6)	1(2)	3(5)	P
Bridge (1)	2(3)	1(2)	2(3)	P
Road bonus (2)	1(P)	1(P)	1(P)	P
Enter higher elevation (3)	+2	+1	+3	P
Enter or leave enemy ZOC	+2	+1	+3	P
Move ZOC to ZOC	+8	+5	P	P
Change mode (5)	2	2	4	4
Unlimber in ZOC	N/A	N/A	8	N/A
Fortify	12	P	P	P
Fire phase	2	2	P	4
Melee: Att. (4)	2	2	P	P
Melee: Def.	1	1	2	2

Notes:

- Units using the road bonus pay only 1 operation point to enter.
- Diagonal moves are not allowed using the road bonus. Infantry must be in Column mode to use the road bonus.
- Units using the road bonus pay only 1 operation point to enter a higher elevation.
- A unit must fire at the square it is to melee.
- Mode change for CAV ART is 2.

AMMO RESUPPLY TABLES

Eligibility Table: Chance to go to Resupply Table. 50% chance to go to Resupply Table for CAV, CAV ART, Confederate ART, and Evans Brigade.

RANGE TO DIV. LEADER	PERCENT CHANCE OF GOING TO RESUPPLY TABLE
0	Auto - Resupply*
1	Auto - Resupply*
2	90%
3	70%
4	50%
5	30%
6	10%
7	Auto - No Resupply

* Resupply Table is skipped.

Resupply Table: Chance to become resupplied with ammo.

	UNION (Mid Turn)	CONFED. (Mid Turn)
Art.	70% (35%)	50% (25%)
Inf./Cav.	90% (45%)	70% (35%)

MELEE COMBAT RESULTS TABLE

Compare the results of the following formula with the table below:

$$(\text{Attacker's Mod. Strength} - \text{Def. Mod. Strength}) / 50$$

DIFFERENTIAL FROM ABOVE	ATT. LOSSES	DEF. LOSSES	% ATT. RETREAT	% DEF. RETREAT
-7 or less	Random of 25 + 150	Random 25	50%	0%
-5 to -6	Random of 25 + 50	Random 25	50%	0%
-4 to 4	Random of 25	Random 25	20%	40%
5 to 12	Random of 25	Random 25 + 50	0%	100%
13 and more	Random of 25	Random 25 + 100	0%	100%

Defender's retreat is checked first and then the Attacker is checked. Both the attacker and defender (except for routed units) will not retreat at the same time.

WEAPON/RANGE CASUALTY TABLE

WEAPON TYPE	ABREV.	RANGE IN SQUARES						
		1	2	3	4-6	7-10	11-15	
Rifle	RFL	4	2	0	0	0	0	0
Musket	MSK	3	0	0	0	0	0	0
Rifle/Musket	R/M	3	1	0	0	0	0	0
Rifle/Sharps	R/S	6	2	0	0	0	0	0
Rifle/Shotgun	R/G	4	1	0	0	0	0	0
Sharps Rifle	SHR	8	2	0	0	0	0	0
Rifle/Carbine	R/C	4	1	0	0	0	0	0
Carbine	CRB	4	1	0	0	0	0	0
Shotgun	SHG	4	0	0	0	0	0	0
Pistol	PST	1	0	0	0	0	0	0

6 lb. Smoothbore	SM6	8	2	2	1	0	0	0
12 lb. Napoleon	N12	14	4	2	1	0	0	0
3" Rifled Gun	RG3	8	5	4	2	1	0	0
12 lb. Howitzer	H12	16	2	2	1	0	0	0
24 lb. Howitzer	H24	17	4	2	1	0	0	0
10 lb. Parrott	P10	8	5	5	2	2	1	0
20 lb. Parrott	P20	8	6	6	2	2	1	0

The number under the range column is the number of men lost per 100 men for small arms fire and per one gun for artillery. These numbers are further modified by the various strength/casualty modifiers.

FATIGUE GAIN TABLE

ACTION	FATIGUE GAIN
Enter square in normal mode	2
Enter square in column mode	1
Fortify one level	20
Per 2 casualties in men (see below)	1
Per one operation point of force march	6
Leader dies in unit	5
Routed unit passes through friendly unit	5

NOTE: Units with over 600 men in them will gain proportionately less fatigue up to 1000 men. For example, a 600-man unit gains 1 fatigue point per 3 losses (33% of casualties turn into fatigue). A 900-man unit would gain 1 fatigue per 4½ men lost (16%).

FIRE AND MELEE STRENGTH/CASUALTY TERRAIN MODIFIERS

If the defender is in:

TERRAIN	FIRE MOD.	MELEE MOD.
Clear	1.00	1.00
Cornfield	1.00	1.00
Woods	.80	1.00
Higher Elev.	.90	.90
Town	.70	1.00
Bridge/Ford	1.00	.80*

* Attacker on bridge/ford

MODE MODIFIERS ON FIRE AND MELEE STRENGTH/CASUALTIES

MODE	UNIT TYPE	FIRE	MELEE
Normal	INF	1.00	1.00
Column	INF	.75	.75
Mounted	CAV	.75	1.50
Routed	ALL	.75	.50
Lim. or Unlim. Art.	ART	1.00	1.00

OTHER MODIFIERS ON FIRE AND MELEE STRENGTH/CASUALTIES

Leader Bonus = Direct Modifier
(See Order of Battle)

Flank Modifier to Attacker = 1.50
Flank Modifier to Defender = .50

Density Modifier = 1% more or less casualties per 12 men more or less than 650 men in the square. No more or less casualties than 25%.

Random Modifier = ±50% (.5 to 1.5)

Battle Time Modifier = (OP Remaining)/10
NOTE: This modifier is for fire combat, not melee. A unit is assumed to always have at least five operation points remaining.

Fortification = Level × .10
NOTE: This modifies Att. Fire Strength.