

11. COMBAT. (V 12.09.09)

During a combat phase, the phasing player's units may attack adjacent enemy units and enemy units in the same hex as themselves. Under certain circumstances, the non-phasing player may also attack adjacent enemy units. Attacking is voluntary unless required by certain results on the MAIN COMBAT RESULTS TABLE (CRT).

Units are normally not required to attack, but if declared, an attack must either be made during the initial combat phase or delayed until the exploitation combat phase. **Exception: Hasty attacks (Rule ???) may not be delayed.**

11.A. GENERAL RESTRICTIONS ON COMBAT.

- 1) No unit may attack or be attacked more than once per phase unless required by a combat result.
- 2) No unit may attack into a hex or across a hexside prohibited to that unit.
- 3) All units defending in a hex must be attacked collectively, with their defence strengths combined. **Exception: If the defender chooses not to use some units in the defence, they do not count in any way but still suffer all combat results that do not add a "+#MP" marker. Note: Non defending units are affected by retreats and would get "+#MP" markers or suffer losses due to enemy ZOCs during the retreat.**
- 4) Each attack must be directed against the units occupying a single hex. Two or more enemy-occupied hexes may not be attacked as a single attack. **Exception: Dual ownership hexes as per Rule 11.R.3.d).**
- 5) Units stacked in the same hex may attack into different hexes, but each combat is resolved separately.
- 6) A single unit may not attack more than one adjacent hex.
- 7) A remnant (Rule ???) may not voluntarily attack *Note: Involuntary attacks are allowed.*
- 8) The phasing player decides the order of all attacks.
- 9) The stacking limit of the attacked hex limits the number of units in each adjacent hex that may attack the hex (see Rule 8.C.2).
- 10) Any attack at odds higher than 20:1 is resolved at 20:1. Attacks at greater than 13:1 odds, add +1 to the combat die for each odds level up to 20:1.
- 11) An attack at less than 1:4 (guaranteed) odds may not be made unless required because of a previous combat result (such as a CA or DL). In this case, a -2 die roll modifier is applied for each odds level less than 1:4.
- 12) The maximum strength the attacker is ever forced to lose is equal to double the defenders' face value defence strength. *Note: Disruption losses are in addition to this.*
- 13) If an attack is delayed until the exploitation combat phase, reserves may be added and also participate.
- 14) Reserves are the only units that may declare a **new** attack at the end of the exploitation phase (DLs force an attack).

11.B. COMBAT PROCEDURE.

The following procedure is followed for ground attacks:

- 1) At the end of a movement or exploitation phase, the phasing player shows all attacks to be made by placing a numbered "Combat" marker on the hexes to be attacked. If an attacking unit has a "+# MP" marker on itself, immediately increase the number of the marker by one.

(The COMBAT SHEETS should be used by the attacking player to keep track of each attack and the relevant information for it.) The attacker never has to declare the odds of his attacks, only that they are occurring. *Note: It will probably be more convenient and faster for players to mark their attacks as they move their units.*

- 2) Perform the enemy reaction phase and any related activities. The reacting player indicates which of his stacks will perform a hasty attack (Rule 11.C) against phasing units. The phasing player may then also declare hasty attacks against reacting units.
- 3) Perform half-strength defensive air support and full-strength offensive ground support missions.
- 4) Expend SPs for the attack (Rule 19.A.1.a). Supplied attacks require (1 SP per attacking stack plus the terrain, planned attack (Rule 11.K) and overstack costs, times the weather modifier) times the defenders ZOC modifier (Rule 5.A.1). *For example, an attack against a defending self-supporting division (partial ZOC) at U4 (reduced ZOC) would multiply the required attack SP expenditure by 1/4 the normal cost.*
- 5) Modify the strengths of all units attacking into an enemy-occupied hex due to terrain (including weather effects), supply, and support (Rule 9.A.3), as appropriate.
- 6) Total the attack strengths of all attacking units, add offensive ground support from air units (Rule ?), and/or naval gunfire support (Rule 39.A) to the total.
- 7) If appropriate, modify the defence strengths of all defending units due to supply conditions (Rule 17.B.1) and support (Rule 9.A.3). Total the defence strengths and add any air units' defensive ground support factors and/or naval gunfire support.
- 8) Compare the total attack strength to the total defence strength (attacker:defender) to obtain a combat ratio. Round this ratio down in favour of the defender to correspond to a simple odds ratio. Maintain one decimal place when calculating this ratio. **Exception: For all odds between 1:1 and 3:1 maintain .05.**
- 9) Calculate the armour effects modifier (Rule 11.J).
- 10) Calculate the special unit combat ability modifier (Rule 11.E).
- 11) Defender may attempt to retreat before combat (Rule 11.D).
- 12) After the odds ratio is calculated, the phasing player may attack immediately or, if it is the initial combat phase, may delay the attack until the exploitation combat phase. All declared attacks must be resolved in either the initial or the exploitation combat phases. *Note: If an attack is delayed, the defender has the option of immediately making a hasty attack against the entire attackers force.*
- 13) The phasing player decides if his unmoved units wish to make a planned attack (Rule 11.K) and increase the combat die modifier by expending SPs. The defender then decides whether to decrease the modified die roll by up to one less than the attacker increased it.
- 14) When an attack is to proceed, the attacker recalculates the odds if changes to the strengths were made, maintaining fractions to one decimal place. Four six-sided (two similarly and two differently coloured) and a ten-sided die are then rolled. *Note: One of the distinctive d6's is used to show the attackers losses on the RED TABLE and the other is used to show the defenders losses.* If the number on the ten-sided die is equal or less than the fractional (or

proportional between 1.5:1 to 3:1) part of the odds, the odds on the CRT are rounded up one column.

- 15) Shift the column due to weather modifiers.
- 16) The 2d6 result is adjusted by the main combat die modifier (terrain, "+# MP" markers, AEC, high odds, etc.) and cross-indexed with the final odds column to generate a combat result. *For example, if the odds were 3.4:1 and a 1, 2, 3, or 4 was rolled on the ten-sided die, the new odds would be 4:1. If the odds were 2.75:1 and a 1 through 5 was rolled (50% of the 0.5 difference between 2.5:1 and 3:1) on the ten-sided die, the new odds would be 3:1. The combat result affects the units involved in the combat; implement it immediately. Note: If the odds are less than 1:1 the procedure shown above is reversed. For example, if the odds are 1:2.8, there would be an 80% chance of them becoming 1:3.*
Note: Another d6 may be required if a surprise attack is being attempted by commandos and another d10 if AEC/A TEC is being used.
- 17) The defender retreats if required (Rule 11.Q.2).
- 18) Remove disruptions to both sides due to the RED TABLE results (Rule 11.L.2).
- 19) Place a "+# MP" marker equal to the difference of "+# MP" markers received by both sides due to combat results and the die rolls. *For example, if the attacker took casualties and the defender rolled higher on the RED Table, the difference is zero so neither places a marker on their units. If the attacker had taken casualties and rolled higher on the RED Table, he would place a "+2 MP" marker on all of his participating units.*
- 20) The attacker may advance if allowed (Rule 11.Q.1).

11.C. HASTY ATTACKS.

At the end of **any** movement phase, the **opposing** player may declare hasty attacks against any adjacent enemy units (or hexes not in enemy ZOCs). **Exception: If an attack is declared against a stack, it may not itself declare a hasty attack unless the attack is delayed.** Moving units always declare their attacks first. *For example: if during a players initial movement phase, he moves next to an enemy stack but does not attack it, the enemy may make a hasty attack against the moving units. If the enemy player moves a reacting stack next to an opposing stack, the reacting player could declare a hasty attack. If this was not done, the phasing players could declare a hasty attack against the reacting units.*

The following additional restrictions apply to hasty attacks:

- 1) No supply may be expended for the attack thus halving all attack strengths and also preventing planned attacks (Rule 11.K).
- 2) Air support and NGS is halved.
- 3) Units undergoing a hasty attack may retreat before combat if a success roll is made (Rule 11.D).
- 4) The hasty attack occurs in the next combat phase. The order of attacks is decided by the opposing player.
- 5) The hasty attack may not be voluntarily delayed. Units affected by combat results that force another attack in a later phase, are no longer performing a hasty attack.
- 6) Units advance after combat normally.

11.D. RETREAT BEFORE COMBAT.

All units can attempt to retreat before combat. When resolving an attack against a hex, use the procedure below:

- 1) The attacker declares the attack but does not fly air.
- 2) The defending player may then attempt to retreat before combat with any (or all) of his units.

- 3) Declare the hexes that the units are retreating to.
- 4) Each retreating unit must roll on the SUCCESS TABLE.
- 5) The regular retreat rules (Rule 11.Q.2) are followed.
- 6) Attacking units may not be reallocated or withheld from the attack, even if all defenders retreat before combat.
- 7) If defending units remain in the attacked hex, the attack is resolved. If all defending units retreat before combat, the attacking units may advance after combat normally.

Units may also choose to retreat before an overrun. The overrunning player must have the movement points available to attempt the overrun but does not have to expend them if the defender chooses to retreat before being overrun.

Table 1 Retreat Before Combat Results and Modifiers

RETREAT BEFORE COMBAT	
Results:	
D:	Disaster: No retreat. Place a "+ 6 MP" marker on the unit.
F*:	Complete Failure: No retreat. Place a "+ 4 MP" marker on the unit.
F:	Failure: No retreat. Place a "+ 2 MP" marker on the unit..
S:	Success: The attempt succeeds. Place an additional "+ 2 MP" marker on the unit over and above the normal movement cost.
S*:	Great Success: The attempt succeeds. If another unit in the hex attempts a retreat before combat, it gets a + 1 modifier.
Modifiers (Cumulative):	
-2	The unit is slower than an attacking unit of the same (or higher) zone class.
-1	Retreating unit has equal MPs to an attacking unit of the same zone class.
-1	For each "+ # MP" marker on a defending unit.
-1	Unit is retreating from a hex that was able to be examined fully.
-1	For each level of interdiction or harassment in the hex being retreated from.
-#	If bad terrain is retreated to, use the combat die modifier of the entered hex.
+ #	If bad terrain is retreated out of, use the combat die modifier of the hex left.
+ 1	For each "+ # MP" marker on the attacking stack.
+ 1	For each 2 MP that the retreating unit is faster than an attacking unit of the same zone class (or higher).
+ 1	Ski/sleigh unit in snow weather.
+ 1	Finnish, Norwegian, or Swedish ski unit in snow weather.
+ 1	Cavalry unit.
+ 2	Recon unit.
+ 2	Finnish, Swedish, or Norwegian units retreating into woods or forest.
+ 3	Commando unit.

11.E. SPECIAL UNIT COMBAT ABILITIES.

Certain units such as heavy armour (Rule ???), light infantry (Rule 15.M.4), mountain (Rule 15.M.7.a), and units with the woodsmanship ability (Rule 11.O.1) may use the SPECIAL UNIT COMBAT ABILITY TABLE. This applies when attacking or defending in terrain their ability applies to, as per Rule ???.

Compare the attackers REs of special ability units to the defenders REs of the same type of special ability units. If using this special ability, required losses (see Rule 11.O.1) may be incurred by the special ability units. If the defender has more REs of the special ability units than the attacker, use the reverse procedure.

Table 2 Special Unit Combat Ability Table

SPECIAL UNIT COMBAT ABILITY TABLE	
ATTACKERS SPECIAL UNIT RE RATIO	COMBAT EFFECTS
Triple REs	+2
Double REs	+1
More REs	Success Table Roll*
DEFENDERS SPECIAL UNIT RE RATIO	COMBAT EFFECTS
Triple REs	-2
Double REs	-1
More REs	Success Table Roll*

* S result: +1 (attacker) or -1 (defender) to combat die roll.
 F result: No effect.
 F* result: Eliminate one applicable attacking/defending strength point from a unit attempting the die roll with the applicable special ability.

Note 1) The maximum odds ratio is equal to double the larger force's RE/hvArm unit total.
 Note 2) Units eliminated due to a Success Table roll, force an odds recalculation.

11.F. TERRAIN EFFECTS ON COMBAT.

Terrain in the defender's hex and the terrain of the hexsides across which the attack is made may affect combat resolution. The combat effects column on the TERRAIN EFFECTS CHART summarizes these effects. References to "AEC" refer to armour capabilities, as per Rule 10.D.

"Terrain" is rated by its effect on units attacking into such a hex or across such a hexside. In general, terrain may affect combat by halving or quartering some or all of the attacking units or by applying modifications (such as -1) to the AEC modifier and to the main combat die roll. Die roll modifications (eg., -2) apply only to the 2d6 roll used to resolve the attack. "Air" refers to the effects on the TBF of all air units. "SPs" refer to the additional supply point expenditure required for a full strength attack to be made.

In the rare case where several hexes are attacked from a single hex, the terrain benefits for all attacked hexes are added together. For example, if two woods hexes were attacked (-2/-1), the final modifier would be -4/-2.

11.F.1. TERRAIN EFFECTS ON AEC.

Certain types of terrain and fortifications are listed on the TERRAIN EFFECTS CHART as -1 or more AEC depending on the type of terrain. Subtractions from the positive AECA or negative AECD die modifiers due to terrain may never reduce the modifier to the other side of 0. ATEC modifiers are calculated after all terrain modifiers have been accounted for. For example, a German Panzer Division (3 REs AECA is attacking a Soviet Tank Corps (3 REs ATEC) in a woods hex (-2, -1 AEC). This gives an AECA to ATEC modifier of 0, an AEC terrain modifier of -1 (ignored since the AECA to ATEC modifier is already zero), and a die modifier of -2, for a net -2.

If a unit is attacking a hex (or across a hexside) that modifies the strength of motorized units, modify any AEC that the unit uses by the same ratio. For example, two panzer divisions (6 REs of AEC) attacking a forest hex (c/m and artillery halved) across a minor river hexside (non-artillery halved) would only be worth 1 1/2 REs of AEC. Any unit defending in a hex that modifies the strength of motorized units has its AECD (but not ATEC) effects modified by the same ratio. Note: If an attack is made from several hexes that are on different sides of a river, the AEC effects of the river apply only to the units attacking across the river hexside.

Motorized infantry (see the UIC) attacking at full strength into terrain that normally halves c/m units is no longer considered neutral for AEC conversions (Rule ?).

Note: Units attacking across a hexside suffer the same stacking and combat penalties as if they were attacking a similar terrain hex. For example, a stack of units attacking across a mountain hexside would only be able to attack with units equal to the normal limit on mountain stacking.

11.F.2. EFFECTS ON SPECIAL UNIT COMBAT ABILITY.

If units are attacking a hex (or across a hexside) that modifies their strength, also modify any REs (or number of units) using their special unit combat ability uses by the same ratio. Note: This includes heavy armour units.

11.F.3. TERRAIN EFFECTS OF MOUNTAINS ON ARMOUR.

Mountain terrain halves all units with the armour symbol. This is besides the normal halving of all units on the attack. For example, a 4-10 Mech X would be worth 1 attacking a unit in a mountain hex and 2 if defending in a mountain hex.

11.F.4. TERRAIN EFFECTS OF FORTS AND CITIES.

If a defender is in a fortification or a major city and combat result of CA or DL occur, the defender may convert the main combat die result to a ME if he so wishes. He loses this option in forts if an airdrop was also made in the hex. If the airdrop was made in a major city, the defender may convert the result to a ME for all attacking units except the parachute unit, which must be counter-attacked normally or suffer the deadlock itself (and attack in the next combat phase). Note: Even if the result is converted to a ME, both sides must still first suffer any appropriate results from the Regimental Equivalent Disruption Table.

11.G. ZERO STRENGTH UNITS.

A unit with an attack strength of 0 may not attack by itself. It may participate in an attack made by other units. It is affected by all combat (and advance after combat) results.

11.H. MULTIPLE CONTINGENT/COUNTRY ATTACKS.

If units from two or more contingents (Rule 58.A) or countries participate in combat, use the MULTIPLE CONTINGENT/COUNTRY EFFECTS TABLE to modify the main CRT die roll.

If units of two or more counties or contingents are participating in a defence then the die roll modifiers are reversed.

Table 3 Multiple Contingent/Country Effects Table

MULTIPLE CONTINGENT/COUNTRY EFFECTS TABLE	
DESCRIPTION	COMBAT EFFECT
1-3 1/2 REs of a different contingent.	NE
4+ REs of a different contingent	-2
4+ REs of a friendly country within a contingent.	-1
7+ REs of a different Commonwealth country (or countries).	-1

Note: 1) Combat effects are reversed if defending.
 2) The Commonwealth modifier takes precedence over the friendly country modifier.

11.I. ARMOUR EFFECTS MODIFIERS.

Calculate armour effects modifiers (Rule 10.C) by comparing the total attacking armour REs to the defending ATEC and/or AECD REs as shown below on the ARMOUR EFFECTS TABLE. Terrain and weather are then considered to give a final modifier to the combat die roll. For example, 5.1:1 AEC:ATEC would give a +3 AEC modifier to the main combat die roll with a 50% chance of a +4.

Armour effects are calculated by the following method and in the listed order:

- 1) Total all REs of AECA (plus conversions).
- 2) Total all REs of ATEC (plus conversions).

Table 4 AEC/ATEC Summary

AEC/ATEC SUMMARY	
CONVERSION RATIOS	
ATEC	Converts all neutral types on a 1:1 ratio.
AECA/D	Converts all neutral types excepting AA, AT, and non-c/m artillery.
UNIT SIZE	
Brigades, regiments, cadres, half-cadres, battalions	Convert equal REs
German Panzer/panzer grenadier division of strength 14+	Convert 2 REs
All other tank/mechanized divisions.	Convert 1 RE
UNIT TYPES (after certain dates)	
German assault guns and certain panzer units.	ATEC x 2
Fortified/entrenched Soviet AT/German hvAA (with 3 x inf. REs).	ATEC x 2
INTRINSIC ATEC	
Unsupported Divisions	No ATEC
Self-supporting Divisions	¼ RE ATEC (no ATEC until 1942)
German/Allied 1944 self-supporting divisions.	½ RE ATEC (are also ATEC neutral)
Support Divisions	½ RE ATEC (¼ RE ATEC until 1942)
German/Allied 1944 support divisions.	1 RE ATEC (are also ATEC neutral)

- 3) Compare the REs of AECA to the REs of ATEC to arrive at a final ratio. The AECA:ATEC ratio may not be larger than twice the number of attacking AECA REs. If less than 1:1 got to step 4. If greater than 1:1, find the appropriate die modifier on the ARMOUR/ARTILLERY EFFECTS CHART and go to step 5. For example, one tank brigade (1 RE AECA) is attacking a non-support division (¼ RE ATEC) resulting in a 4:1 AECA:ATEC ratio. As two times the attacking REs of AECA only gives 2 REs, the maximum ratio would be 2:1 for a +2 die modifier.
- 4) Total all REs of AECD (plus conversions)(Table 14). Compare the attacking REs of AECA to the defending REs of AECD and calculate the ratio. AECD may never make the ratio less than the inverse of two times the defending REs of AECD. Find the appropriate die roll modifier on the ARMOUR/ARTILLERY EFFECTS CHART and make it a negative modifier. If the AECA to AECD ratio is not less than 1-1, there is no AECD modifier.
- 5) Subtract the weather and terrain effects modifiers from the AECA or AECD modifiers. These subtractions move both positive and negative modifiers closer to 0. They may never reduce or increase it past that level.
- 6) The attacking and then the defending player declares if they are not using AEC, ATEC, or other die roll modifying units. This choice eliminates the need for required losses by those units. Return to step 1 and recalculate armour effects if necessary.

Table 5 Armour Effects Table

ARMOUR EFFECTS TABLE			
AEC:ATEC	DIE MODIFIER	AEC:ATEC	DIE MODIFIER
1 - 1	+ 0	5.3 - 1	+ 4.6
1.1 - 1	+ .2	5.5 - 1	+ 4.7
1.2 - 1	+ .4	5.7 - 1	+ 4.8
1.3 - 1	+ .6	5.8 - 1	+ 4.9
1.4 - 1	+ .8	6 - 1	+ 5
1.5 - 1	+ 1	6.2 - 1	+ 5.1
1.6 - 1	+ 1.2	6.4 - 1	+ 5.2
1.7 - 1	+ 1.4	6.6 - 1	+ 5.3
1.8 - 1	+ 1.6	6.8 - 1	+ 5.4
1.9 - 1	+ 1.8	7 - 1	+ 5.5
2 - 1	+ 2	7.2 - 1	+ 5.6
2.1 - 1	+ 2.1	7.5 - 1	+ 5.7
2.2 - 1	+ 2.2	7.8 - 1	+ 5.8
2.3 - 1	+ 2.3	8 - 1	+ 5.9
2.4 - 1	+ 2.4	8.3 - 1	+ 6
2.6 - 1	+ 2.5	8.7 - 1	+ 6.1
2.7 - 1	+ 2.6	9 - 1	+ 6.2
2.8 - 1	+ 2.7	9.5 - 1	+ 6.3
2.9 - 1	+ 2.8	10 - 1	+ 6.4
3 - 1	+ 2.9	10.6 - 1	+ 6.5
3.1 - 1	+ 3	11.2 - 1	+ 6.6
3.2 - 1	+ 3.1	11.9 - 1	+ 6.7
3.4 - 1	+ 3.2	12.6 - 1	+ 6.8
3.5 - 1	+ 3.3	13.2 - 1	+ 6.9
3.6 - 1	+ 3.4	14 - 1	+ 7
3.8 - 1	+ 3.5	14.8 - 1	+ 7.1
3.9 - 1	+ 3.6	15.6 - 1	+ 7.2
4 - 1	+ 3.7	16.4 - 1	+ 7.3
4.1 - 1	+ 3.8	17.3 - 1	+ 7.4
4.3 - 1	+ 3.9	18.2 - 1	+ 7.5
4.4 - 1	+ 4	19.1 - 1	+ 7.6
4.6 - 1	+ 4.1	20 - 1	+ 7.7
4.7 - 1	+ 4.2	21 - 1	+ 7.8
4.9 - 1	+ 4.3	22 - 1	+ 7.9
5 - 1	+ 4.4	23 - 1	+ 8
5.2 - 1	+ 4.5		

Note: Maximum AECA/D odds ratio is equal to double the attacking REs of AECA.

Example 1: A 12-10 panzer division (3 REs AECA), two infantry divisions, and three c/m artillery regiments are attacking. Since c/m artillery units are AECA neutral they may be converted to AECA. As the panzer division may only convert 1 RE of neutral types to AECA, the extra 2 artillery regiments are not counted. The total REs of AECA would be 4.

Example 2: One Soviet light tank cadre (1 RE) and one motorized infantry division (3 REs) are defending. As the light tank unit is ½ AECD it may convert ½ RE of motorized infantry to AECD giving a total of 1 RE of AECD. The light tank is ½ ATEC and may convert an equal amount of motorized infantry to ATEC. Total ATEC is ½ RE for the light tank plus ½ RE of converted motorized infantry plus ½ RE intrinsic ATEC for the division. This gives a combined total of 1.5 REs of ATEC.

Example 3: A German 7-10 panzer grenadier division (3 REs) is attacking. As the panzer grenadier is ½ AEC, it will be worth 3 REs x ½ plus 1 RE x ½ (conversion) for a total of 2 REs AEC. Note: This unit is effective by converting its own neutral REs.

Example 4: Four German panzer divisions, two motorized divisions, one panzer grenadier division (all with a strength of less than 13), and one infantry division are attacking. Panzer divisions count full AECA, giving a total of 12 REs of AECA. Panzer grenadiers count ½ AECA giving a total of 1 ½ REs of AECA and 1 ½ REs of neutral. Since motorized divisions are neutral and as each panzer division

counts as a regiment for conversion purposes, four of the 7 1/2 neutral REs are converted to full AECA. The panzer grenadier converts 1/2 RE. The infantry division does not count. The total REs of AECA is 12+4+1.5+5 equalling 18.

The defender has one AT regiment, three artillery regiments, and one support infantry division entrenched (this late in the war the AT is counted as double ATEC) to start and has one tank division enter the hex in the reaction move. The AT regiment counts as 2 REs of ATEC and may convert the same amount of artillery for another 2 REs giving a total of 4 REs of ATEC. When the tank division enters the hex, it converts 1 more RE of artillery to full ATEC and counts as 3 REs of ATEC itself for another 4 REs. The one supported infantry division counts as 1/2 RE of ATEC. Total ATEC is thus 8.5 REs. The AECA:ATEC ratio is thus 18 to 8.5 giving 2.11 to 1 odds (rounded down to 2.1 to 1). The armour effects modifier is +1 with an 80% chance of a +2.

Example 5: One German panzer regiment and one motorized infantry division are defending in a forest hex against an attack by units with no AECA. The panzer regiment gives a total of 1 RE of AECD. The motorized infantry division has no AECD but may be converted on a 1:1 basis. The 1 RE of AECD from the regiment may thus convert one RE of the motorized infantry giving a total of 2 REs of AECD. The ratio is 0:2 which becomes 1:4 as the ration may not be less than the inverse of two times the defending REs of AECD. A 1:4 ratio gives a modifier of -3 to the die roll. The forest hex reduces the modifier by 3 down to 0. Note: Further terrain modifiers would not change the armour modifier to a positive number.

11.J. PLANNED ATTACKS & ARTILLERY EFFECTS.

The phasing player may use extra supply to use artillery effects (Rule ???) during the initial or exploitation combat phases. A planned attack must be declared before the combat occurs. The following restrictions apply:

- 1) A maximum of 1 RE per attacking stack may have moved in the preceding movement phase and still participate in the attack. *For example, a 3-hex attack may have 1 RE moved into each hex but could not add a 3-RE unit to one hex. Note: A delayed attack will still qualify as a planned attack even if too many REs had moved in the initial movement phase as long as no more than 1 RE per stack was added to the attack in the exploitation phase.*
- 2) During the initial combat phase half the original SP cost must be expended for each +1 increase in the main combat die roll to occur. *For example, if an attack resulting in odds of 2.3:1 (with 1 RE of attacking artillery) cost 10 SPs, the odds could become 2.3:1 +1 if an extra 5 SPs were expended, for a total of 15 SPs.*
- 3) During the exploitation combat phase, halve the attackers AEC.

Artillery effects (AE) are calculated on a ratio basis by comparing the attackers AE to the defenders AE using regimental equivalents. Units use the following RE sizes:

- 1) Artillery units count their RE size.
- 2) Support divisions count as 1/2 their RE size.
- 3) Self supported units count as 1/4 their RE size.
- 4) Half the AE value of the attacker in the exploitation phase.

The maximum die roll modifier is equal to the REs of artillery units. *Note: Do not count the REs of non-artillery units.*

For each +1 die roll modifier (rounded up) received due to AE, one artillery unit may not advance after combat.

To get the final armour/artillery modifier, add both together. For example, if AEC modified the odds by +3.2 and artillery modified them by +1.4, the final die modifier would be +4.6.

11.K. GROUND COMBAT RESULTS.

Two combat results tables are used during all combats as per Rule 11.B. The 2d6 result is compared to the odds column on the MAIN COMBAT RESULTS TABLE (CRT). The attacker's and defender's d6 die rolls are modified and the effects are shown on the REGIMENTAL EQUIVALENT DISRUPTION TABLE (RED TABLE). These combat tables may cause the loss (or disruption) of strength points.

Results from the two tables may not be combined before losses are taken unless no retreat is required as per Rule 11. *For example, if a player loses 10 strength points due to a large exchange result and has another 6 points disrupted due to the RED TABLE, no retreat is required so losses could be combined. Two 8-6 infantry divisions could be flipped to 3-6 cadres to fulfill these losses. The net result would be 5 points of losses from one division plus three free for forming the cadre, 2 points from the second division, 3 disrupted from the second division, and 3 free disruptions for forming the cadre. If a retreat had to be made through enemy ZOCs, the RED losses would not be taken until retreat losses were accounted for. In this case, the second division would have 3 points of casualties plus 3 points from forming a cadre that could be taken as retreat losses. If 2 points of casualties were caused by a retreat, this would leave 1 point to be disrupted (plus 3 for forming a cadre) so total losses would be 9 points of casualties and 1 point disrupted. Forming cadres would have absorbed 3 point of casualties and 3 points of disruptions.*

11.K.1. MAIN GROUND COMBAT RESULTS TABLE.

Numbers to the left of a combat definition affect the attacking units and numbers to the right of a combat definition affect the defending units.

- a) **1 (Full Value.)** This result requires the full value of losses to be taken.
- b) **1/2 (Half Value.)** This result requires half the full value of losses to be taken.
- c) **: (Regimental Equivalent Exchange) (REX).** Both sides must lose one strength point per RE of the smallest side (usually the defender) involved in the attack. The combat result is carried out immediately.
- d) **CA (Counterattack.)** Current defending units must immediately (*i.e.*, before any other combat is resolved but after all RED TABLE results are applied) attack any hex occupied by enemy units. **Exception: Fortifications convert CA results to a 1X1/2 result.**
 - i) All air and naval support used in the initial attack is returned before the counterattack occurs. New NGS and air support missions may be performed at this time in the same manner as if it was a hasty attack (Rule ?).
 - ii) No supply must be expended to make a counterattack unless the player wishes to spend extra to make a planned attack (Rule ???). *Note: Only the extra supply needed to modify the roll has to be expended in this situation.*
 - iii) All previous "+# MP" markers (such as those from the RED Table die roll or previous combat results) affect a combat forced by a CA or DL. *Note: Increase the "+# MP" marker on the counterattacking units before the attack is made as normal.*
 - iv) All units in the chosen hex must be attacked. New odds and modifiers will be calculated for this attack, with the new defending units assumed to be in clear terrain. River modifiers do not apply (even if another CA result occurs).
- v) **Exception: If the counterattacked units did not participate in the original attack, all terrain penalties would apply.** *For example, if three stacks of units are attacking and a fourth unit is adjacent to the defender but not participating, the defender could choose to counterattack the fourth stack but suffers normal terrain modifiers.*

- vi) *Note: Counterattacking units may advance as per the CRT.*
- vii) Units participating in a counterattack even as a defender may not be used in any future attacks even if the original attacker had them committed to do so. Any attacks they were committed to, must still be made, however. *For example, Three out of five units in a stack attack one hex and the other two units attack another hex with other units. If the attack with three units resulted in a counterattack, the second attack would have to be made without the aid of the two units in the counterattacked stack. If no other hex was involved, the second attack would be cancelled.*
- e) **D (Disrupted.)** The affected players must disrupt strength points equal to defenders (or the lowest combat strength) side. If in either a fortification or city hex (that affects combat in any way), or a dual ownership hex, the defender halves the required disruption losses and eliminates them instead. *Note: This applies only to the MAIN COMBAT TABLE disruption result. Surviving defending units suffer a "DR".*
- f) **DL (Deadlock.)** The attack is temporarily inconclusive but is continuing and may escalate. Mark all attacking units with a "DL" marker if the combat occurs in the initial combat phase; mark the defending units with a "DL" marker if the combat occurs in the exploitation combat phase. **Exception: In both phases, if the defending units are in a fortification, the DL becomes a 1X½ result.**
- i) Any phasing unit under a "DL" marker must attack an enemy unit during the next combat phase. New forces (i.e., reserves, air support or naval support) may be freely added to this attack. *Note: Units under "DL" markers may move normally but only if each hex entered is adjacent to an enemy unit or to conduct an overrun in an adjacent hex.*
- ii) Supply expenditure is recalculated and the proper SPs must be spent again to ensure a normal strength attack. This supply may come out of the fronts supply pools even if the units are isolated.
- g) **DR (Defender Retreats.)** All affected units must retreat (Rule 11.Q.2) if the odds are 3:1 or higher. If lower, the DR may be converted into an additional ½ (REX) result. The defender's strength is not counted in any future combats this impulse if it retreats onto another hex also being attacked. If a hex is attacked during the exploitation combat phase, all units that retreated onto that hex earlier in the turn are counted at half strength when totalling the defence factors. *Note: This includes delayed attacks and deadlock attacks as well as normal exploitation combats.* All attacks that call for a retreat result incur the above results besides any other results called for.
- h) **E (Elimination.)** Strength points equal to the defenders face value strength are eliminated. Units remaining in the hex also suffer a "DR" result if they take higher losses.
- i) **L (Large Exchange.)** The affected players lose strength points equal to the largest single offensive or defensive strength point used in the combat. Roll an additional d6; on a 1-3 result, use the attackers largest attack strength; on a 4-6 result, use the defenders largest defence strength. The maximum strength points that may be lost with this result are equal to the total strength points in the weaker stack. Neither player must retreat.
- j) **ME (Minimal Effects.)** A ME result is suffered. Both sides suffer a ¼ REX result and get a -2 die modifier to the RED Table.
- k) **OR (Overrun.)** The player performing an immediate overrun (Rule ?) is successful and may continue moving. If an overrun was attempted, place "Expended # MP" and "ZOC" markers in the defenders hex. During a normal

combat, the defending units suffer an "E1" result. In either case the attacker gets a -1 die modifier to the RED Table.

- k) **X (Exchange.)** The affected players must lose strength points equal to the side with the lower combat strength (or the defender if both sides are equal). Remaining defending units also suffer a "DR" result if their remaining combat strength is less than the attackers.

Combat Example: A German 8-6, 7-6 and 6-6 infantry division are in three different hexes and are attacking a Soviet 5-6 rifle division. The attacker has 4 factors of offensive air support and the defender has 3 factors of defensive air support and 2 factors of naval gunfire support (NGS). The combat ratio is 2.5:1 (25:10) (3 SP are expended since it is a three hex attack) and it is the initial Axis combat phase. A DL (deadlock) result is rolled delaying the attack. Redo the combat during the exploitation combat phase. The attacker may add reserves to the battle and so stacks a 4-10 motorized infantry regiment with the 6-6. All air and naval factors previously counted are ignored since they have been returned to their airbases. (Note: If the battle had been voluntarily delayed, the air factors would still be counted and no extra SP would be expended.) No new air or naval factors are added. The odds are now 5:1 (25:5) (3 SP are expended again) and another DL is rolled for the battle. No losses occur on either side due to the RED Table die rolls. The 6-6 advances into the hex and forces a dual ownership situation with a "+# MP" marker on it. The Soviet player must attack the 6-6 in the dual ownership hex during the Soviet initial combat phase. Extra forces may be added to the attack from the same or adjacent hexes. He adds two 4-6 rifle divisions to an adjacent hex and the same to another adjacent hex to assist in the attack. He also places another 5-6 rifle division in the dual ownership hex. This gives a total of 26 attack factors. Four points of GS are added so the final odds are 30-6 or 5:1 (3 SP expenditure halved to 1½ SP due to the "+# MP" marker) -1 (due to the -2 of the woods and +1 for the "+# MP" marker). A CA (counterattack) result is achieved (with no RED Table losses) and the German units must immediately (before any other attacks are rolled for) attack one of the adjacent enemy units. Because of the dual ownership restrictions, he may only attack the two 5-6's in the same hex (as he cannot launch spoiling attacks). The German flies a ground support air mission and adds 4 points to the attack. The odds are 1:1 (10:10) (no supply is expended) with no die roll modifier as the terrain is counted as clear. A CA result (no RED Table losses) is rolled forcing the Soviet to immediately attack him back. The Soviet adds 2 points of GS so the odds are 2:1 (12:6) (no supply is expended) since only the two 5-6's may participate, with no die roll modifier as the terrain is counted as clear. An ME is rolled ending the attacks. Note: This example assumes that all combats had no losses due to the RED table, a very unlikely result.

11.K.2. REGIMENTAL EQUIVALENT DISRUPTION (RED).

Numbers on this table represent the level of disruption that the attacker or defender must take.

If an RED result occurs, the affected side must disrupt one point per RE that the defender has in the hex.

The possible RED Table results are listed below. *Note: All die roll modifiers on the RED Table are cumulative.*

- a) ½ (Half RED.) The combat result requires that a half RED be taken.
- b) 1 (Full RED.) A full RED must be taken.
- c) 1½ (One and a Half RED.) One and a half times a full RED must be taken.
- d) 2 (Double RED.) Take double the full RED losses.

Table 6 Regimental Equivalent Disruption Table

REGIMENTAL EQUIVALENT DISRUPTION		
EFFECTS ON ATTACKER	DIE (d6)	EFFECTS ON DEFENDER
No losses	1	No losses
No losses	2	No losses
½ RED	3	No losses
½ RED	4	½ RED
1 RED	5	½ RED
1 RED	6	½ RED
1 ½ RED	7	1 RED
1 ½ RED	8	1 RED
2 RED	10	1 RED

Note: 1) The player with the highest unmodified die roll gets a "+1 MP" marker on all involved units.

2) Tie unmodified die roll; attacker suffers an additional ¼ (REX) result.

Modifiers to the Defenders RE Total:

- + # Add one for each negative main combat die modifier up to a maximum of +1 per 3 REs (rounded up) that the defender initially had in the hex.
- X 2 If in terrain (but not across hexsides) that halves attacking infantry.
- X 2 If a political police unit is involved in the combat.
- X 2 If the defending RE is an SS or NKVD unit.
- X 2 Immediate overrun attack does not achieve an "OR" result.
- X 4 If in terrain that quarters attacking infantry.

Die Roll Modifiers for both sides:

- +1 If defender is in a partial or full hex city.
- +1 If a "Deadlock" marker caused the combat.
- +1 If defender is in a Sov/Ger city (but not town).
- +1 If there are 3+ REs of SS units involved in the combat.
- +1 For each even numbered "+ # MP" marker on friendly units.
- +1 If an NKVD political police unit is attacking.
- +2 If an NKVD political police unit is defending.
- +2 If defender is in a fortified area or behind a fortified hexside.
- 1 If part of the opposing force is U1 or higher.
- 1 If all of the opposing force is supply isolated.

Attacker Die Roll Modifiers:

- +? Add the final negative combat modifier (to increase the die roll).
- +1 Amphibious assault vs. an initially occupied hex (before reaction move).
- +1 If defender is in a fort or unimproved fortress.
- +3 If defender is in a fortified zone, port fortification, or fortress.
- +2 If an immediate overrun combat did not clear the defender's hex or did so because the defender retreated. Note that the attacker gets a "DL" marker.
- 1 If an "OR" combat result was achieved on the Main CRT.
- 1 If attacker makes a Prepared Attack.

Defender Die Roll Modifiers:

- +1 If the final combat die modifier is positive.
- 1 If the final combat die modifier is negative.
- 1 If defender is in a fort, fortified area, or attack is across a fortified hexside.
- 2 If defender is in a fortified zone, port fortification, or fortress.

Note: 1) Units which are not halved/quartered by the defenders terrain count double value for fulfilling RED results.
 2) All terrain (but not amphibious/airborne assault or naval transport) modifiers and attackers special abilities must be accounted for.
 3) All "D" results must be taken as ½ casualties if the defender is in a fortification, is combat/supply isolated, or if a political police unit is involved in the combat.

11.L. COMBAT LOSSES.

Calculate all combat loss requirements using the printed combat strengths of the involved units. Losses based on attacking units use the attack strength. Losses based on the defender's units use the defence strength.

More losses may not be taken than required other than from a single unit. For example, if four points were to be lost, a player could

not take 1-point out of each of four units and thus remove them from the map. He could however, remove a 8-point unit rather than a 4-point unit.

Terrain, supply, and support (Rule 9.A) may modify strengths for combat resolution, but these factors are not considered for losses unless certain special abilities are used.

All losses are absorbed using the replacement cost of the unit. For example, if the attacker was required to take 2 points of casualties, he could fulfill this by taking a 2-1-10 II (1½ RPs) and a 0-1-10 II (½ RP). Casualties are rounded down and disruption results are rounded up to the nearest half strength point. For example, if a defender received a ½E½D result and had defence strength of 5, he would eliminate 2½ RPs of units and disrupt 3 RPs of units. Note: Entire units (including the cadre) may always be disrupted rather than immediately adding back the excess RPs (Rule 11.M.6). Combined losses suffer the worst effects first.

Note: A unit may combine losses from the Main Combat Table and the RED Table before suffering casualties if there is either no retreat or a safe retreat route. For example, If two 8-6 divisions (3-6 cadres) are attacking two 3-6 divisions and a 1L1 is the combat result (extra die roll indicates that the defenders largest unit is used) with an additional ½ RED result for the attacker, one 3-6 would be eliminated as the largest unit involved in the defence is worth 3 strength points. The attacker would lose 3 points for the same reason. He would also then have to lose 3 points due to the ½ RED result as the two 3-6 divisions have 6 REs. This is a combined loss of 6 strength points. Because the 8-6 can form a cadre he would take the 3 strength point exchange first and then lose 3 additional points due to the disruption. Only 2 of these points would actually be disrupted. The other 1 point would not be taken as a cadre is formed when 5 points are lost. The unit could actually take another 2 points of losses due to its ability to form cadre (Rule ???) but these are wasted in this case.

11.L.1. CASUALTIES.

Combat casualties generate special replacements as per Rule 52.F. Note: Any time a unit is removed from the map due to taking combat casualties, its RE size counts towards disruption losses as well (see below).

11.L.2. DISRUPTIONS.

When fulfilling disruption losses, a unit's disruption value is equal to its RE size (if removed from the map) plus its combat strength. For example, a 2-6 regiment would count as 3 points if removed from the map; a 7-6 division would count as 10 points.

A player may always choose to halve his disruption losses and take them as casualties. For example, a 5-6 division that took 1 RE of disruptions, could either flip to its 2-6 cadre, disrupt 1 strength point (which would be added to the pool during the replacement phase) and add 2 back to the pool as excess losses (which could be used in the same phase) or could convert its 1 point of disruption to ½ point of casualties and remove them directly from the replacement pool as an immediate RP expenditure (Rule 11.M.8).

A unit may choose to be either disrupted at full strength or be reduced to a cadre/remnant. For example, a defending 7-6 division could be disrupted at full strength and count as 10 points or could flip to a 3-6 cadre (counting 7 points).

A unit may not be disrupted more than once due to a single combat roll. Note: Multiple results due to DLs, CAs, or hasty attacks count as new rolls.

Disrupted units are placed on the turn track as per the ORDER OF LOSS PLACEMENT TABLE. If the unit forms a cadre/remnant instead, all of the removed strength points are added back to the appropriate replacement pool.

A unit with no safe retreat path that suffers a disruption, first does its retreat (if required) and then takes its disruption casualties. If it would still have no safe retreat path, it must convert its disruption losses to casualties, as described above. Note: A safe retreat path is one causing no extra losses.

The maximum amount of disruption losses required to be converted to half casualties is equal to the modified strength

of the enemy units in the hex they must retreat through. For example, a 2-10 AA III (unsupported) cutting off an enemy stack would only require 1 strength point of disrupted units to be converted to casualties even if three 3-6 XX are retreating.

11.L.3. SPECIAL ABILITY EFFECTS ON RE BASED LOSSES.

Combat losses may be affected by the special ability of the attacking units. This only occurs when the unit modifies the halving or quartering of the terrain. For example, if an REX result occurred in a mountain hex, 3 short documentary REs of defenders would cause 6 strength points of non-mountain unit casualties (since their REs are halved in attack) but only 3 strength points of mountain unit casualties since they are not halved in the attack.

11.L.4. ORDER OF CASUALTIES.

All combat losses are taken in order as shown on the ORDER OF LOSS PLACEMENT TABLE.

Table 7 Order of Loss Placement Table

ORDER OF LOSS PLACEMENT TABLE	
ORDER AND TYPE OF LOSSES	TURN TRACK PLACEMENT
1) Main CRT casualties and required losses.	All: Current turn losses
2) Main CRT disruptions.	RP: One turn Unit: Four turns
3) RED Table disruptions.	RP: One turn Unit: Four turns

Note: 1) Isolated losses must be placed in the home countries isolated pool.
2) Placement defines how long it takes before a unit may be rebuilt.
3) All RPs in a replacement pool that is isolated when its last city is captured are taken as eliminated isolated casualties.

11.L.5. AIR AND NAVAL UNITS.

Air units and naval gunfire may aid in combat. However, the bombing strengths of air units and the gunnery strengths of naval units are not included when determining losses. Air and naval units are never eliminated due to ground combat.

11.L.6. EXCESS LOSSES.

When casualties are taken in non-isolated units, excess losses are added directly back into the replacement pools. For example, if a 3-5 Security Division attacks a 2-6 Infantry Brigade and an exchange is rolled, the 2-6 is eliminated with 2 factors counting for special replacements. The 3-5 is also eliminated with the two exchanged factors counting for special replacements and the one extra factor being directly added to the replacement pool.

If in doubt as to how many strength points to add back to the replacement pool, use the following formula: ((Attack Strength - cadre attack strength) + (defence strength - cadre defence strength) - (necessary casualties x 2)) x 1/2 = replacements added directly to the pool. If a unit is being reduced to a remnant, substitute "remnant strength" in the formula for "cadre strength."

11.L.7. EFFECTS OF CADRES/REMNANTS ON LOSSES.

When a unit forms a cadre/remnant (Rule 11.N), only the difference between its current and reduced strength is counted for special replacements or added back to the replacement pool. For example, if an 8-6 infantry division takes seven strength points of casualties and forms a 3-6 cadre, only five points would count for special replacements.

11.L.8. IMMEDIATE REPLACEMENT POINT EXPENDITURE.

Immediately after a combat situation is resolved but before casualties are taken, units in general supply may use RPs in a pool to fulfill losses. Several restrictions apply:

- a) It may not be used during a movement phase for overruns.
- b) It may not be used by Soviet units.
- c) It may not be used for RED Table losses.
- d) RPs may not be used to fulfill required losses for special combat ability units. Note: AEC is a special combat ability.
- e) RPs may never be used to fulfill disruption results.
- f) Any units in a stack using immediate RP expenditure get a "+1 MP" marker placed on them.
- g) No unit may use immediate RP expenditure more than once per combat phase.
- h) No unit may use immediate RP expenditure and also take losses as part of the same combat result. Note: A new combat roll due to a CA result is a new combat result for this purpose.
- i) Fragile units may not use immediate RP expenditure.
- j) Limited RP units count 1 RE of replacement per RP taken.

Two options for immediate RP expenditure are available:

- a) If the stack has a full ZOC, 2 RPs may be used by any unit or combination of units.
- b) If the stack has a partial ZOC, 1 RP may be used.

Count special replacements normally for these losses. For example, if an 7-6 infantry division takes two strength points of casualties, either the 7-6 could be flipped to a 3-6 cadre and three RPs added directly to the RP pool or two infantry RPs would be removed from the pool to keep the 7-6 at full strength. In either case, two strength points would be counted for special replacements. If a CA result had occurred, the 7-6 could either take 2 RPs from the pool before the CA took place or after the CA's new combat result occurs. It could not take 2 RPs, stay at full strength, and take another 2 RPs after the CA occurred.

The player may choose what type of RPs (inf, arm, or art) he wishes to lose if the designated unit may be rebuilt using the chosen RP type. For example, a 16-10 panzer division may lose up to 4 RPs of arm or inf in any combination and stay at full strength as long as there are no required losses.

11.L.9. MIXED REPLACEMENT UNITS.

If a unit needing armour, artillery, or infantry RPs to be rebuilt, takes losses, the following rules apply:

- a) If an armour unit suffers losses, 50% or the loss counts as armour RPs, 30% as infantry RPs, and 20% as artillery RPs.
- b) If a mechanized unit suffers losses, 40% or the loss counts as armour RPs, 40% as infantry RPs, and 20% as artillery RPs.
- c) If a motorized/mixed unit takes losses, 20% or the loss counts as armour RPs, 60% as infantry RPs, and 20% as artillery RPs.
- d) If a unit requiring both infantry and artillery RPs takes losses, 80% or the loss counts as inf RPs and 20% as artillery RPs.
- e) If the unit has no support, replace the artillery RP percentage with inf RPs.
- f) Note: The maximum RP loss of any replacement type is equal to that types RP cost of rebuilding the unit from its reduced level. Once this is reached, all remaining losses must be from the other RP type.

Any strength points left after losses have been fulfilled are added directly to the replacement pools. If no points of one type are left while losses are still being taken, the other type

must be lost instead. Calculate leftover points by using the nations REPLACEMENT POINT COST CHART.

Example: A 16-10 panzer division exchanges a 5-6 rifle division. The 16-10 flips to a 7-8 cadre, kills 3 armour and 2 infantry points to meet the exchange and adds 2.5 armour and 1.5 infantry points directly back to the replacement pools. If it had exchanged a 5-6 and a 3-6, it would have killed 4.5 armour and 3.5 infantry and added only one armour point to the pool. If it had exchanged two 5-6's and a 3-6, it would have only formed a 7-8 cadre. Special replacements are counted only from the actual losses taken; not the points added directly to the replacement pools.

11.M. REDUCED UNITS.

Some units have reduced strength sides as described below. When such a unit is eliminated in combat, it is reduced to its cadre or remnant strength instead of being removed. If a unit has been reduced as described above, it is not required to take any more losses even if called for by RED TABLE results. It may choose to do so however, so that another friendly unit does not have to.

11.M.1. CADRES.

Various divisional/corp units can take losses in combat and remain in play at reduced strengths. These units have cadres printed on the backs of the counters. When calculating the total strength loss in a combat, the strength of a divisional unit reduced to a cadre is counted fully.

11.M.2. REMNANTS.

Various battalions, brigades, regiments, divisions, and divisional cadres (see the nations RP COST CHART for exact units) can take losses in combat and remain in play at reduced strengths. Units may have remnant strengths printed on the back of the counters.

When an eligible unit (that is not back-printed) is eliminated in combat, it is reduced to remnant status by replacing the unit with a matching remnant-sized unit type. Place the eliminated unit in the appropriate ELIMINATED OR ELIMINATED ISOLATED BOX. Losses are calculated in the same manner as when forming cadres.

Remnants are under the following restrictions:

- a) They must have either an attack or defence strength greater than zero.
- b) They may not be used as garrison units.
- c) Remnants may not be used in operational or strat reserve.
- d) Remnants get no special replacements when lost.
- e) A remnant may be used as a replacement point to build up a cadre if it occupies the same hex. In effect, it is a movable replacement point marker with a combat strength.

The REMNANT/CADRE STRENGTH CHART is used to calculate the strengths of any unit that may form remnants that is not back printed. *Note: These units will need to be made.*

11.M.3. MULTIPLE REDUCTIONS OF UNITS.

When a unit is reduced to its cadre/remnant strength, the resulting cadre/remnant may only be reduced/eliminated if a new roll is made on the CRT or if losses are required due to a retreat. *Note: In this case, both the full strength of the unit and the cadre/remnant are counted when calculating losses.*

Table 8 Remnant/Cadre Strength Chart

REMNANT/CADRE STRENGTH CHART	
CADRES (as printed on counters)	UNIT VALUES
Major Power	(½ strength - 1) rounded up
Soviet, Italian, and Minors	(½ strength - 2) rounded up
British (1943+)	(½ attack strength) round down (½ defence strength) round up
REMNANTS	
Major Power	(½ attack strength - 2) round up (½ defence strength - 1) round up
Soviet, Italian, and Minors	(½ strength - 2) rounded up

Note: 1) If both attack and defence strengths are zero after rounding, receive no remnant.
 2) Any unit that does not form a printed cadre, may form a remnant instead.
 3) Any AA unit that forms a remnant has a remnant AA value equal to its remnants attack strength plus its defence strength.

Remnants are formed as units with standard movement allowances and a few basic subtypes. All infantry types have 6 MP, artillery has 6 MP, and armour has either 8 or 6 MP (if the initial MP was 10 or 8 MP).

11.N. REQUIRED LOSSES.

Units must take required losses as described below:

- 1) If their special abilities are used.
- 2) If it is a unit in its home country or a possession.

11.N.1. LOSSES DUE TO SPECIAL ABILITIES.

Combat losses may require losses from units with special abilities. If the units special abilities increases their strength, then their ability to fulfil required losses is also increased by the same amount. *For example, a two strength assault engineer unit that counts double strength would count as four strength points when fulfilling required losses but only two for actual casualties.*

11.N.1.a. ORDER OF REQUIRED LOSSES.

All required losses are taken in the order shown in the below table. If more than one unit type is involved in a combat in which required losses are taken, losses are taken in order, one unit at a time. Units with unlisted special abilities are counted as special combat ability units. *Note: Some units may be able to fulfill several types of losses and so count as both.* Cycle through the table if necessary to fulfill required losses.

Table 9 Order of Required Losses Table

ORDER OF REQUIRED/REGULAR LOSSES TABLE	
1)	Commandos (any special ability used in combat) (Rule ???).
2)	Air-dropped units if the surprise attack bonus is rolled for (Rule ???).
3)	Combat Engineers used to negate fortification/city benefits* (Rule ?).
4)	AEC/ATEC capable units (if AEC/ATEC effects are used) (Rule ???).
5)	Special combat ability units (if a special ability is used in combat) (Rule ???).
6)	Winterized units (if winterization benefits are used in combat) (Rule ???).
7)	Units with no "+ # MP" marker or the smallest number (in order).
8)	A nations units if the combat occurs in their home country or possession*.

* Non-standard required losses.
Note: No unit must take required losses if it has not used its special abilities in combat or overrun.

11.N.1.b. MAIN COMBAT TABLE REQUIRED LOSSES.

If units use their special abilities in a combat resulting in losses to their side, losses are taken from these units first. This occurs at the rate of one strength point per attacking RE of special ability units required to gain the die modifier unless specified differently in rules covering these units. *Note: The maximum number of required losses taken is equal to the total losses required by the CRT.*

Required losses are an exception to Rule ??? which allows only one unit to take more losses than required. Any unit taking required losses may take only what is necessary to meet its obligation as long as it can form a cadre or remnant. The remainder of the unit's RPs may be added back to the replacement pool. *For example, if the attacker is required to take 2 points of AECA, 1 point of combat engineers, and two points of light infantry, it could take partial losses from all three units as long as they can form a cadre or remnant, and add the non-required loss RPs back to the appropriate RP pools. The rest of the losses could be taken from other units as per Rule 11.M.*

11.N.2. LOSSES DUE TO NATIONAL DEFENCE.

If combat occurs in a unit's home country or its possession, the first point of non-disrupted losses must come from a home country unit. These losses may be taken from the replacement pool if allowed as an immediate RP expenditure. *For example, if an Italian 4-6 and a German 8-6 division are defending in Lybia and are forced to take 4 points of losses; the Italian unit could be reduced to a 0-6 remnant, the Italian could remove 1 RP and the German could be reduced to 3-6 cadre (and add back two RPs), or the Italian could be reduced to a 0-6 remnant to fulfill the first loss (adding back 3 RPs) and the German could be reduced to cadre for the other 3 points of losses (and add back 2 RPs).*

11.O. EFFECTS ON FORTRESSES & FORTIFICATIONS.

Any time units in a fortress or fortification (Rule 40.B) are attacked on at least the 1:2 odds column, the fortress or fortification will be immediately (before the next attack or counterattack) reduced by one level. *Note: This will occur even if the attack does not succeed in clearing the defending hex.* Forts and fortresses are reduced in strength as follows:

- 1) A fortress is reduced to a damaged fortress.
- 2) An unimproved fortress is reduced to a damaged unimproved fortress.
- 3) *Note: Damaged fortresses and damaged unimproved fortresses are never reduced.*
- 4) An improved fortified area is reduced to a fortified area,
- 5) A fortified area is reduced to an improved fort,
- 6) An improved fort is reduced to a fort,
- 7) A fort is reduced to a field fortification.
- 8) Field fortifications are reduced to entrenchments.
- 9) An entrenchment is removed from play.
- 10) *Note: Combat does not reduce fortified hexsides, permanent fortified areas, port fortifications, fortified zones, or field fortifications formed from combat units.*

If a fortified zone is captured, it is not removed until the capturing players next initial phase. *For example, if the Soviets captured a FZ, the Axis player would have a chance to recapture it before it was destroyed.*

11.P. MOVEMENT AFTER COMBAT.

Units participating in combat may be advanced or retreated as described below. This requires a "+# MP" marker to be placed on them.

11.P.1. ADVANCE AFTER COMBAT.

Attacking units may choose to advance after combat into a vacant hex up to the stacking limit. The advance must be made immediately upon resolution of the attack, before any other attack is resolved. *Note: Any original defending units forced to attack the original attacker, may also choose to advance after combat into the original attackers hex.*

Any unit that advances after combat has a "+# MP" marker (Rule 6.A.2) placed on it. The # is equal to the MP cost the unit has to expend to enter the hex (due to terrain hexsides, ZOC costs, harassment, interdiction, other "+# MP" markers, etc.) Reduce the ZOC level of all attacking or defending units attacked (or going to be attacked). *For example, a 6-10 motorized division that advances after combat into clear terrain across a minor river (1/2-1 MA) would get a "+5MP" marker placed on it. In the exploitation phase it could spend 5 MPs to remove the marker. If an 8-6 infantry division had also advanced, a "+3 MP" marker would be placed on it after the advance and still remain on the 8-6 as it has no exploitation phase to remove it.*

Note: "MP markers in the hex" is defined as the largest number shown on a unit.

11.P.2. RETREAT AFTER COMBAT.

When a unit must retreat, the owning player moves it a minimum of one hex away from the hex it occupied during the combat. *Note: This may be into an enemy occupied hex.* The following conditions apply:

- a) Retreating units are required to pay all normal costs to enter any hex retreated into. In effect they must place a "+# MP" marker on themselves at the end of the retreat to show the MP expended. All attacking units (including those involved in other attacks) have their ZOC by reduced one level for the purpose of affecting retreating units
- b) Retreating units must retreat at least one hex if possible. If there is no possible hex to retreat to, they remain in the hex but suffer double losses (as per "d" below) from all units exerting ZOCs on their hex.
- c) Retreating units **may** continue to retreat one hex at a time until they are in a hex not normally affected by an enemy ZOC. Casualties due to enemy ZOCs must be taken immediately when entering a new hex. Excess casualties taken in one hex may be counted against the retreating units further ZOC losses if a multiple hex retreat is occurring.
- d) Retreating units may suffer losses due to the ZOCs exerted by enemy units into the hexes they retreat to (or through). If enemy units exert a ZOC two levels greater than that of friendly units in the hex, the retreating units must lose defence strength points equal to the modified attack strength of the units exerting the ZOC. If the ZOC exerted by enemy units is one level higher, this loss is halved. If the exerted ZOC is the same, no losses must be taken.
- e) Units forced by combat results to retreat from an interdicted hex (Rule ?) are rolled for normally. *Note: A unit able to form a cadre/remnant would take casualties and retreat with the cadre/remnant.* When retreating, units must use a bridge if one is available on the hexside they cross.
- f) Units that end their retreat in a friendly-occupied hex which is attacked later in the same combat phase, contribute nothing to the defence. Their defence strengths and all other abilities (AEC, support, AA, etc.) are ignored during the attack and for all loss calculations. These units suffer all adverse effects of the subsequent attack.
- g) Units retreating to an overstacked position are placed in the appropriate overstacking section of the CORP/ARMY SHEET after expending all required MPs to do so.

- h) Units retreating into an enemy occupied hex **may** immediately (before any other combat is done but after disruption losses are taken) attack the enemy units in the hex. This is a hasty attack (Rule ?) and will take into account terrain, SPs, GS, etc. *Note: All retreating units will attack together. Required "+#MP" markers due to the retreat itself are placed after the combat and are cumulative with any caused by the new CRT results.*
- i) Units forced to retreat from a port hex to a sea hex are eliminated as combat isolated even if in supply, other than those which can retreat using its intrinsic transport capacity (Rule ???) modified by its capture roll. Each hit caused by the capture roll reduces the ITC by 1 RE.

Table 10 Ground Combat Results Table

MAIN COMBAT RESULTS TABLE																					
DIE		ODDS RATIO																DIE			
		1:4	1:3	1:2	1:1	1.5:1	2:1	2.5:1	3:1	4:1	5:1	6:1	7:1	8:1	9:1	10:1	11:1	12:1	13:1		
-4		1E	1E	1E	1X	1X	½E	1X	½X	1:	1D	½D	1L	1:½	ME	1:1	DL	DR	D½	-4	
-3		1E	1E	1X	1X	½X	½X	½X	1:	1D	½D	1L	1:½	ME	1:1	DL	DR	D½	1L1	-3	
-2		1E	1X	1X	½X	½X	½X	1:	1D	½D	1L	1:½	ME	1:1	DL	DR	D½	1L1	1X½	-2	
-1		1X	1X	½X	½X	½E	1:	1D	½D	1L	1:½	ME	1:1	DL	DR	D½	1L1	1X½	L1	E½D½	-1
0		1X	½X	½X	½E	1:	1D	½D	1L	1:½	ME	1:1	DL	DR	D½	1L1	1X½	L1	E½	E½D½	0
1		½X	½X	1:	1:	1D	½D	1L	½:	ME	1:1	DL	DR	D½	1L1	1X½	L1	E½	E½D½	1	
2		½X	1:	½E	1D	½D	1L	½:	1:½	1:1	DL	CA	D½	1L1	1X1	L1	E½	E½D¼	E¾D¼	2	
3		1:	½E	1D	½D	1L	½:	1:½	ME	DL	CA	DR	1L1	1X1	½X1	E½	E½D¼	E½D½	E1	3	
4		½E	1D	½D	1L	½:	1:½	ME	1:1	CA	DR	D½	1X1	½X1	L1	E½D¼	E½D½	E¾D¼	OR	4	
5		1D	½D	1L	½:	1:½	ME	1:1	DL	DR	D½	1L1	½X1	L1	E½	E½D½	E¾D¼	E1	OR	5	
6		½D	1L	½:	1:½	ME	1:1	DL	CA	D½	1L1	1X1	L1	E½	E½D¼	E¾D¼	E1	OR	OR	6	
7		1L	½:	1:½	ME	1:1	DL	CA	DR	1L1	1X1	½X1	E½	E½D¼	E½D½	E1	OR	OR	OR	7	
8		½:	1:½	ME	DL	DL	CA	DR	D½	1X1	½X1	L1	E½D¼	E½D½	E¾D¼	OR	OR	OR	OR	8	
9		1:½	ME	DL	CA	CA	DR	D½	1L1	½X1	L1	E½	E½D½	E¾D¼	E1	OR	OR	OR	OR	9	
10		ME	DL	CA	DR	DR	D½	1L1	½:½	L1	E½	E½D¼	E¾D¼	E1	OR	OR	OR	OR	OR	10	
11		DL	CA	DR	D½	D½	1L1	½:½	½:1	E½	E½D¼	E½D½	E1	OR	OR	OR	OR	OR	OR	11	
12		CA	DR	D½	1L1	1L1	½:½	½:1	L1	E½D¼	E½D½	E¾D¼	OR	OR	OR	OR	OR	OR	OR	12	
13		DR	D½	1L1	½:½	½:½	½:1	L1	E½	E½D½	E¾D¼	E1	OR	OR	OR	OR	OR	OR	OR	13	
14		D½	1L1	½:½	½:1	½:1	L1	E½	E½D¼	E¾D¼	E1	OR	OR	OR	OR	OR	OR	OR	OR	14	
15		1L1	½:½	½:1	L½	L1	E½	E½D¼	E½D½	E1	OR	OR	OR	OR	OR	OR	OR	OR	OR	15	
16		½:½	½:1	X½	L1	E½	E½D¼	E½D½	E¾D¼	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR	16	
17		½:1	X½	L1	E½	E½D¼	E½D½	E¾D¼	E1	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR	17	
18		X½	L1	X1	E½D¼	E½D½	E¾D¼	E1	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR	18	
OVERRUN COSTS		COMBAT ODDS							3:1	4:1	5:1	6:1	7:1	8:1	9:1	10:1	11:1	12:1	13:1		
		ADD TO OVERRUN MP COST							+3	+3	+2	+2	+1	+1	+1	+0	+0	-1	-1		

- Notes:
- 1) Each odds level higher than 13:1 adds one to the main combat die roll to a maximum of +7.
 - 2) Each forced attack at less than 1:4 odds is -2 to the main combat die roll for each odds level less than 1:4.
 - 3) If in an fortification/city hex that has any modifiers, and a "Disruption" result occurs, the defender halves the disruption losses and takes them as casualties instead.
 - 4) An additional +2 to the RED Table is required from the attacker if an "OR" is not achieved on an overrun attempt.
 - 5) Casualties are rounded down to the nearest half RP; disruptions are rounded up to the nearest half RP.
 - 6) Any unit with a "+ # MP" marker that declares an attack, immediately increases the "+ # MP" marker by 1 and suffers all effects as of that level.
 - 7) +1 to the die for each odd numbered "+ # MP" marker in the defenders hex (if the unit participates in combat).
 - 8) -1 to the die for each odd numbered "+ # MP" marker on any of the attackers units. (Use the highest numbered marker on a participating unit)
 - 9) Note the effects of terrain on RE based losses (Rule ???).
 - 10) All retreating units get a "# MP" equal to the terrain and ZOC costs of the hex retreated to. The hex they leave counts as screened.

COMBAT RESULT DEFINITIONS

Attacker Result (Left Side of Definition):

1 Full Value
 ½ Half Value
 Note: 1) The attacker may never lose more than double the defenders face value strength.

Affecting Both Players
 RED Higher Roll "+1 MP" marker on high roller's units
 RED Tie Roll Attacker takes additional ¼: (REX) result
 Casualties: Get an additional "+1 MP" marker (count converted disruption results as losses)
 Note: Only place a marker (on the player receiving the highest number) totalling the difference between the number of "+ # MP" markers received by both sides

Definitions:

: Regimental Equivalent Exchange
 CA Counterattack (fight immediately with no SP expenditure required and no terrain effects)*
 D Disruption (E if isolated) and Retreat (defender only) (may choose to convert at half rate into casualties)
 DL Deadlock (redo in next possible combat phase)*
 E Elimination and Retreat
 L Large Exchange (1-3 Attacker, 4-6 Defender)
 ME Minimal Effect: ¼:¼ (REX) (-2 to RED Table)
 X Exchange
 Note: All results which include a DR effect may convert the DR into an additional :½ (REX) at less than 3:1 odds.

Defender Result (Right Side of Definition):

1 Full Value
 ½ Half Value
 ¼ Quarter Value
 DR Defender Retreats (may convert to :½ (REX) at less than 3:1 odds)
 OR Overrun: Defender eliminated. -1 to RED table
 * Defender may convert result to a ME if in a fortification or major city.
 Note: Immediately reduce forts by one level after any attack of 1:2 odds or better.

