

AP (APCR/APDS) TO KILL TABLE

Gun Type	range 0-1	2	3-6	7-12	13-18	19-24
MG	6	5	5	4	4	--
12.7	7	6	6	5	5	--
German ATR	7	6	6	5	--	--
Polish ATR	7	6	6	5	--	--
Rus ATR	8	7	7	6	--	--
20L	8	7	7	6	6	5
37	9	9	8	8	8	7
37*	8	8	7	7	7	6
37L (APCR)	10 (13)	10 (12)	9 (11)	9 (10)	9 (8)	8 (6)
37LL	12	12	11	11	11	10
40L	11	11	10	10	10	9
45L	11 (15)	11 (14)	10 (13)	10 (12)	10 (10)	9 (8)
47	11	11	10	10	10	9
50 (APCR)	12 (17)	12 (16)	11 (15)	11 (14)	11 (12)	10 (8)
50L (APCR)	14 (20)	14 (19)	13 (18)	13 (17)	13 (15)	12 (13)
57L (APDS)	16 (19)	16 (18)	15 (18)	15 (18)	15 (18)	14 (18)
57LL	16 (21)	16 (20)	15 (19)	15 (18)	15 (16)	14 (14)
75	15	14	14	14	14	13
75*	11	10	10	10	10	9
75L (APCR)	18 (23)	17 (22)	17 (21)	17 (20)	17 (19)	16 (17)
75LL	24	23	23	23	23	22
76*	10	9	9	9	9	8
76L (APCR)	18 (25)	17 (24)	17 (23)	17 (22)	17 (21)	16 (19)
Rus 76L (APCR)	14 (17)	13 (16)	13 (15)	13 (14)	13 (13)	12 (11)
76LL (APDS)	24 (26)	23 (25)	23 (25)	23 (25)	23 (25)	22 (25)
77L	20	19	19	19	19	18
85L (APCR)	18 (22)	17 (21)	17 (20)	17 (19)	17 (18)	16 (16)
88LL (APCR)	21 (26)	20 (25)	20 (24)	20 (23)	20 (22)	19 (20)
88LL	28	27	27	27	27	26
122L	26	25	25	25	25	24
152*	18	17	17	17	17	16

TO KILL NUMBER (TK#) MODIFIERS

Rear Facing Hit: +1 to TK#
Critical Hit: TK# x 2

CE Crew Stun/Recall

Stun if CE crew fails MC or
MG TK = Final TK #
12 = recall/STUN
2nd stun = recall/STUN
Stun on 1MT AFV = recall/STUN
K/KIA on IFT = recall/STUN

FINAL TK # = TK # - AF

Armor Factors: 0 1 2 3 4 5 6 8 11 14 18 26

☐ = superior turret ○ = inferior turret

HE & FLAME TO KILL TABLE (no mortars)

Gun Size	20+	30+	40+	50+	70+	80+	100+	120+	150+	DC	FT
TK#	3	4	5	6	7	8	10	12	16	16	8*

* halved if using Long Range; +1 if vehicle is CE; Armor Factor not used

HEAT TO KILL TABLE

Gun Size	37	75	76	95	105	122	Baz 43	Baz 44/45	PIAT	PSK	PF
TK#	26	13	13	16	15	17	13	16	15	26	31

AFV DESTRUCTION TABLE

Final Effects DR	Direct Fire	Area Target		FT	MG	CC
		Type ²	DC ³			
< TK# / K / 1KIA / CCV	ELIM	ELIM	ELIM	ELIM	ELIM	ELIM
= TK# / K / 1KIA / CCV	Im ^H / Sh ^T	Im ^H / Sh ^T	Im ^H / Sh ^T	ELIM	Stun	Im
HE 1 > Final TK# / K	Im ^H / Sh ^T	Im ^H / Sh ^T	Im ^H / Sh ^T	N/A	N/A	N/A
non-HE ¹ 1 > Final TK#	Possible Sh (take NMC)	N/A	N/A	N/A	N/A	N/A

¹Includes HEAT

²Use original IFT DR for hit location; all AF ≤ 4 = -1 TK DRM; all AF > 8 = +1 TK DRM

³Requires a position DR

H = Hull Hit

T = Turret Hit

Im = Immobilization Sh = Shock

GUN DESTRUCTION TABLE


	Ordnance	MG/IFE/Small Arms/FT ¹	DC
≤ Final KIA ²	ELIM	Subsequent die roll	ELIM
= Final K	MALF-CR ³	N/A	MALF-CR
= CH	ELIM	N/A	N/A

Notes: Elim = Gun and Manning Infantry Eliminated
MALF-CR = Gun is malfunctioned,
Manning Infantry suffer Casualty Reduction
Subsequent die roll on same IFT column: KIA=Elim; K=Malf

¹Gunshield is N/A to FT attack

²prior to applying gunshield DRM

³K result = Gun eliminated if AP was fired

TO HIT CHART German 			Infantry Target Type [ITT]						Area Target Type [ATT]		Vehicle Target Type [ATT]						
(shows Final DR needed) FP Column			TH# (CH TH#)						TH# (CH on "2")		TH# (CH on "2")						
Nationality	Gun Type	ITT/ATT/CH	range	1	2	3-6	7-12	13-18	19-24	range	1-12	13-24	range	1-6	7-12	13-18	19-24
All	MG†@ Ω		--	--	--	--	--	--	--	--	--	--	10	9/8	6/5	--	--
All	ATR@	1/--/2	--	--	--	--	--	--	--	NA	NA		10	8	6	5	
German	20L	1/--/2	10(5)	9(4)	8(3)	7(3)	5(2)	4(1)		7	7		10	9	7	6	
German	37	4/2/8	10(5)	9(4)	8(3)	7(3)	4(2)	3(1)		7	6		10	9	6	5	
German	37L	4/2/8	10(5)	9(4)	8(3)	7/6(3/2)	5/4(2/1)	4/3(1/1)		7	7		10	9/8	7/6	6/5	
German	50*	--/2/12	--	--	--	--	--	--		7(NA 1-2)	6(NA 21+)		--	--	--	--	
German	50	6/2/12	10(5)	9(4)	8(3)	7(3)	5(2)	4(1)		7	7		10	9	7	6	
German	50L	6/2/12	10(5)	9(4)	8(3)	7/6(3/2)	6/5(2/2)	5/4(2/1)		7	8		10	9/8	8/7	7/6	
German	75*	12/6/24	10(5)	9(4)	8(3)	7(3)	5(2)	4(2)		7	7		10	9	7	6	
German	75L	12/6/24	10(5)	9(4)	8(3)	7/6(3/2)	7/6(3/2)	6/5(2/2)		7	9		10	9/8	9/8	8/7	
German	75LL	12/6/24	10(5)	9(4)	8(3)	7(3)	7(3)	6(2)		7	9		10	9	9	8	
German	81*	--/8/30	--	--	--	--	--	--		7(NA 1-2)	7		--	--	--	--	
German	88L	16/8/30	10(5)	9(4)	8(3)	7(3)	7(3)	6(2)		7	9		10	9	9	8	
German	88LL	16/8/30	10(5)	9(4)	8(3)	7/6(3/2)	7/6(3/2)	6/5(2/2)		7	9		10	9/8	9/8	8/7	
German	105	20/8/36	10(5)	9(4)	8(3)	7(3)	6(2)	5(2)		7	8		10	9	8	7	


Firer Based To Hit DRM	
Guns, SW Mortars, LATW, MG, & Vehicles	
1. Fire in AFPh (+3 if in woods/building) +2 (for Gun/SW Mortar/Vehicle that did not move)	+2
2. Pinned firer [MG attempt NA if Pinned]	+2
3. Non-Qualified Use (Guns only)	+2
4. Captured use	+2
5. CX	+1
6. Leadership [NA Guns/Vehicles]	+x
7. Smoke (at ranges < 13 hexes)	-2
Guns and Vehicles only	
8. Covered Arc change per hexside; x2 if firer in woods/bldg 360° mount or T +1/+1/+1 ST +2/+1/+1 NT +3/+1/+1	
9. Intensive Fire	+2
10. Fire within hex (x2 if woods/building)	+2
11. APCR/APDS at ranges ≥ 13	+1
LATW only	
12. Avoiding Backblast in building; Fire in AFPh (each)	+2
Vehicle only	
13. Buttoned Up (BU)	+1
14. Bounding (First) Fire [B(F)F] In AFPh or BFF > 3 MP in LOS T/ST +4 NT +5 BFF 2.5 - 3 MP in LOS T/ST +5 NT +6 BFF ≤ 2 MP in LOS T/ST +6 NT +7	
15. Stun	+1
16. Motion/Non-Stopped Fire add Case 14 & lower die x2 additionally if on ITT, 1-hex range (2-hex range +1) +2	

† Must be within normal range and not halved FP
 @ SW use RED TH# only if subject to Captured or Inexperienced use
 Ω MG CH is NA
 ‡ American and British 57L has Limited HE; use values in [brackets] for AP ammunition
 © British 40L is AP only use 2/--/4 FP Column

VEHICLE HIT LOCATION
Turret Hit: TH DR white dr > color dr
Hull Hit: TH DR color dr ≥ white dr

RED TO HIT NUMBERS
 Use the red numbers on the To Hit chart (if different than the black #s) for:
 • Area Target Type attempts
 • pre-1944 American MA/Gun
 • Non-Qualified/Captured use
 • Russian/Italian/Allied Minor/Axis Minor MA/Gun

Target Based To Hit DRM	
17. TEM (NA for ATT)	per TEM
18. Hindrance	per Hindrance
19. FFNAM; FFMO (each)	-1
20. Acquired Target (NA LATW/MG)	-1 or -2
21. Target using hazardous movement (FFMO/FFNAM NA)	-2
22. Gun/Vehicle Target Size: vs. large/double-large target vs. small/double-small target	-1/-2 +1/+2
23. Area Fire (firing at empty hex)	+2
24. vs. Motion or Moving Vehicle Motion or >3 MP in Firer's LOS +2 ≤ 3 MP in Firer's LOS +3 ≤ 1 MP in Firer's LOS +4	
25. 1-hex range vs. stopped vehicle (2-hex range: -1) [NA for ATT; non-ATR LATW; Motion/non-stopped Firer]	-2

TO HIT CHART Russian 			Infantry Target Type [ITT]						Area Target Type [ATT]		Vehicle Target Type [ATT]						
(shows Final DR needed)			TH# (CH TH#)						TH# (CH on "2")		TH# (CH on "2")						
Nationality	Gun Type	FP Column ITT/ATT/CH	range	1	2	3-6	7-12	13-18	19-24	range	1-12	13-24	range	1-6	7-12	13-18	19-24
All	MG†@Ω		--	--	--	--	--	--	--	--	--	--	10	9/8	6/5	--	--
All	ATR@	1/--/2	--	--	--	--	--	--	--	NA	NA		10	8	6	5	
Russian	82*	--/8/30	--	--	--	--	--	--	--	7(NA 1-2)	7		--	--	--	--	
Russian	45L	4/2/8	10(5)	9(4)	8(3)	6(2)	5(2)	4(2)		7	8		10	8	7	6	
Russian	50*	--/2/12	--	--	--	--	--	--	--	7(NA 1-2)	6(NA 21+)		--	--	--	--	
Russian	57LL	6/2/12	10(5)	9(4)	8(3)	6(2)	5(2)	4(2)		7	8		10	8	7	6	
Russian	76*	12/6/24	10(5)	9(4)	8(3)	6(2)	4(1)	3(1)		7	7		10	8	6	5	
Russian	75	12/6/24	10(5)	9(4)	8(3)	7/6(3/2)	6/5(2/2)	5/4(2/1)		7	8		10	9/8	8/7	7/6	
Russian	76L	12/6/24	10(5)	9(4)	8(3)	6(2)	6(2)	5(2)		7	9		10	8	8	7	
Russian	85L	16/8/30	10(5)	9(4)	8(3)	6(2)	6(2)	5(2)		7	9		10	8	8	7	
Russian	122	24/12/36	10(5)	9(4)	8(3)	6(2)	5(2)	4(1)		7	8		10	8	7	6	
Russian	152*	30/12/36	10(5)	9(4)	8(3)	6(2)	4(2)	3(1)		7	7		10	8	6	5	

Firer Based To Hit DRM

Guns, SW Mortars, LATW, MG, & Vehicles

1. Fire in AFPh (+3 if in woods/building) +2
(for Gun/SW Mortar/Vehicle that did not move)
2. Pinned firer [MG attempt NA if Pinned] +2
3. Non-Qualified Use (Guns only) +2
4. Captured use +2
5. CX +1
6. Leadership [NA Guns/Vehicles] +X
7. Smoke (at ranges < 13 hexes) -2

Guns and Vehicles only

8. Covered Arc change per hexside; x2 if firer in woods/bldg
360° mount or T +1/+1/+1
ST +2/+1/+1
NT +3/+1/+1
9. Intensive Fire +2
10. Fire within hex (x2 if woods/building) +2
11. APCR/APDS at ranges ≥ 13 +1

LATW only

12. Avoiding Backblast in building; Fire in AFPh (each) +2

Vehicle only

13. Buttoned Up (BU) +1
14. Bounding (First) Fire [B(F)F]
In AFPh or BFF > 3 MP in LOS T/ST +4 NT +5
BFF 2.5 - 3 MP in LOS T/ST +5 NT +6
BFF ≤ 2 MP in LOS T/ST +6 NT +7
15. Stun +1
16. Motion/Non-Stopped Fire add Case 14 & lower die x2
additionally if on ITT, 1-hex range (2-hex range +1) +2

† Must be within normal range and not halved FP

@ SW use RED TH# only if subject to Captured or Inexperienced use

Ω MG CH is NA

‡ American and British 57L has Limited HE; use values in [brackets] for AP ammunition

© British 40L is AP only use 2/--/4 FP Column

VEHICLE HIT LOCATION

Turret Hit: TH DR white dr > color dr

Hull Hit: TH DR color dr ≥ white dr


Target Based To Hit DRM

17. TEM (NA for ATT) per TEM
18. Hindrance per Hindrance
19. FFNAM; FFMO (each) -1
20. Acquired Target (NA LATW/MG) -1 or -2
21. Target using hazardous movement (FFMO/FFNAM NA) -2
22. Gun/Vehicle Target Size:
vs. large/double-large target -1/-2
vs. small/double-small target +1/+2
23. Area Fire (firing at empty hex) +2
24. vs. Motion or Moving Vehicle
Motion or >3 MP in Firer's LOS +2
≤ 3 MP in Firer's LOS +3
≤ 1 MP in Firer's LOS +4
25. 1-hex range vs. stopped vehicle (2-hex range: -1) -2
[NA for ATT; non-ATR LATW; Motion/non-stopped Firer]

RED TO HIT NUMBERS

Use the red numbers on the To Hit chart (if different than the black #s) for:

- Area Target Type attempts
- pre-1944 American MA/Gun
- Non-Qualified/Captured use
- Russian/Italian/Allied Minor/Axis Minor MA/Gun

TO HIT CHART British 			Infantry Target Type [ITT]						Area Target Type [ATT]		Vehicle Target Type [ATT]						
(shows Final DR needed) FP Column			TH# (CH TH#)						TH# (CH on "2")		TH# (CH on "2")						
Nationality	Gun Type	ITT/ATT/CH	range	1	2	3-6	7-12	13-18	19-24	range	1-12	13-24	range	1-6	7-12	13-18	19-24
All	MG†@Ω		--	--	--	--	--	--	--	--	--	--	10	9/8	6/5	--	--
All	ATR@	1/--/2	--	--	--	--	--	--	--	NA	NA	NA	10	8	6	5	--
British	37LL	4/2/8	10(5)	9(4)	8(3)	7(3)	5(2)	4(1)		7	7	7	10	9	7	6	6
British	40L©	2/--/4	10(5)	9(4)	8(3)	7/6(3/2)	5/4(2/1)	4/3(1/1)		--	--	--	10	9/8	7/6	6/5	6/5
British	51	--/2/12	--	--	--	--	--	--		7(NA 1-2)	6(NA 21-24)	6	--	--	--	--	--
British	57L‡	6[2]/2[--]/12[4]	10(5)	9(4)	8(3)	7/6(3/2)	6/5(2/2)	5/4(2/1)		7	8	8	10	9/8	8/7	7/6	7/6
British	75	12/6/24	10(5)	9(4)	8(3)	7(3)	6(2)	5(2)		7	8	8	10	9	8	7	7
British	76*	--/6/24	--	--	--	--	--	--		7(NA 1-2)	7	7	--	--	--	--	--
British	76LL	12/6/24	10(5)	9(4)	8(3)	7(3)	7(3)	6(2)		7	9	9	10	9	9	8	8
British	77L	12/6/24	10(5)	9(4)	8(3)	7(3)	7(3)	6(2)		7	9	9	10	9	9	8	8
British	88	16/8/30	10(5)	9(4)	8(3)	7/6(3/2)	6/5(2/2)	5/4(2/1)		7	8	8	10	9/8	8/7	7/6	7/6
British	95*	16/8/30	10(5)	9(4)	8(3)	7(3)	5(2)	4(2)		7	7	7	10	9	7	6	6

Firer Based To Hit DRM

Guns, SW Mortars, LATW, MG, & Vehicles

1. Fire in AFPh (+3 if in woods/building) +2
(for Gun/SW Mortar/Vehicle that did not move)
2. Pinned firer [MG attempt NA if Pinned] +2
3. Non-Qualified Use (Guns only) +2
4. Captured use +2
5. CX +1
6. Leadership [NA Guns/Vehicles] +x
7. Smoke (at ranges < 13 hexes) -2

Guns and Vehicles only

8. Covered Arc change per hexside; x2 if firer in woods/bldg
360° mount or T +1/+1/+1
ST +2/+1/+1
NT +3/+1/+1
9. Intensive Fire +2
10. Fire within hex (x2 if woods/building) +2
11. APCR/APDS at ranges ≥ 13 +1

LATW only

12. Avoiding Backblast in building; Fire in AFPh (each) +2

Vehicle only

13. Buttoned Up (BU) +1
14. Bounding (First) Fire [B(F)F]
In AFPh or BFF > 3 MP in LOS T/ST +4 NT +5
BFF 2.5 - 3 MP in LOS T/ST +5 NT +6
BFF ≤ 2 MP in LOS T/ST +6 NT +7
15. Stun +1
16. Motion/Non-Stopped Fire add Case 14 & lower die x2
additionally if on ITT, 1-hex range (2-hex range +1) +2

† Must be within normal range and not halved FP

@ SW use RED TH# only if subject to Captured or Inexperienced use

Ω MG CH is NA

‡ American and British 57L has Limited HE; use values in [brackets] for AP ammunition

© British 40L is AP only use 2/--/4 FP Column

VEHICLE HIT LOCATION

Turret Hit: TH DR white dr > color dr

Hull Hit: TH DR color dr ≥ white dr


Target Based To Hit DRM

17. TEM (NA for ATT) per TEM
18. Hindrance per Hindrance
19. FFNAM; FFMO (each) -1
20. Acquired Target (NA LATW/MG) -1 or -2
21. Target using hazardous movement (FFMO/FFNAM NA) -2
22. Gun/Vehicle Target Size:
vs. large/double-large target -1/-2
vs. small/double-small target +1/+2
23. Area Fire (firing at empty hex) +2
24. vs. Motion or Moving Vehicle
Motion or >3 MP in Firer's LOS +2
≤ 3 MP in Firer's LOS +3
≤ 1 MP in Firer's LOS +4
25. 1-hex range vs. stopped vehicle (2-hex range: -1) -2
[NA for ATT; non-ATR LATW; Motion/non-stopped Firer]

RED TO HIT NUMBERS

Use the red numbers on the To Hit chart (if different than the black #s) for:

- Area Target Type attempts
- pre-1944 American MA/Gun
- Non-Qualified/Captured use
- Russian/Italian/Allied Minor/Axis Minor MA/Gun

TO HIT CHART  <small>(shows Final DR needed)</small>			Infantry Target Type [ITT]						Area Target Type [ATT]		Vehicle Target Type [ATT]						
Nationality	Gun Type	FP Column ITT/ATT/CH	TH# (CH TH#)						TH# (CH on "2")		TH# (CH on "2")						
			range	1	2	3-6	7-12	13-18	19-24	range	1-12	13-24	range	1-6	7-12	13-18	19-24
All	MG†@Ω		--	--	--	--	--	--	--	--	--	--	range	10	9/8	6/5	--
All	ATR@	1/--/2	--	--	--	--	--	--	--	NA	NA	NA	10	8	6	5	
Allied Minor	46*	--/2/8	--	--	--	--	--	--	--	7(NA 1)	NA	NA	--	--	--	--	
American	37LL	4/2/8	10(5)	9(4)	8(3)	7/6(3/2)	5/4(2/1)	4/3(1/1)		7	7	7	10	9/8	7/6	6/5	
American	57L‡	6[2]/2[--]/12[4]	10(5)	9(4)	8(3)	7/6(3/2)	6/5(2/2)	5/4(2/1)		7	8	8	10	9/8	8/7	7/6	
American	60*	--/4/16	--	--	--	--	--	--		7(NA 1-2)	7	7	--	--	--	--	
American	75	12/6/24	10(5)	9(4)	8(3)	7(3)	6(2)	5(2)		7	8	8	10	9	8	7	
American	76L	12/6/24	10(5)	9(4)	8(3)	7(3)	7(3)	6(2)		7	9	9	10	9	9	8	
American	81*	--/8/30	--	--	--	--	--	--		7(NA 1-2)	7	7	--	--	--	--	
American	105	20/8/36	10(5)	9(4)	8(3)	7(3)	6(2)	5(2)		7	8	8	10	9	8	7	
American	155	30/12/36	10(5)	9(4)	8(3)	7/6(3/2)	6/5(2/2)	5/4(2/1)		7	8	8	10	9	8	7	

Firer Based To Hit DRM

Guns, SW Mortars, LATW, MG, & Vehicles

1. Fire in AFPh (+3 if in woods/building) +2
(for Gun/SW Mortar/Vehicle that did not move)
2. Pinned firer [MG attempt NA if Pinned] +2
3. Non-Qualified Use (Guns only) +2
4. Captured use +2
5. CX +1
6. Leadership [NA Guns/Vehicles] +X
7. Smoke (at ranges < 13 hexes) -2

Guns and Vehicles only

8. Covered Arc change per hexside; x2 if firer in woods/bldg
360° mount or T +1/+1/+1
ST +2/+1/+1
NT +3/+1/+1
9. Intensive Fire +2
10. Fire within hex (x2 if woods/building) +2
11. APCR/APDS at ranges ≥ 13 +1

LATW only

12. Avoiding Backblast in building; Fire in AFPh (each) +2

Vehicle only

13. Buttoned Up (BU) +1
14. Bounding (First) Fire [B(F)F]
In AFPh or BFF > 3 MP in LOS T/ST +4 NT +5
BFF 2.5 - 3 MP in LOS T/ST +5 NT +6
BFF ≤ 2 MP in LOS T/ST +6 NT +7
15. Stun +1
16. Motion/Non-Stopped Fire add Case 14 & lower die x2
additionally if on ITT, 1-hex range (2-hex range +1) +2

† Must be within normal range and not halved FP

@ SW use RED TH# only if subject to Captured or Inexperienced use

Ω MG CH is NA

‡ American and British 57L has Limited HE; use values in [brackets] for AP ammunition

© British 40L is AP only use 2/--/4 FP Column

VEHICLE HIT LOCATION

Turret Hit: TH DR white dr > color dr

Hull Hit: TH DR color dr ≥ white dr

Target Based To Hit DRM

17. TEM (NA for ATT) per TEM
18. Hindrance per Hindrance
19. FFNAM; FFMO (each) -1
20. Acquired Target (NA LATW/MG) -1 or -2
21. Target using hazardous movement (FFMO/FFNAM NA) -2
22. Gun/Vehicle Target Size:
vs. large/double-large target -1/-2
vs. small/double-small target +1/+2
23. Area Fire (firing at empty hex) +2
24. vs. Motion or Moving Vehicle
Motion or >3 MP in Firer's LOS +2
≤ 3 MP in Firer's LOS +3
≤ 1 MP in Firer's LOS +4
25. 1-hex range vs. stopped vehicle (2-hex range: -1) -2
[NA for ATT; non-ATR LATW; Motion/non-stopped Firer]

RED TO HIT NUMBERS

Use the red numbers on the To Hit chart (if different than the black #s) for:

- Area Target Type attempts
- pre-1944 American MA/Gun
- Non-Qualified/Captured use
- Russian/Italian/Allied Minor/Axis Minor MA/Gun

TO HIT CHART **Italian**

& Axis/Allied Minors



(shows Final DR needed)

Nationality	Gun Type	FP Column ITT/ATT/CH	Infantry Target Type [ITT]						Area Target Type [ATT]		Vehicle Target Type [ATT]					
			TH# (CH TH#)	range	1	2	3-6	7-12	13-18	19-24	TH# (CH on "2")	TH# (CH on "2")	range	1-6	7-12	13-18
All	MG†@Ω			--	--	--	--	--	--			range	10	9/8	6/5	--
All	ATR@	1/--/2		--	--	--	--	--	--	NA	NA		10	8	6	5
Allied Minor	46*	--/2/8		--	--	--	--	--	--	7(NA 1)	NA		--	--	--	--
Axis Minor	81*	--/8/30		--	--	--	--	--	--	7(NA 1-2)	7		--	--	--	--
Italian	37*	4/2/8		10(5)	9(4)	8(3)	6(2)	2(1)	1(1)	7	5		10	8	4	3
Italian	45*	--/2/8		--	--	--	--	--	--	7(NA 1)	7(NA 14-24)		--	--	--	--
Italian	47	4/2/8		10(5)	9(4)	8(3)	6(2)	4(1)	3(1)	7	7		10	8	6	5
Italian	75*	12/6/24		10(5)	9(4)	8(3)	6(2)	4(1)	3(1)	7	7		10	8	6	5
Italian	105	20/8/36		10(5)	9(4)	8(3)	6(2)	5(2)	4(1)	7	8		10	8	7	6

Firer Based To Hit DRM

Guns, SW Mortars, LATW, MG, & Vehicles

1. Fire in AFPh (+3 if in woods/building) +2
(for Gun/SW Mortar/Vehicle that did not move)
2. Pinned firer [MG attempt NA if Pinned] +2
3. Non-Qualified Use (Guns only) +2
4. Captured use +2
5. CX +1
6. Leadership [NA Guns/Vehicles] +X
7. Smoke (at ranges < 13 hexes) -2

Guns and Vehicles only

8. Covered Arc change per hexside; x2 if firer in woods/bldg
360° mount or T +1/+1/+1
ST +2/+1/+1
NT +3/+1/+1
9. Intensive Fire +2
10. Fire within hex (x2 if woods/building) +2
11. APCR/APDS at ranges ≥ 13 +1

LATW only

12. Avoiding Backblast in building; Fire in AFPh (each) +2

Vehicle only

13. Buttoned Up (BU) +1
14. Bounding (First) Fire [B(F)F]
In AFPh or BFF > 3 MP in LOS T/ST +4 NT +5
BFF 2.5 - 3 MP in LOS T/ST +5 NT +6
BFF ≤ 2 MP in LOS T/ST +6 NT +7
15. Stun +1
16. Motion/Non-Stopped Fire add Case 14 & lower die x2
additionally if on ITT, 1-hex range (2-hex range +1) +2

† Must be within normal range and not halved FP
 @ SW use RED TH# only if subject to Captured or Inexperienced use
 Ω MG CH is NA
 ‡ American and British 57L has Limited HE; use values in [brackets] for AP ammunition
 © British 40L is AP only use 2/--/4 FP Column

VEHICLE HIT LOCATION

Turret Hit: TH DR white dr > color dr
Hull Hit: TH DR color dr ≥ white dr

Target Based To Hit DRM

17. TEM (NA for ATT) per TEM
18. Hindrance per Hindrance
19. FFNAM; FFMO (each) -1
20. Acquired Target (NA LATW/MG) -1 or -2
21. Target using hazardous movement (FFMO/FFNAM NA) -2
22. Gun/Vehicle Target Size:
vs. large/double-large target -1/-2
vs. small/double-small target +1/+2
23. Area Fire (firing at empty hex) +2
24. vs. Motion or Moving Vehicle
Motion or >3 MP in Firer's LOS +2
≤ 3 MP in Firer's LOS +3
≤ 1 MP in Firer's LOS +4
25. 1-hex range vs. stopped vehicle (2-hex range: -1) -2
[NA for ATT; non-ATR LATW; Motion/non-stopped Firer]

RED TO HIT NUMBERS

Use the red numbers on the To Hit chart (if different than the black #s) for:

- Area Target Type attempts
- pre-1944 American MA/Gun
- Non-Qualified/Captured use
- Russian/Italian/Allied Minor/Axis Minor MA/Gun