

1 ► Combat Results Table (CRT)

- ♦ Inferior Allied Combat Doctrine (21.1).
- ♦ White Die Roll Modifier = +/- PR (9.7).

Odds Column Shifts

DEFENDER

- 1L Relevant Attackers at lower Elevation
- 1L/2L Improved Position (IP)
- 1L/2L All attackers across Great/Grand River
- 2L Brit. Naval Support (Allied only 21.2)

ATTACKER

- 1R Prepared Attack ↑
- 2R Flanked (9.5)
- 1R-7R Prep. Bombardment (20.0)

Combat Results

E = 1 CEL reduction for each Force
 +/- # = post-combat EC DRM

- ① = Retreat 1 hex
- ② = Retreat 2 hexes and suffer a SR
- ⓪ = Attacker Intense Retreat 1 hex
- s = Strength Reduction (9.10)

Die Rolls	1:4 x < .291	1:3 .292-.415	1:2 .416-.624	3:4 .625-.874	1:1 .875-1.24	3:2 1.25-1.74	2:1 1.75-2.49	3:1 2.5-3.49	4:1 3.5-4.99	6:1 5.0-6.99	8:1 7.0 < x	Die Rolls	
-1	1	-/+1	-/+2	-1/+3	-2/+4①	-2/E+1①	-2/E+1①	-2/E+2②	-2/E+3②	-2/E+3②	-2/E+3②	1	
	2,3	+1/-	-/-	-/+3	-/+3	-1/+3	-1/+4⓪	-2/E+1⓪	-2/E+1①	-2/E+1①	-2/E+2②	-2/E+3②	2,3
	4,5	+3s/-1	+2/-1	+1/-	+1/+1	-/+2	-/+3	-/+3	-/+3	-1/+4⓪	-1/+4①	-2/E+1①	4,5
	6	+3s/-1	+3s/-1	+2/-1	+2/-	+1/-	+1/+1	-/+3	-/+3	-/+3	-1/+3⓪	-1/+5①	6
0	1	+1/-	-/+2	-/+3	-1/+4⓪	-2/E+1①	-2/E+1①	-2/E+2②	-2/E+2②	-2/E+2②	-2/E+3②	-2/E+3②	1
	2,3	+1/-	-/-	-/+1	-/+3	-/+3⓪	-/+3	-1/+4⓪	-2/+4⓪	-2/+4s①	-2/E+1②	-2/E+3②	2,3
	4,5	+3/-1	+3/-1	+3/-	+2/+1	+1/+2	-/+3	-/+3	-/+3	-/+3	-1/+4①	-2/E+1①	4,5
	6	+4s/-2	+3s/-1	+2s/-1	+2s/-	+3/-	+3/-	+1/+2	+1/+2	+1/+2	-/+3⓪	-1/+4①	6
1	1	+1/+1	-/+1	-/+3⓪	-/+3⓪	-/+4①	-/+4①	-1/+4①	-2/E+2②	-2/E+2②	-2/E+2②	-2/E+3②	1
	2,3	+3/-1	+2/-	+2/+1	+1/+2	+1/+3	-/+3⓪	-/+3①	-/+4①	-1/+4①	-1/E+1②	-2/E+2②	2,3
	4,5	+3s/-2	+3/-2	+3/-	+3/+1	+3/+1	+2/+2	+2/+3⓪	+1/+3⓪	-/+3⓪	-1/+4①	-2/E+1②	4,5
	6	+5s/-2	+4s/-2	+4s/-1	+3/-1	+3/-1	+3/-1	+3/-	+2/-	+1/+3	-/+3⓪	-/+4①	6
2	1	+1/-1	-/+1⓪	-/+2①	-/+1①	-/+3①	-/+4⓪	-1/+4①	-1/E+1②	-1/E+1②	-1/E+2②	-2/E+3②	1
	2,3	+3/-1	+3/-	+3/+1	+3/+2	+3/+3⓪	+1/+3①	+1/+3⓪	-/+3⓪	-/+4①	-1/E+1①	-2/E+2②	2,3
	4,5	+4/-2	+3/+2	+3/-	+3/-	+3/-	+3/+1	+2/+2	+1/+3⓪	+1/+3⓪	-/+4①	-1/+4①	4,5
	6	5s/-2	+4s/-2	+4s/-2	+3s/-2	+3/-2	+3/-1	+3/-	+3/+1	+2/+2	+1/+3	-/+4①	6
3	1	+1/-1	+1/-	+1/+2⓪	-/+3①	-/+3①	-/+3①	-/+4①	-/+5①	-1/E+1②	-/E+2②	-2/E+3②	1
	2,3	+3/-1	+3/-	+3/-	+3/+1⓪	+2/+3⓪	+1/+3⓪	-/+3⓪	-/+3①	-/+4①	-1/+5①	-1/E+2②	2,3
	4,5	+4s/-2	+3s/-2	+3/-1	+3/-	+3/+1s	+3/+2s	+2s/+2s	+2/+3	+1/+3	-/+3⓪	-1/+4①	4,5
	6	+5s/-2	+5s/-2	+5s/-2	+4s/-2	+4/-1	+3/-	+3/-	+3/-	+3/+1	-/+3⓪	-/+4①	6
4	1	+1/-1	+1/-	+1/+2⓪	-/+3⓪	+1/+2①	-/+3①	-/+4①	-/+4①	-/+5②	-/E+2②	-2/E+3②	1
	2,3	+3/-1	+3/-	+3/-	+3s/+1s	+3/+3⓪	+2/+3⓪	+1/+3	-/+3⓪	-/+4①	-1/+5①	-1/E+2②	2,3
	4,5	+4s/-2	+4s/-2	+3s/-1	+3/-1	+3s/-1	+3s/-	+3/-	+2s/+2s	+1/+2⓪	-/+3⓪	-1/+4①	4,5
	6	+5s/-2	+5s/-2	+5s/-2	+5s/-2	+4s/-2	+3/+2	+3/-1	+3/-	+3/-	+1/+2⓪	-/+4①	6
5	1	+1/-1	+1/-	+1/+2	-/+2⓪	-/+3⓪	-/+3①	-/+4①	-/+4①	-1/+5②	-1/E+2②	-1/E+2②	1
	2,3	+3/-1	+3/-	+3/-	+3/+1	+3/+1	+3/+3⓪	+1/+3⓪	+1/+3①	-/+3⓪	-1/+4s①	-1/E+2②	2,3
	4,5	+4s/-2	+4/-2	+3/-2	+3/-1	+3/-1	+3/-1	+3/-	+2/+2	+2/+2⓪	-/+3①	-/+4①	4,5
	6	+6s/-3	+5s/-2	+5s/-2	+5s/-2	+4s/-1	+3/-1	+3/-	+3/-	+3/-	+2/-	-/+3①	6
6	1	+1/-1	+1/-	+1/+2	+1/+2⓪	-/+2⓪	-/+4⓪	-/+4①	-/+4①	-1/+5s①	-1/+5②	-1/E+2②	1
	2,3	+3/-2	+3/-1	+3/-	+3/+1	+3/+1	+2/+2	+1/+3⓪	+1/+3⓪	-/+3①	-/+4①	-1/+5①	2,3
	4,5	+4s/-3	+4s/-2	+3s/-2	+3s/-2	+3/-	+3/-1	+3/-	+2/-	+2s/+2s	+2s/+2s	-/+3①	4,5
	6	+6s/-3	+5s/-2	+5s/-2	+5s/-2	+5s/-2	+5/-2	+3/-1	+3/-	+3/-	+3/-	-/+3①	6
7	1	+1/-2	+1/-	+1/+2	+1/+2⓪	-/+3⓪	-/+3⓪	-/+3①	-/+3①	-/+4①	-/+5②	-1/E+2②	1
	2,3	+3/-2	+3/-1	+3/-	+3/-	+3/-	+2/+2	+2/+2⓪	+1/+3⓪	-/+3⓪	-/+3①	-1/+4①	2,3
	4,5	+4s/-3	+4/-2	+3/-2	+3/-2	+3/-1	+3/-1	+3/-	+2/-	+2/-	-/+3⓪	-/+3①	4,5
	6	+6s/-3	+5s/-2	+5s/-2	+5s/-1	+5s/-2	+5s/-2	+3/-2	+3/-	+3/-	+2/-	-/+2①	6
8	1	+1/-2	+1/-1	+1/+1	+1/+1	-/+2⓪	-/+3⓪	-/+3⓪	-/+3⓪	-/+3①	-/+5s①	-1/E+2②	1
	2,3	+3/-3	+3/-1	+3/-	+3/-	+3/-	+2/+1	+2/-	+2/+1	-/+2	-/+3①	-1/+4①	2,3
	4,5	+4s/-3	+4s/-2	+3s/-2	+3/-1	+3/-	+3/-1	+3/-	+3/-	+2/-	-/+3	-/+3①	4,5
	6	+6s/-3	+5s/-3	+5/-2	+5s/-2	+5s/-2	+5s/-2	+3/-2	+3/-1	+3/-	+2/-	-/+3①	6
		1:4	1:3	1:2	3:4	1:1	3:2	2:1	3:1	4:1	6:1	8:1	

1 ► Combat Intensity Matrix

Attacker	Defender	Battle Intensity
Not Intense	Not Intense	Low Intensity
INTENSE	Not Intense	Attacker Intense
Not Intense	INTENSE	Defender Intense
INTENSE	INTENSE	HIGH Intensity

Low Intensity = The defender retreats on black retreats results only.

Attacker Intense = The defender retreats on both black and white retreat results. Attacker suffers an SR if the combat result did not include a black retreat result.

Defender Intense = The defender retreats on black 2 retreat results only. Defender suffers a SR if the combat result included a black 1 or white 1 retreat result.

HIGH Intensity = The defender retreats on black retreat results only. Attacker suffers an SR if the combat result did not include a black retreat result. Defender suffers an SR if the combat result included a black or white retreat result.

► SR Small Magnitude Modification [1d6]

Roll once per combat. Number is roll needed to suffer S result.

Size of Enemy's forces	Total CRT & Intensity result	
	1 SR	2 SRs
¾ or ½ Div.-equivalent	3, 4, 5, 6	1 SR automatic
¼ Division-equivalent	5, 6	4, 5, 6

2 ► Artillery Table

- ♦ **AV Modifier:** ½ AV if firing up Escarpment.
- ♦ Maximum 2 AV when defending in or attacking into Mountainous terrain.

Nr. of division-equivalents	Opponent's Artillery Value Sum						
	≥ 3	0-1	2-6	7-16	17+		
2-2¾	0-1	2-4	5-11	12-22	23+		
1-1¾	0	1-2	3-7	8-14	15+		
≤ ¾		0-1	2-4	5-8	9-15	16+	
Artillery DRM	-2	-1	0	+1	+2	+3	

3 ► Post Combat Effectiveness Check [2d6]

Roll separately for each **Stack**. Modifiers are for each individual **Force** within a **Satck**. A Force passes if the modified roll ≤ its current **CEL**.

- ♦ Dice Roll Modifiers: +/- CRT result
- +/- Artillery DRM
- +1 Defender Flanked

If Force fails its EC by:	Inflict this result on it	& if it's now CI	or if it's now Demoralized
1 — 3	-1E	+①	+②
4 — 6	-2E	+①	+②
7+	-3E +s +①	+①	+②

-#E = Reduce Combat Effectiveness Status by #.

①② = Retreat 1 or 2 hexes.

s = Strength Reduction.

► Bombardment Results Table [1d6]

Die Roll	Caliber Rating vs. Fortress Class							
	21 cm			30.5 cm			42 cm	
	C	B	A	C	B	A	C,B	A
1	1	1	+	1*	1	1	2	2
2	1	1	▪	1	1	1	2	1
3	1	+	▪	1	1	▪*	1	1
4	1	▪	▪	1	▪*	▪	1	1
5	▪	▪	▪	▪*	▪	▪	1	1
6	▪	▪	▪	▪	▪	▪	1	▪

▪ = No effect.

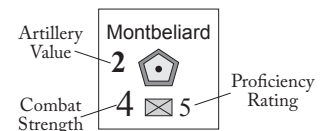
1 = 1 Fortress step loss (2 step losses).

+ = Roll again ... result of 1,2,3 = 1 step loss.

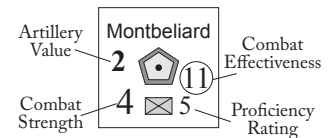
* = 1 Fortress step loss if 5+6 sKM is firing.

Fortress Unit Combat Summary:

Being Attacked while defending w/Combat units: = 1 Div.-equivalent for Artillery Table



Being Attacked when stacked alone: = 1 Div.-equivalent for Artillery Table



(A Fortress cannot choose Intense Combat)

► Preparatory Bombardment (20.0) [1d6]

Dice Roll Modifiers: Up Elevation +2
Up Escarpment +1

Die Roll	Number of 21cm units* participating			Includes a 30.5cm or 42cm unit
	4	5	6	
	* Units with x2 (x4) count as 2 (4) units			Add to post-combat EC
1	6+s+3e	7+s+3e	7+s+3e	+1e
2	5+s+3e	6+s+3e	7+s+3e	+1e
3	4+s+3e	5+s+3e	6+s+3e	+1e
4	3+s+3e	4+s+3e	5+s+3e	+1e
5	3+s+2e	3+s+2e	3+s+3e	+1e
6	2+1e	2+s+2e	2+s+2e	+1e
7	1+1e	1+1e	1+s+1e	▪
8+	1+1e	1+1e	1+1e	▪

= # of CRT column shifts to the right (* Ignore if a Fortress unit is in the defending hex).

s = Strength Reduction.

#e = Post-combat EC DRM for defending Forces.

▪ = No effect.

Terrain Effects Chart (TEC)

Terrain	MP Cost	Combat
Clear	2	—
Wooded (3.5.3)	2	+2 DS
Moor	3	+2 DS
Foothills/Mtn. Valley	3	+4 DS
Mountain	4	max. 2 AV per Force
Steep Mountain (a)	4	
Elevation Change	—	1L (e)
Pure Hexside Terrain		
Escarpment	—	½AV
Forest	3	—
Deep Forest	4	—
Wetlands	3	-2 AS
Mountain Ridge (f)(r)(s)	P	P
Rivers		
Minor River	+1	-1 AS
Major River	+2	-2 AS
Great River (f)	+3	-2 AS/1L
Grand River (f)(r)(s)	+3 (b)	-3 AS/2L
Inundated hexside (f)	+3 (b)	P
Roadway Bridges (3.5.4)		
Bridge over River	+1	—
Other		
Improved Position (IP)	—	1L per level
RR Track for RR Transport	1/10	—
RR Track for Depot move	1	—
City/Town/Location	—	—
Sea hexside	P	P

TEC Notes

DS = Defender's strength increased per hex.
 AS/AV = Attacker's strength and/or AV reduced when attacking across hexside (9.3.2 & 10.1.1a); reduction is per Force.

- (a) Combat Stacking restriction—see 3.1.2a.
- (b) Must begin move adjacent (7.1.5). Repulse across—see 7.4.7.
- (e) If all units are attacking UP Elevation (see also 3.6).
- (f) Affects Flank Attacks—see 9.5.3.
- (r) Retreating across—see 11.1.4.
- (s) Affects Tracing Supply—see 15.3.2.

Special Terrain Features:

- The **Belgian Pontoon Bridge** spanning hexside 51.16-52.16 is a Roadway Bridge in all respects except that only one Force can cross it per movement phase (24.6).
- **Double-River hexsides** are treated as if there were only one river.
- The **IJzer River Inundation** does not exist until created—see 21.3.
- **The Meuse River at Iges:** A Force attacking from hex 46.36 into hex 46.37 is not affected by the river hexside (i.e., it is as if the river did not exist). A Force attacking from hex 46.37 into hex 46.36 is affected by the Major River hexside.
- The **Pont de Pontoise (15.33-15.34)** is demolished only if a German unit moves adjacent. If demolished, cannot be reconstructed.
- The **Seine River** running through Paris is ignored.

Terrain Key

Lowland (Clear)
CLEAR TERRAIN: The terrain types Lowland, Upland, and Highland are all 'Clear.' The only difference is their elevation.
 □ Elevation transitions—see 3.6.1

Elevation Transitions

Upland (Clear)

Highland (Clear)

Foothills/Mountain Valley
MOUNTAINOUS TERRAIN: Foothills/Mtn. Valley, Mountain, and Steep Mtn. hexes are cumulatively termed Mountainous Terrain.

Mountain

Steep Mountain
ELEVATION: There are six levels of elevation found on the map:
 • Lowland (lowest),
 • Upland (lower-middle),
 • Highland (middle),
 • Foothills/Mtn. Valley (upper-middle),
 • Mountains (high),
 • Steep Mtns. (highest).

Mountain Ridge hexside

Inundation

Escarpment hexside

Wetlands hexside

Moor

Wooded hex
WOODED TERRAIN: 'Wooded' is an overlay on-top of Clear Terrain.

Forest hexside
FORESTED HEXSIDES: Forest and Deep Forest hexsides are cumulatively termed Forested hexsides.
 □ Elevation and Forested Hexsides—see 3.6.2

Deep Forest hexside

Railroads

Double Track

Single Track

Narrow Track

RR Structure—see 18.4

RAILROADS—see 18.1

Rivers

Grand River Roadway Bridge

Great River

Major River

Minor River

Roadway Bridges: Cross every Major and Great River hexside and where a Bridge symbol crosses a Grand River.
 □ Roadway Bridges and Movement—see 7.1.4

National Border

Improved Position
IMPROVED POSITIONS—see 14.5

Movement Point Summary Chart

Action	MP Cost
Enter / Exit an EZOC	+2 / +1
Move directly from EZOC to EZOC	+6
- if hex occupied by a friendly Formation or Fortress (7.1.6a)	+4
Enter hex with enemy Fortress unit	+2
Place a Prepared Attack marker ↑ ¢ (7.3)	= Cost to enter hex. Minimum 4
Attempt Repulse	1
Recover Effectiveness Level (7.5)	9 *
Construct an IP ¢ (14.3)	13 *

¢ = NA for Cavalry * = Cannot use Forced March

MP Cost to Entrain/Detrain (7.7.3)

Size and Type of Unit	MP Cost *
Infantry Division, Cav. Corps, Corps Train, HQ	9
Infantry Brigade, Cavalry Division, Artillery	5
Infantry Regiment, Cav. Brigade or Regiment	3

* = Cannot use Forced March

Activity Distances

A unit starting this activity:	Must be at least this far from nearest enemy unit:
Recover Combat Effectiveness (7.5)	GTs 1-18: Either 3 hexes ●●●, or 2 hexes ●● if all intervening hexes are occupied by friendly units in an IP, or adjacent ● if occupying a Level 2 IP. GTs 19-30: Either 3 hexes ●●●●, or 2 hexes ●● if all intervening hexes are occupied by friendly units in an IP, or adjacent ● if occupying any IP.
Recover from Demoralization	5 hexes ●●●●●, or if inside Paris or Antwerpen 2 hexes ●● (7.5.2)
Building an IP	Adjacent ●, but not further than 4 hexes ●●●● (14.3.2)
Begin Entraining - Destination hex	4 hexes ●●●● 6 hexes ●●●●●● * Fortified Camp —see 7.7.3(2)
Embark/Debarck	Adjacent ● / 2 hexes ●●

Removing MP Expended Markers (7.8.3)

Remove this marker	When an enemy unit ...
CEL	Moves adjacent ●
RR (in addition 7.7.5)	Moves adjacent ●
IP	Attacks the hex ↑

Stacking Limits Summary

Situation	Limit per hex
End of friendly movement phase	3½ division-equivalents
Attacking or Defending (3.1.2)	2½ division-equivalents (max. two Asset units, max. one artillery unit)
Steep Mountain terrain: Attacking or Defending from/into/in	1¼ division-equivalent (max. two Asset units, no artillery units)

Division-Equivalents Summary

1	Infantry Division (XX), Cavalry Corps (XXX) Corps Train
½	Infantry Brigade (X), Cavalry Division (XX)
¼	Infantry Regiment (III), Cavalry Brigade (X)
0	Cavalry Regiment (III), Artillery, HQ, Depot Fort*, Fortress**

* Counts as ½ Div.-equivalent on the Artillery Table

** Counts as 1 Div.-equivalent on the Artillery Table

Rail Point cost to Entrain (7.7.1)

Size and Type of Unit	RP Cost
Infantry Div., Cav. Corps, Corps Train	1
All other sizes/types	½

► Forced March Effectiveness Check [2d6]

Forced March EC DRMs:

+1 for every MP used for Forced Marching

Forced March Results Table (7.2.3)

Failed EC by ...	1, 2, 3, 4	5+
Infantry Formation	-1E ↑	-1E s ↑
Cavalry Formation	-1E	-2E
Asset Unit	s ↑	s ↑

-#E = Lose # of Combat Effectiveness Levels.*

* A CEL reduction that cannot be allocated is converted into an 's' result.

s = Strength Reduction (SR). This may eliminate an Asset unit.