Mandatory	*Optional*	*Alternate*	--->	Base Stats							Hit Rolls								Wound Rolls							Saves		Dmg			Misc			Combine Rows					
Descriptions											Reroll		Modifier			Crits			Reroll		Modifier			Crits				Reroll					Filter	Sum			Pick Best		
		Legal Input --->		1-N	0/1	1-N	2-6	1-N	0-N	*	1-5	1-5	int	0/1	0/1	2-5	0-N	0/1	1-5	1-5	int	0/1	0/1	2-5	0/1	0/1	0/1	0/1	0/1	0-N	0-N	0/1	unit type	int or R11C			int or R11C		
Unit	**Weapons**	**Other**	**Details**	Points	Is Melee	Attacks	BS / WS	Strength	AP	Damage	Reroll All	Reroll 1 Die	Modifier	No Penalties	Torrent	Crit on Roll	Sustained Hits	Lethal Hits	Reroll All	Reroll 1 Die	Modifier	No Penalties	Auto Wound	Anti	Dev. Wounds	No L. Cover	Ignore Invul	Reroll Dmg	Reroll 1 Dmg	Flat Mortals	Blast	No Ignore D		Weapon 1	Weapon 2	Weapon 3	Profile 1	Profile 2	Profile 3
Bomber	Bombs				0	1		1	0	1					1								1							4									
	Stubbers	Rapid Fire			0	18	4	4	0	1						6	1		5																				
	Combined			155																														R11(	R12C				
Raptor	Stubbers	Rapid Fire			0	12	3	4	0	1						6	1		5																				
	Lacannon				0	1	3	12	3	d6+1						6	1		5																				
	Heavy Phosphor				0	6	3	6	1	1																1													
	Combined			165																														R14(	R15(	R16C			
Cawl	Gun			185	0	d3	2	14	4	3																					1								
	Gun within 9			185	0	d3	2	14	4	5																					1								
	Arc-Scourge	Vehicle			1	4	2	5	1	1														4	1								Vehicle						
	Axe				1	4	2	8	2	2																													
	Arc-Scourge	Non Vehicle			1	4	2	5	1	1																							!Vehicle						
	Dendrites				1	2d6	3	4	0	1																													
	Combined	Vehicle, no Dend		185																														R19(	R20(	R21C			
	Combined	No Vehicle, no Dend		185																														R19(	R22(	R21C			
Corpuscarii	Shoot			110	0	30	3	5	0	1						6	2																						
	Melee			110	1	30	4	5	0	1						6	2																						
	Combined			110																														R26(	R27C				
Ranged Robot	Twin Phosphor	Assuming Cast			0	10	4	6	0	2									5							1													
	Heavy Phosphor				0	10	4	6	1	1																1													
				235																														R29(	R30C				
Melee Robot	Twin-Fists	Assuming Cast			1	12	4	12	2	3									5																				
	Flamer	Assuming you charged			0	2d6		6	1	1					1											1													
	Combined			235																														R32(	R33C				
Fulgurites	Staff	Lmao		120	1	20	3	6	1	2															1														
Las Strider	Sadness	:(		50	0	1	4	12	4	d6+1						6	1		5																				
AC Strider	??			50	0	2	4	9	1	3						6	1		5																				
Breachers	Arc Vehicle Longrange	Assuming RR		290	0	12	4	8	2	3	5													4									Vehicle						
	Arc Non Vehicle Lonrange			290	0	12	4	8	2	3	5																						!Vehicle						
	Arc Vehicle Halfrange	Assuming RR		290	0	24	4	8	2	3	5													4									Vehicle						
	Arc Non Vehicle Halfrang	Assuming RR		290	0	24	4	8	2	3	5																						!Vehicle						
	Torsion Infantry			290	0	6d3	4	6	2	2	5													2							1		Infantry						
	Hydraulic				1	12	4	8	2	3	5																												
	Arc Claw	Vehicle			1	24	4	5	1	1	5													4									Vehicle						
	Arc Claw	Non			1	24	4	5	1	1	5																						!Vehicle						
	Best Melee Vehicle																																				R43(	R44C	
	Best Melee Non Vehicle																																				R43(	R45C	
	Best Anti Infantry	Shooting		290																													!Vehicle				R41(	R42C	
	Combined Vs Vehicle			290																														R46(	R40C				
	Combined Vs non Veh			290																														R48(	R47C				
Destroyers	Plasma Overloaded			230	0	24	4	8	3	2																													
	Heavy Grav Vehicle			230	0	24	4	6	1	2														2									Vehicle						
Ikarus Crawler	Missile	Vs Fly			0	1	4	10	2	d6+1														2									Fly						
	Array	vs Fly			0	6	4	8	1	2														4									Fly						
	Combined			140																														R54(	R55C				
Ikarus Crawler	Missile	Vs Fly			0	1	4	10	2	d6+1																							!Fly						
	Array	vs Fly			0	6	4	8	1	2																							!Fly						
	Combined			140																														R57(	R58C				
Erad Crawler	Erad Longrange			140	0	d6	4	9	2	2						6	2														1								
	Erad Shortrange			140	0	d6	4	9	3	3						6	2														1								
Phosphor Crawle	Phosphor			140	0	4	4	6	1	2																1													
Neutron Crawler	Neutron			140	0	2	4	16	4	d6+1																					1								
Neutron Crawler	Neutron Heavy (?)			140	0	2	3	16	4	d6+1																					1								
Skystalker	Flechette			130	0	60	4	3	0	1																													
	Melee				0	20	4	3	0	1																													
	Combined			140																														R65(	R66C				
Steryl	Flamer			140	0	10d6		4	0	1					1											1													
	Melee				1	20	4	4	0	1																													
	Combined																																	R68(	R69C				
Raiders	Guns			120	0	18	4	4	0	1															1														
	Melee				1	24	4	4	0	1																													
	Combined			120																														R71(	R72C				
Fire Dogo	Carbine	plus 3 or 5 mortals			0	2d6	4	6	0	1																1					1								
	Pistol				0	8	4	4	0	1																1													
	FireDogoHead				0	6d6		3	1	1					1											1													
	Combined	Ok into Chaff		110																														R74(	R75(	R76C			
Rustie	Sargeant	Infantry			1	4	4	4	2	1														3	1								Infantry						
	Sargeant				1	4	4	4	2	1															1								!Infantry						
	Swords				1	36	4	4	1	1															1														
	Razors	infantry			1	27	4	4	2	1														3									Infantry						
	Razors				1	27	4	4	2	1																							!Infantry						
	Swords Combined	Infantry		140																														R78(	R80C				
	Swords Combined			140																														R79(	R80C				
	Razors Combined	Infantry		140																														R78(	R81C				
	Razors Combined			140																														R79(	R82C				
Rangers/Vang	Plasma				0	2	4	8	3	2																1													
	Arc Long Range	Vehicle			0	1	4	8	1	d3														4	1	1							Vehicle						
	Arc Short Range	Vehicle			0	2	4	8	1	d3														4	1	1							Vehicle						
	Rifle				0	16	4	4	0	1																1													
	Arc Long Range				0	1	4	8	1	d3																1							!Vehicle						
	Arc Short Range				0	2	4	8	1	d3																1							!Vehicle						
	Radium	Infantry			0	24	4	3	0	1														4		1							Infantry						
	Radium				0	24	4	3	0	1																1							!Infantry						
	Ranger Long Range	Vehicle		90																													Vehicle	R87(	R88(	R90C			
	Ranger Short Range	Vehicle		90																													Vehicle	R87(	R89(	R90C			
	Ranger Long Range			90																													!Vehicle	R87(	R91(	R90C			
	Ranger Short Range			90																													!Vehicle	R87(	R92(	R90C			
	Vanguard	Vehicle		80																														R87(	R89(	R94C			
	Vanguard	Infantry		80																														R87(	R92(	R93C			
Omnipulus	Infantry			75	0	d6+3		4	0	2					1									2	1								Infantry						
Omnipulus	Monster			75	0	d6+3		4	0	2					1									4	1								Monster						
FireDo																																							
Ferrumite	Vs Big				0	3	3	12	3	d6																							Vehicle, Monster						
	vs Small				0	3	4	12	3	d6																							!Vehicle, !Monster						
Belleros	vs Big	Direct!			0	2d6	4	7	2	1																					1		Vehicle, Monster						
	vs Small	Direct!			0	2d6	3	7	2	1																					1		!Vehicle, !Monster						
	Stubber				0	9	4	4	0	1						6	1																						
	Disruptor				0	3	4	9	2	d6									5																				
	Ferrumite All																																				R13(	R132C	
	Belleros All																																				R13(	R134C	
	Combined Ferrumite			185																														R13(	R13(	R136C			
	Combined Belleros			185																														R13(	R13(	R136C			
Dragoon	No Walker				1	4	4	7	2	2						6	2				1												!Walker						
	Walker				1	4	4	7	2	2						6	2				1			2									Walker						
	Dragoon Lance			60																																	R148(	R149C	

Settings: Dark Mode: FALSE
Max Overkill Penalty: 1.5 Only for targets of 2+ unit size.

Updated Version: https://docs.google.com/spreadsheets/d/1N1c4kRn49LyKhUYCShovss4cxVvvMjdVD64aJEPFF_w

Click File -> Make a copy

Guide: This is the **Input** sheet. Write the stats of attacking units here.
Targets is an optional input sheet for defending units.

Output Sheets:
- **Damage**: Average damage caused.
- **PPW**: Points spent Per Wound caused. Hidden by default.
- **PPP**: Points spent Per Point killed. (read: points per point)

'Legal Input' Notation:
- 0/1 values are abilities that are on if set to 1 and off otherwise.
- Ranges (e.g. 2-5) accept any interger in that interval.
- 'int' accepts any integer.

Legal Values for 'Damage' Column:

1	2	…	16	
d3	d3+1	…	d3+10	
2d3	2d3+1	…	2d3+10	
d6	d6+1	…	d6+10	
2d6	2d6+1	2d6+2	2d6+3	2d6+4
d6 min 3	melta	*melta means legacy melta - 2d6 pick best*		

Ability Explanations:

Hits
- **Reroll All**: Reroll all failed hit rolls of the given number or lower.
- **Reroll 1 Die**: Reroll a single failed roll of this number or lower.
- **Modifier**: Bonus or penalty to hit.
- **No Penalties**: Attacks ignore all penalties to hit.
- **Torrent**: No hit roll is made, attack hits automatically.
- **Crit on Roll**: Hits of this number or greater are critical hits.
- **Sustained Hits**: Number of additional hits from a crit.
- **Lethal Hits**: Crits auto wound.

Wounds
- **Reroll All**: Reroll all failed die rolls of the given number or lower.
- **Reroll 1 Die**: Reroll a single failed roll of this number or lower.
- **Modifier**: Bonus or penalty to wound.
- **No Penalties**: Attacks ignore all penalties to wound.
- **Auto Wound**: No hit roll is made, attack hits automatically.
- **Anti**: Rolls of this number or greater critically wound.
- **Crit AP**: Overrides AP on critical wounds.
- **Crit Damage**: Overrides Damage on critical wounds.
- **Devastating Wounds**: Crits convert damage to MWs.

Saves
- **No L. Cover**: Targets do not benefit from light cover.
- **Ignore Invul**: Targets don't benefit from their invul saves.

Damage
- **Reroll Dmg**: Reroll damage rolls that are worse than average.
- **Reroll 1 Dmg**: Reroll 1 damage roll that's worse than average.

Custom Mortal Wounds
- **Min Hit Roll**: The lowest successful hit roll causing mortals.
- **MWs on Roll**: The number of mortals caused by each such roll.
- **Max Mortals**: Max average mortals caused.
- **End Attack**: Whether attack sequence ends after mortals.
- **Min W Roll**: The lowest successful wound roll causing mortals.
- **MWs on Roll**: The number of mortals caused by each such roll.
- **Max Mortals**: Max average mortals caused.
- **End Attack**: Whether attack sequence ends after mortals.
- **Flat Mortals**: Constant number of Mortals caused by weapon.

Misc
- **Blast**: Additional attack roll for every five models in target unit.
- **No Ignore D**: Stops damage reduction and saves vs mortals.
- **Filter**: Write a type, e.g. 'Vehicle', to set damage to 0 against other types. Write '!Vehicle' to set damage to 0 against that type. Use ',' to separate types. A with any mentioned type qualifies.

Combine Rows
Combine other rows instead of specifying a profile directly.
- Sum: Replace row with sum of other rows.
- Pick Best: Replace row with best of other rows.
Syntax: '3' refers to the row three rows below this one.
Syntax: 'R11C' refers to row 11.

		Base Stats					Hit				Wound					Saves						Dmg			Misc			
Legal Input ---->	1-N	1-N	int	2-6	2-6	1-N	int	int	0/1	0/1	int	int	0/1	0/1	1-5	int	2-6	2-6	0/1	1-N	1-N	1-N	1-N	0/1	2-6	1-N	0/1	
Unit	**Points**	**Toughness**	**Armour Save**	**Invul Save**	**FNP**	**Wounds**	**M. Hit Penalty**	**R. Hit Penalty**	**No M. Rerolls**	**No R. Rerolls**	**Max Hit Roll**	**M. Wnd Penalty**	**R. Wnd Penalty**	**No M. Rerolls**	**No R. Rerolls**	**Min Wnd Roll**	**Light Cover**	**Invul vs Melee**	**Invul vs Ranged**	**Daemon Saves**	**Reduce AP**	**Ignore AP**	**All is Dust**	**M. Dmg. Red.**	**R. Dmg. Red.**	**Nature Damage**	**MW FNP**	**Unit Size**	**Unit Types**	**Details**
Termagant	6	3	5			1											1											20	Infantry	
Battle Sister	11	3	3			1											1											5	Infantry	
Genestealer	18	4	5	5		2											1											10	Infantry	
Necron Warrior	12	4	4	4		1											1											20	Infantry,Cl	Orika
Marine	19	4	3			2											1											10	Infantry	
Chosen	23	4	3			3											1											5	Infantry	
Purgator	27.5	5	2			2											1											5	Infantry	
Beast Snagga	10.5	5	5		6	1											1											10	Infantry	
Lychguard	19	5	3	4		2						1	1				1											10	Infantry,Cl	Nobl
Crisis Suit	65	5	3	4		6											1											6	Vehicle,Fly	Z Sh
Terminator	40	5	2	4		3											1											10	Infantry	
Bulgryn	30	6	4	4	6	3											1							1	1			6	Infantry	
Inceptor	i333	6	3			4											1											6	Infantry,Fly	
Custodian	45	6	2			3											1											2	Infantry	
Scout Sentinel	50	7	3			7											1											3	Vehicle,Walker	
Obliterator	80	7	2	5		5											1											4	Infantry	
Raider	90	7	4	6		10											1											2	Vehicle,Fly	
Tyrant Guard	i666	8	3			4											1											4	Infantry,Charac	
Rhino	80	9	3			10											1											2	Vehicle	
Carnifex	125	9	2			8											1											3	Monster	
Lord of Change	230	10	6	4		18											1											2	Monster,Charac	
Armiger	140	10	3			12											1		5									2	Vehicle,Walker	
Walkrant	220	10	2	4	5	10											1											2	Monster,Cl	Adap
T. Chas	290	11	4	4	4	12											1									1		2	Monster,Cl	Sem
Leman Russ	190	11	2			13											1											2	Vehicle	
Knight Despoiler	400	12	3			22											1		5									2	Vehicle,Charac	
Land Raider	260	12	2			16											1											2	Vehicle	
Tyrannofex	200	12	2			16											1							1	1			2	Monster	
Knight Valiant	490	13	2			24											1		5		1							2	Vehicle,Cl	Pans

Min Hit Roll:
Enter the lowest roll that can hit this unit.

Min Wnd Roll:
Enter the lowest roll that can wound this unit.

Light Cover:
Bonus to armour save vs shooting.

Daemon Saves:
Invuls can't be ignored.

Ignore AP:
AP values of this number or lower are ignored.

All is Dust:
Write '1' if the unit gets +1 to saves vs dmg 1.

MW FNP:
Feel No Pain vs Mortal Wounds.

Unit Size:
Lone models are not subject to overkill penalties.
Also used for Blast.

Unit Types:
Unit types separated by ','. Used by Filter.

Note: All points are guesswork.

		Base Stats				Hit				Wound				Saves						Dmg			Misc			
Legal Input --->	1-N	1-N	int	2-6	2-6	1-N	int	int	0/1	0/1	int	int	0/1	0/1	1-5	int	2-6	2-6	0/1	1-N	1-N	1-N	1-N	0/1	2-6	1-N	0/1	
Unit	Points	Toughness	Armour Save	Invul Save	PNP	Wounds	M. Hit Penalty	R. Hit Penalty	No M. Rerolls	No R. Rerolls	Max Hit Roll	M. Wound Penalty	R. Wound Penalty	No M. Rerolls	No R. Rerolls	Min Wound Roll	Light Cover	Invul vs Melee	Invul vs Ranged	Daemon Saves	Reduce AP	Ignore AP	All is Dust	M. Dmg. Red.	R. Dmg. Red.	Halve Damage	MW PNP	Unit Size	Unit Types	Details

		Base Stats				Hit				Wound				Saves						Dmg			Misc			
Legal Input --->	1-N	1-N	int	2-6	2-6	1-N	int	int	0/1	0/1	int	int	0/1	0/1	1-5	int	2-6	2-6	0/1	1-N	1-N	1-N	1-N	0/1	2-6	1-N	0/1	
Unit	Points	Toughness	Armour Save	Invul Save	PNP	Wounds	M. Hit Penalty	R. Hit Penalty	No M. Rerolls	No R. Rerolls	Max Hit Roll	M. Wnd Penalty	R. Wnd Penalty	No M. Rerolls	No R. Rerolls	Min Wnd Roll	Light Cover	Invul vs Melee	Invul vs Ranged	Daemon Saves	Reduce AP	Ignore AP	All is Dust	M. Dmg. Red.	R. Dmg. Red.	Have Damage	MW PNP	Unit Size	Unit Types	Details

		Base Stats					Hit					Wound					Saves							Dmg			Misc			
Legal Input --->	1-N	1-N	int	2-6	2-6	1-N	int	int	0/1	0/1		int	int	0/1	0/1	1-5	int	2-6	2-6	0/1	1-N	1-N	1-N	1-N	1-N	0/1	2-6	1-N	0/1	
Unit	**Points**	**Toughness**	**Armour Save**	**Invul Save**	**FNP**	**Wounds**	**M. Hit Penalty**	**R. Hit Penalty**	**No M. Rerolls**	**No R. Rerolls**	**Min Hit Roll**	**M. Wnd Penalty**	**R. Wnd Penalty**	**No M. Rerolls**	**No R. Rerolls**	**Min Wnd Roll**	**Light Cover**	**Invul vs Melee**	**Invul vs Ranged**	**Daemon Saves**	**Reduce AP**	**Ignore AP**	**All is Dust**	**M. Dmg. Red.**	**R. Dmg. Red.**	**Halve Damage**	**MW FNP**	**Unit Size**	**Unit Types**	**Details**

		Base Stats					Hit				Wound				Saves						Dmg			Misc			
Legal Input --->		1-N	int	2-6	2-6	1-N	int	int	0/1	0/1	int	int	0/1	0/1	1-5	int	2-6	2-6	0/1	1-N	1-N	1-N	0/1	2-6	1-N	0/1	
Unit	**Points**	**Toughness**	**Armour Save**	**Invul Save**	**FNP**	**Wounds**	**M. Hit Penalty**	**R. Hit Penalty**	**No M. Rerolls**	**No R. Rerolls**	**Max Hit Roll**	**M. Wound Penalty**	**R. Wound Penalty**	**No M. Rerolls**	**No R. Rerolls**	**Min Wound Roll**	**Light Cover**	**Invul vs Melee**	**Invul vs Ranged**	**Daemon Saves**	**Reduce AP**	**Ignore AP**	**All is Dust**	**M. Dmg. Red.**	**R. Dmg. Red.**	**Melee Damage**	**MW FNP**	**Unit Size**	**Unit Types**	**Details**

Average Damage Caused

Color Coding: Good Bad | Overkill Correction: On | *Sheet by Ponder#6839* | github.com/svknoe/WH40k-Point-Efficiency-Calculator

Unit	Weapons	Other	Termagant	Battle Sister	Genestealer	Necron Warrior	Marine	Chosen	Purgator	Beast Snagga	Lychguard	Crisis Suit	Terminator	Bullgryn	Inceptor	Custodian	Scout Sentinel	Obliterator	Raider	Tyrant Guard	Rhino	Carnifex	Lord of Change	Armiger	Walkrant	T. C'tan	Leman Russ	Knight Despoiler	Land Raider	Tyrannofex	Knight Valiant
Wound Penalty	Transhuman	**Toughness**	3	3	4	4	4	4	5	5	5	5	5	6	6	6	7	7	7	8	9	9	10	10	10	11	11	12	12	12	13
Save Bonus	AP Restriction	**Save**	5+	3+	5+	4+	3+	3+	2+	5+	3+	3+	2+	4+	3+	2+	3+	2+	4+	3+	3+	2+	6+	3+	2+	4+	2+	3+	2+	2+	2+
Hit Penalty	Min Hit	**Inv Save**			5+	4+					4+	4+	4+	4+				5+	6+				4+	R 5+	4+	4+		R 5+			R 5+
MW Save		**FnP**								6+				6+											5+	4+					
Dmg Reduction		**Wounds**	1	1	2	1	2	3	2	1	2	6	3	3	4	3	7	5	10	4	10	8	18	12	10	12	13	22	16	16	24
Limited Rerolls		**Points**	6	11	18	12	19	23	27.5	10.5	19	65	40	30	333333	45	50	80	90	666666	80	125	230	140	220	290	190	400	260	200	490
Unit	**Weapons**	**Other**	**Termagant**	**Battle Sister**	**Genestealer**	**Necron Warrior**	**Marine**	**Chosen**	**Purgator**	**Beast Snagga**	**Lychguard**	**Crisis Suit**	**Terminator**	**Bullgryn**	**Inceptor**	**Custodian**	**Scout Sentinel**	**Obliterator**	**Raider**	**Tyrant Guard**	**Rhino**	**Carnifex**	**Lord of Change**	**Armiger**	**Walkrant**	**T. C'tan**	**Leman Russ**	**Knight Despoiler**	**Land Raider**	**Tyrannofex**	**Knight Valiant**
Bomber	Bombs		4.5	4.3	4.5	4.5	4.3	4.3	4.2	3.8	4.3	4.3	4.2	3.8	4.3	4.2	4.3	4.2	4.5	4.3	4.3	4.2	4.5	4.3	2.8	2.3	4.2	4.3	4.2	4.2	4.2
	Stubbers	Rapid Fire	5.3	3.6	4.5	4.5	3.0	3.0	1.1	2.8	1.2	2.2	1.1	2.8	2.2	1.1	2.2	1.1	3.3	1.2	1.2	0.6	1.8	1.2	0.4	0.9	0.6	1.2	0.6	0.6	0.6
	Combined		9.8	7.9	9.0	9.0	7.3	7.3	5.3	6.5	5.6	6.6	5.3	6.5	6.6	5.3	6.6	5.3	7.8	5.6	5.6	4.8	6.3	5.6	3.2	3.2	4.8	5.6	4.8	4.8	4.8
Raptor	Stubbers	Rapid Fire	4.4	3.0	3.8	3.8	2.5	2.5	0.9	2.3	1.0	1.9	0.9	2.3	1.9	0.9	1.9	0.9	2.8	1.0	1.0	0.5	1.5	1.0	0.3	0.8	0.5	1.0	0.5	0.5	0.5
	Lacannon		0.8	0.5	1.1	0.4	1.1	1.5	0.8	0.8	0.7	1.6	1.1	0.9	1.8	1.1	1.9	1.3	2.4	1.6	1.9	1.4	1.5	2.1	1.1	0.5	1.4	1.7	1.2	1.0	0.8
	Heavy Phosphor		2.8	1.7	1.8	1.3	1.3	1.3	0.9	1.9	1.0	1.3	0.9	0.8	1.0	0.7	0.7	0.4	0.9	0.7	0.7	0.4	0.7	0.7	0.3	0.3	0.4	0.3	0.2	0.2	0.2
	Combined		8.0	5.2	6.6	5.5	4.9	5.3	2.6	5.0	2.8	4.8	2.9	4.1	4.7	2.7	4.4	2.7	6.1	3.3	3.6	2.4	3.7	3.7	1.7	1.6	2.4	3.0	2.0	1.7	1.6
Cawl	Gun		4.2	1.7	3.7	2.1	4.6	5.2	2.8	2.8	2.2	3.1	4.2	1.6	3.5	2.8	2.7	2.3	2.9	1.9	2.3	2.0	1.7	2.2	1.1	0.6	1.9	2.0	2.0	1.5	1.8
	Gun within 9		4.2	1.7	3.7	2.1	4.6	5.2	2.8	2.8	2.2	3.6	4.2	2.9	6.9	2.8	4.1	4.6	5.8	3.7	4.6	3.0	2.5	3.0	1.9	0.8	3.2	3.3	3.0	3.0	2.9
	Arc-Scourge	Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0	0.0	1.7	0.0	1.7	0.0	1.7	0.0	0.0	1.7	0.0	0.0	1.7	1.7	1.7	0.0	1.7
	Axe		2.8	1.9	3.7	1.4	3.7	2.8	2.2	2.2	1.7	2.2	1.7	0.9	3.0	1.7	2.6	1.9	3.7	2.2	1.5	1.1	1.1	1.5	0.7	0.3	1.0	1.5	1.1	0.6	0.9
	Arc-Scourge	Non Vehicle	1.9	1.1	1.5	1.1	1.1	1.1	0.6	1.2	0.6	0.0	0.6	0.5	0.6	0.4	0.0	0.4	0.0	0.6	0.0	0.4	0.3	0.0	0.1	0.1	0.0	0.0	0.0	0.2	0.0
	Dendrites		2.1	1.0	1.6	1.2	0.8	0.8	0.3	0.9	0.3	0.5	0.3	0.6	0.5	0.3	0.5	0.3	0.8	0.3	0.3	0.1	0.4	0.3	0.1	0.2	0.1	0.3	0.1	0.1	0.1
	Combined	Vehicle, no Dend	6.9	3.6	7.4	3.5	8.3	8.0	5.0	4.9	3.9	7.5	5.8	3.8	9.9	4.4	8.3	6.5	11.2	5.9	7.8	4.1	3.6	6.1	2.6	1.1	5.9	6.4	5.7	3.5	5.5
	Combined	No Vehicle, no Dend	8.8	4.7	8.9	4.6	9.4	9.1	5.6	6.1	4.4	5.9	6.4	4.3	10.5	4.8	6.6	6.9	9.5	6.5	6.1	4.4	3.9	4.4	2.7	1.3	4.2	4.7	4.1	3.7	3.8
Corpuscarii	Shoot		10.0	6.7	10.0	10.0	6.7	6.7	2.5	6.3	3.3	5.0	2.5	4.2	3.3	1.7	3.3	1.7	5.0	3.3	3.3	1.7	2.5	1.7	0.6	1.3	0.8	1.7	0.8	0.8	0.8
	Melee		11.1	5.6	11.1	8.3	5.6	5.6	2.1	6.9	2.8	4.2	2.1	3.5	2.8	1.4	2.8	1.4	4.2	2.8	2.8	1.4	2.1	1.4	0.5	1.0	0.7	1.4	0.7	0.7	0.7
	Combined		21.1	12.2	21.1	18.3	12.2	12.2	4.6	13.2	6.1	9.2	4.6	7.6	6.1	3.1	6.1	3.1	9.2	6.1	6.1	3.1	4.6	3.1	1.0	2.3	1.5	3.1	1.5	1.5	1.5
Ranged Robot	Twin Phosphor	Assuming Cast	3.2	1.6	5.9	2.2	3.0	2.2	1.5	2.9	2.5	3.0	1.1	1.6	2.5	0.9	1.6	0.8	2.8	1.9	1.9	0.9	2.8	1.9	0.6	0.7	0.9	1.0	0.5	0.3	0.5
	Heavy Phosphor		3.5	2.1	2.2	1.7	1.7	1.7	1.1	2.3	1.3	1.7	1.1	1.0	1.3	0.8	0.8	0.6	1.1	0.8	0.8	0.6	0.8	0.8	0.4	0.4	0.6	0.4	0.3	0.3	0.3
			6.7	3.7	8.1	3.9	4.6	3.9	2.6	5.2	3.8	4.6	2.2	2.6	3.8	1.8	2.5	1.3	3.9	2.7	2.7	1.5	3.6	2.7	1.0	1.1	1.4	1.4	0.8	0.5	0.8
Melee Robot	Twin-Fists	Assuming Cast	5.8	3.9	7.8	2.9	7.8	11.7	5.8	5.8	5.3	8.8	8.8	4.4	7.8	8.8	8.3	6.7	11.1	7.1	8.9	7.1	8.0	10.7	5.3	2.7	6.9	8.3	6.0	4.5	4.2
	Flamer	Assuming you charge	4.9	2.9	3.1	2.3	2.3	2.3	1.6	3.2	1.8	2.3	1.6	1.5	1.8	1.2	1.2	0.8	1.6	1.2	1.2	0.8	1.2	1.2	0.5	0.6	0.8	0.6	0.4	0.4	0.4
	Combined		10.7	6.8	10.9	5.3	10.1	14.0	7.4	9.0	7.1	11.1	10.3	5.8	9.5	9.9	9.5	7.4	12.7	8.3	10.1	7.9	9.2	11.8	5.9	3.3	7.7	8.8	6.4	4.9	4.6
Fulgurites	Staff	Lmao	11.9	8.9	13.3	7.8	11.1	9.4	8.9	9.1	8.9	11.1	7.8	5.6	8.9	6.7	6.4	5.7	7.4	6.7	6.7	5.9	6.7	6.7	4.0	2.8	5.8	4.4	4.4	4.4	4.4
Las Strider	Sadness	:(	0.6	0.5	0.9	0.3	1.1	1.5	0.9	0.6	0.6	1.3	0.9	0.7	1.8	1.2	1.9	1.4	1.9	1.6	1.9	1.5	1.2	1.6	0.9	0.4	1.5	1.3	1.3	1.1	0.9
AC Strider	??		0.9	0.4	1.7	0.6	0.9	1.3	0.4	0.8	0.7	1.2	0.6	0.9	0.8	0.6	0.9	0.5	1.5	0.8	0.8	0.4	1.1	0.7	0.2	0.4	0.3	0.7	0.3	0.2	0.6
Breachers	Arc Vehicle Longrange	Assuming RR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.0	0.0	0.0	0.0	0.0	7.0	0.0	10.0	0.0	5.6	0.0	0.0	6.8	0.0	0.0	3.9	6.2	4.0	0.0	4.5
	Arc Non Vehicle Lonrange		6.3	3.8	10.0	3.8	7.5	11.3	4.0	5.0	4.5	0.0	6.0	4.5	6.0	6.0	0.0	5.0	0.0	4.5	0.0	2.7	4.5	0.0	2.0	1.5	0.0	0.0	0.0	2.0	0.0
	Arc Vehicle Halfrange	Assuming RR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.0	0.0	0.0	0.0	0.0	14.0	0.0	20.0	0.0	11.3	0.0	0.0	13.5	0.0	0.0	7.8	12.4	8.0	0.0	9.0
	Arc Non Vehicle Halfrang	Assuming RR	12.5	7.5	20.0	7.5	15.0	22.5	8.0	10.0	9.0	0.0	12.0	9.0	12.0	12.0	0.0	10.0	0.0	9.0	0.0	5.3	9.0	0.0	4.0	3.0	0.0	0.0	0.0	4.0	0.0
	Torsion Infantry		8.3	4.1	11.7	5.0	8.8	6.1	5.4	7.1	8.8	0.0	4.4	3.4	8.1	3.8	0.0	4.2	0.0	7.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Hydraulic		7.5	5.0	10.0	3.8	10.0	15.0	6.0	6.0	4.5	9.0	9.0	4.5	8.0	9.0	9.3	7.5	12.5	6.0	5.0	4.0	4.5	6.0	3.0	1.5	3.9	5.5	4.0	3.0	3.8
	Arc Claw	Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5	0.0	0.0	0.0	0.0	4.5	0.0	6.0	0.0	4.5	0.0	0.0	4.5	0.0	0.0	3.0	4.5	3.0	0.0	3.0
	Arc Claw	Non	10.0	6.0	8.0	6.0	6.0	6.0	3.0	6.3	3.0	0.0	3.0	2.5	3.0	2.0	0.0	2.0	0.0	3.0	0.0	2.0	1.5	0.0	0.7	0.8	0.0	0.0	0.0	1.0	0.0
	Best Melee Vehicle		7.5	5.0	10.0	3.8	10.0	15.0	6.0	6.0	4.5	9.0	9.0	4.5	8.0	9.0	9.3	7.5	12.5	6.0	5.0	4.0	4.5	6.0	3.0	1.5	3.9	5.5	4.0	3.0	3.8
	Best Melee Non Vehicle		10.0	6.0	10.0	6.0	10.0	15.0	6.0	6.3	4.5	9.0	9.0	4.5	8.0	9.0	9.3	7.5	12.5	6.0	5.0	4.0	4.5	6.0	3.0	1.5	3.9	5.5	4.0	3.0	3.8
	Best Anti Infantry	Shooting	12.5	7.5	20.0	7.5	15.0	22.5	8.0	10.0	9.0	0.0	12.0	9.0	12.0	12.0	0.0	10.0	0.0	9.0	0.0	5.3	9.0	0.0	4.0	3.0	0.0	0.0	0.0	4.0	0.0
	Combined Vs Vehicle		7.5	5.0	10.0	3.8	10.0	15.0	6.0	6.0	4.5	27.0	9.0	4.5	8.0	9.0	23.3	7.5	32.5	6.0	16.3	4.0	4.5	19.5	3.0	1.5	11.7	17.9	12.0	3.0	12.8
	Combined Vs non Veh		22.5	13.5	30.0	13.5	25.0	37.5	14.0	16.2	13.5	9.0	21.0	13.5	20.0	21.0	9.3	17.5	12.5	15.0	5.0	9.3	13.5	6.0	7.0	4.5	3.9	5.5	4.0	7.0	3.8
Destroyers	Plasma Overloaded		10.0	6.7	13.3	5.0	13.3	10.0	8.0	7.8	6.0	8.0	6.0	3.3	10.7	6.0	9.3	6.7	13.3	8.0	5.3	4.0	4.0	5.3	2.7	1.0	3.7	5.3	4.0	2.0	3.3
	Heavy Grav Vehicle		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.7	0.0	0.0	0.0	0.0	5.8	0.0	10.0	0.0	6.7	0.0	0.0	6.7	0.0	0.0	3.1	6.7	3.3	0.0	6.7
Ikarus Crawler	Missile	Vs Fly	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.7	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.9	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0
	Array	vs Fly	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	1.3	0.0	0.0	0.0	2.0	0.0	0.0	0.0	1.5	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0
	Combined		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	2.0	0.0	0.0	0.0	3.1	0.0	0.0	0.0	2.4	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0
Ikarus Crawler	Missile	Vs Fly	0.3	0.2	0.6	0.2	0.4	0.6	0.3	0.3	0.3	0.0	0.4	0.4	0.0	0.3	0.6	0.4	0.0	0.6	0.6	0.4	0.0	0.5	0.3	0.0	0.2	0.3	0.2	0.2	0.2
	Array	vs Fly	1.7	0.8	3.3	1.3	1.7	1.3	0.7	1.3	1.0	0.0	0.5	0.8	0.0	0.5	1.2	0.6	0.0	1.0	0.7	0.3	0.0	0.7	0.2	0.0	0.3	0.7	0.3	0.2	0.5
	Combined		2.0	1.0	3.9	1.5	2.1	1.8	0.9	1.6	1.3	0.0	0.9	1.2	0.0	0.8	1.8	1.0	0.0	1.6	1.3	0.8	0.0	1.2	0.5	0.0	0.5	1.0	0.6	0.3	0.7
Erad Crawler	Erad Longrange		4.3	1.6	5.1	2.6	3.8	2.3	1.7	2.5	2.3	2.5	1.5	1.0	2.5	1.0	1.7	1.1	2.6	1.9	1.5	1.0	1.0	1.0	0.4	0.2	0.6	1.0	0.6	0.3	0.5
	Erad Shortrange		5.2	2.1	5.1	2.6	5.1	6.3	2.5	3.0	2.3	3.8	4.6	1.9	3.3	2.9	3.0	2.4	4.1	2.6	2.4	1.9	1.5	1.9	1.0	0.5	1.3	1.8	1.3	1.0	1.2
Phosphor Crawle	Phosphor		1.4	0.8	1.8	0.7	1.3	1.0	0.9	1.1	1.0	1.3	0.7	0.4	1.0	0.5	0.6	0.4	0.9	0.7	0.7	0.4	0.7	0.7	0.3	0.2	0.4	0.3	0.2	0.1	0.2
Neutron Crawler	Neutron		2.5	1.0	2.2	1.3	2.8	2.9	1.7	1.7	1.3	2.4	2.3	1.4	3.5	1.5	2.6	2.0	2.7	2.3	2.2	1.7	1.4	1.9	1.0	0.4	1.7	1.8	1.7	1.4	1.6
Neutron Crawler	Neutron Heavy (?)		3.3	1.4	3.0	1.7	3.7	3.8	2.2	2.2	1.8	3.3	3.1	1.9	4.6	2.0	3.5	2.7	3.6	3.1	2.9	2.2	1.9	2.5	1.3	0.6	2.3	2.4	2.3	1.9	2.1
Skystalker	Flechette		7.5	5.0	5.0	5.0	3.3	3.3	1.7	4.2	1.7	3.3	1.7	2.1	1.7	0.8	1.7	0.8	2.5	1.7	1.7	0.8	2.5	1.7	0.6	1.3	0.8	1.7	0.8	0.8	0.8
	Melee		2.5	1.7	1.7	1.7	1.1	1.1	0.6	1.4	0.6	1.1	0.6	0.7	0.6	0.3	0.6	0.3	0.8	0.6	0.6	0.3	0.8	0.6	0.2	0.4	0.3	0.6	0.3	0.3	0.3
	Combined		10.0	6.7	6.7	6.7	4.4	4.4	2.2	5.6	2.2	4.4	2.2	2.8	2.2	1.1	2.2	1.1	3.3	2.2	2.2	1.1	3.3	2.2	0.7	1.7	1.1	2.2	1.1	1.1	1.1
Steryl	Flamer		15.6	7.8	11.7	8.8	5.8	5.8	1.9	6.5	1.9	3.9	1.9	4.9	3.9	1.9	3.9	1.9	5.8	1.9	1.9	1.0	2.9	1.9	0.6	1.5	1.0	1.9	1.0	1.0	1.0
	Melee		4.4	2.2	3.3	2.5	1.7	1.7	0.6	1.9	0.6	1.1	0.6	1.4	1.1	0.6	1.1	0.6	1.7	0.6	0.6	0.3	0.8	0.6	0.2	0.4	0.3	0.6	0.3	0.3	0.3
	Combined		20.0	10.0	15.0	11.3	7.5	7.5	2.5	8.3	2.5	5.0	2.5	6.3	5.0	2.5	5.0	2.5	7.5	2.5	2.5	1.3	3.8	2.5	0.8	1.9	1.3	2.5	1.3	1.3	1.3
Raiders	Guns		3.8	3.0	3.0	3.0	2.5	2.5	1.8	1.9	1.5	2.0	1.8	1.9	2.0	1.8	2.0	1.8	2.3	1.5	1.5	1.5	1.5	1.5	1.0	0.8	1.5	1.5	1.5	1.5	1.5
	Melee		5.3	2.7	4.0	3.0	2.0	2.0	0.7	2.2	0.7	1.3	0.7	1.7	1.3	0.7	1.3	0.7	2.0	0.7	0.7	0.3	1.0	0.7	0.2	0.5	0.3	0.7	0.3	0.3	0.3
	Combined		9.1	5.7	7.0	6.0	4.5	4.5	2.4	4.1	2.2	3.3	2.4	3.5	3.3	2.4	3.3	2.4	4.3	2.2	2.2	1.8	2.5	2.2	1.2	1.3	1.8	2.2	1.8	1.8	1.8
Fire Dogo	Carbine	plus 3 or 5 mortals	3.1	1.1	2.0	1.8	1.0	0.9	0.4	1.7	0.8	0.9	0.5	0.8	0.7	0.3	0.4	0.2	0.6	0.4	0.4	0.2	0.6	0.4	0.1	0.3	0.2	0.2	0.1	0.1	0.1
	Pistol		1.8	0.9	1.3	1.0	0.7	0.7	0.2	0.7	0.2	0.4	0.2	0.6	0.4	0.2	0.4	0.2	0.7	0.2	0.2	0.1	0.3	0.2	0.1	0.2	0.1	0.2	0.1	0.1	0.1
	FireDogoHead		8.8	5.3	4.7	3.5	3.5	3.5	2.3	4.9	1.8	3.5	2.3	1.5	1.8	1.2	1.8	1.2	2.3	1.8	1.8	1.2	1.8	1.8	0.8	0.9	1.2	1.8	1.2	1.2	1.2
	Combined	Ok into Chaff	13.6	7.3	8.0	6.3	5.2	5.1	3.0	7.3	2.7	4.8	3.1	2.8	2.9	1.7	2.6	1.6	3.6	2.4	2.4	1.5	2.7	2.4	1.0	1.3	1.5	2.2	1.4	1.4	1.4
Rustie	Sargeant	Infantry	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.1	1.3	0.0	1.3	1.1	1.3	1.3	0.0	1.3	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Sargeant		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.6	0.0	0.6	0.0	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.3
	Swords		10.5	7.5	7.0	6.0	6.0	6.0	4.0	4.6	3.0	4.5	4.0	3.8	4.5	4.0	4.5	4.0	5.0	3.0	3.0	3.0	3.0	3.0	2.0	1.5	3.0	3.0	3.0	3.0	3.0
	Razors	infantry	9.0	6.0	6.0	4.5	6.0	6.0	4.5	7.5	4.5	0.0	4.5	3.8	6.0	4.5	0.0	4.5	0.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Razors		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0	0.0	0.0	3.0	0.0	3.8	0.0	1.5	1.1	1.1	1.5	0.8	0.6	1.1	1.5	1.1	1.1	1.1
	Swords Combined	Infantry	11.8	8.8	8.3	7.3	7.3	7.3	5.3	5.7	4.3	4.5	5.3	4.9	5.8	5.3	4.5	5.3	5.0	4.3	3.0	3.0	3.0	3.0	2.0	1.5	3.0	3.0	3.0	3.0	3.0
	Swords Combined		10.5	7.5	7.0	6.0	6.0	6.0	4.0	4.6	3.0	5.0	4.0	3.8	4.5	4.0	5.1	4.0	5.6	3.0	3.3	3.3	3.3	3.3	2.2	1.7	3.3	3.3	3.3	3.3	3.3
	Razors Combined	Infantry	10.3	7.3	7.3	5.8	7.3	7.3	5.8	8.6	5.8	0.0	5.8	4.9	7.3	5.8	0.0	5.8	0.0	7.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Razors Combined		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	0.0	0.0	0.0	0.0	3.6	0.0	4.4	0.0	1.8	1.5	1.5	1.8	1.0	0.7	1.5	1.8	1.5	1.5	1.5
Rangers/Vang	Plasma		0.8	0.7	1.1	0.4	1.4	1.0	0.9	0.6	0.5	0.7	0.5	0.3	1.1	0.7	1.0	0.7	1.1	0.8	0.6	0.4	0.3	0.4	0.2	0.1	0.4	0.4	0.4	0.2	0.4
	Arc Long Range	Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.6	0.0	0.6	0.0	0.5	0.0	0.0	0.5	0.0	0.0	0.5	0.5	0.5	0.0	0.5
	Arc Short Range	Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0	1.1	0.0	1.2	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	1.0	1.0	0.0	1.0
	Rifle		3.6	1.8	2.7	2.0	1.3	1.3	0.4	1.5	0.4	0.9	0.4	1.1	0.9	0.4	0.9	0.4	1.3	0.4	0.4	0.2	0.7	0.4	0.1	0.3	0.2	0.4	0.2	0.2	0.2
	Arc Long Range		0.3	0.2	0.5	0.2	0.3	0.4	0.2	0.3	0.2	0.0	0.2	0.2	0.3	0.2	0.0	0.2	0.0	0.2	0.0	0.1	0.2	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.0
	Arc Short Range		0.7	0.4	0.9	0.4	0.7	0.8	0.4	0.5	0.4	0.0	0.4	0.4	0.6	0.4	0.0	0.4	0.0	0.4	0.0	0.2	0.3	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.0
	Radium	Infantry	4.0	2.0	4.0	3.0	2.0	2.0	1.0	3.3	2.0	0.0	1.0	2.5	2.0	1.0	0.0	1.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Radium		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.7	0.0	1.0	0.0	0.7	0.3	1.0	0.7	0.2	0.5	0.3	0.7	0.3	0.3	0.3
	Ranger Long Range	Vehicle	4.4	2.5	3.8	2.4	2.7	2.4	1.3	2.1	0.9	2.1	0.9	1.4	2.0	1.1	2.4	1.2	3.0	1.3	1.5	0.7	1.0	1.4	0.4	0.4	1.1	1.4	1.2	0.4	1.1
	Ranger Short Range	Vehicle	4.4	2.5	3.8	2.4	2.7	2.4	1.3	2.1	0.9	2.7	0.9	1.4	2.0	1.1	3.0	1.2	3.6	1.3	2.0	0.7	1.0	1.9	0.4	0.4	1.6	1.9	1.7	0.4	1.6
	Ranger Long Range		4.7	2.7	4.2	2.6	3.1	2.8	1.5	2.4	1.2	1.6	1.1	1.6	2.3	1.3	1.9	1.4	2.4	1.5	1.0	0.8	1.2	0.9	0.4	0.5	0.6	0.9	0.7	0.5	0.6
	Ranger Short Range		5.1	2.9	4.7	2.8	3.4	3.1	1.7	2.6	1.4	1.6	1.4	1.7	2.6	1.5	1.9	1.6	2.4	1.7	1.0	0.9	1.3	0.9	0.5	0.5	0.6	0.9	0.7	0.6	0.6
	Vanguard	Vehicle	0.8	0.7	1.1	0.4	1.4	1.0	0.9	0.6	0.5	3.2	0.5	0.3	1.1	0.7	2.8	0.7	3.3	0.8	2.2	0.8	1.3	2.1	0.4	0.6	1.7	2.1	1.8	0.6	1.7
	Vanguard	Infantry	5.5	3.1	6.0	3.8	4.1	3.8	2.3	4.5	2.9	0.7	1.9	3.1	3.7	2.1	1.0	2.1	1.1	3.3	0.6	0.7	0.7	0.4	0.4	0.2	0.4	0.4	0.4	0.4	0.4
Omnipulus	Infantry		10.8	10.8	10.8	10.8	10.8	10.8	10.8	9.0	10.8	0.0	10.8	9.0	10.8	10.8	0.0	10.8	0.0	10.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Omnipulus	Monster		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.5	6.5	0.0	4.3	3.3	0.0	0.0	0.0	6.5	0.0
FireDo																															

Average Damage Caused

Color Coding: Good Bad | Overkill Correction: On | *Sheet by Ponder#6839* | github.com/svknoe/WH40k-Point-Efficiency-Calculator

Wound Penalty	Transhuman	**Toughness**	3	3	4	4	4	4	5	5	5	5	5	6	6	6	7	7	7	8	9	9	10	10	10	11	11	12	12	12	13
Save Bonus	AP Restriction	**Save**	5+	3+	5+	4+	3+	3+	2+	5+	3+	3+	2+	4+	3+	2+	3+	2+	4+	3+	3+	2+	6+	3+	2+	4+	2+	3+	2+	2+	2+
Hit Penalty	Min Hit	**Inv Save**			5+	4+					4+	4+	4+	4+				5+	6+				4+	R 5+	4+	4+		R 5+			R 5+
MW Save		**FnP**								6+				6+											5+	4+					
Dmg Reduction		**Wounds**	1	1	2	1	2	3	2	1	2	6	3	3	4	3	7	5	10	4	10	8	18	12	10	12	13	22	16	16	24
Limited Rerolls		**Points**	6	11	18	12	19	23	27.5	10.5	19	65	40	30	333333	45	50	80	90	666666	80	125	230	140	220	290	190	400	260	200	490

Unit	Weapons	Other	Termagant	Battle Sister	Genestealer	Necron Warrior	Marine	Chosen	Purgator	Beast Snagga	Lychguard	Crisis Suit	Terminator	Bullgryn	Inceptor	Custodian	Scout Sentinel	Obliterator	Raider	Tyrant Guard	Rhino	Carnifex	Lord of Change	Armiger	Walkrant	T. C'tan	Leman Russ	Knight Despoiler	Land Raider	Tyrannofex	Knight Valiant
Ferrumite	Vs Big		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	0.0	0.0	2.5	0.0	3.5	0.0	2.8	0.0	0.0	3.0	0.0	0.0	1.9	2.1	1.6	0.0	1.0
	vs Small		1.3	0.8	1.5	0.6	1.5	2.0	1.1	1.2	0.9	1.9	1.5	1.2	2.4	1.5	1.8	1.5	2.6	1.9	2.1	1.5	1.7	2.2	1.2	0.5	1.5	1.6	1.2	0.9	0.7
Belleros	vs Big	Direct!	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.9	0.0	1.2	0.0	0.6	0.0	0.0	0.6	0.0	0.0	0.4	0.6	0.4	0.0	0.3
	vs Small	Direct!	5.1	2.2	2.7	2.4	2.0	1.8	1.2	2.8	1.5	1.8	1.3	1.5	1.8	1.0	1.2	0.8	1.6	0.8	0.8	0.5	0.8	0.8	0.3	0.4	0.5	0.8	0.5	0.5	0.4
	Stubber		2.0	1.3	1.5	1.5	1.0	1.0	0.3	0.8	0.3	0.7	0.3	0.8	0.7	0.3	0.7	0.3	1.0	0.3	0.3	0.2	0.5	0.3	0.1	0.3	0.2	0.3	0.2	0.2	0.2
	Disruptor		1.2	0.7	1.8	0.7	1.3	1.8	0.8	1.1	1.0	2.1	1.1	1.3	1.9	1.1	1.8	1.3	2.8	1.9	1.8	1.1	1.4	1.4	0.6	0.4	0.8	1.3	0.9	0.7	0.7
	Ferrumite All		1.3	0.8	1.5	0.6	1.5	2.0	1.1	1.2	0.9	2.6	1.5	1.2	2.4	1.5	2.5	1.5	3.5	1.9	2.8	1.5	1.7	3.0	1.2	0.5	1.9	2.1	1.6	0.9	1.0
	Belleros All		5.1	2.2	2.7	2.4	2.0	1.8	1.2	2.8	1.5	1.8	1.3	1.5	1.8	1.0	1.2	0.8	1.6	0.8	0.8	0.5	0.8	0.8	0.3	0.4	0.5	0.8	0.5	0.5	0.4
	Combined Ferrumite		4.5	2.9	4.8	2.9	3.9	4.8	2.3	3.1	2.3	5.3	2.9	3.3	4.9	2.9	5.0	3.1	7.3	4.1	4.9	2.8	3.6	4.7	1.9	1.2	2.9	3.8	2.6	1.8	1.9
	Combined Belleros		8.3	4.3	5.9	4.7	4.3	4.5	2.3	4.7	2.9	4.5	2.7	3.6	4.3	2.4	3.7	2.4	5.3	3.0	2.9	1.8	2.7	2.5	1.1	1.1	1.5	2.5	1.6	1.4	1.3
Dragoon	No Walker		2.8	1.9	3.7	1.4	3.7	2.8	2.8	2.7	2.2	0.0	2.1	1.2	3.7	2.1	0.0	1.9	3.7	2.2	2.2	1.7	1.7	0.0	0.0	0.4	1.5	0.0	1.7	0.8	0.0
	Walker		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	0.0	0.0	0.0	0.0	3.2	0.0	0.0	0.0	0.0	0.0	0.0	3.7	1.9	0.0	0.0	3.7	0.0	0.0	2.8
	Dragoon Lance		2.8	1.9	3.7	1.4	3.7	2.8	2.8	2.7	2.2	2.8	2.1	1.2	3.7	2.1	3.2	1.9	3.7	2.2	2.2	1.7	1.7	3.7	1.9	0.4	1.5	3.7	1.7	0.8	2.8

Dark Mode FALSE

Points Spent Per Point Killed

Color Coding: Good Bad | Overkill Correction: On | *Sheet by Ponder#6839* | github.com/svknoe/WH40k-Point-Efficiency-Calculator

Wound Penalty	Transhuman	**Toughness**	3	3	4	4	4	4	5	5	5	5	5	6	6	6	7	7	7	8	9	9	10	10	10	11	11	12	12	12	13
Save Bonus	AP Restriction	**Save**	5+	3+	5+	4+	3+	3+	2+	5+	3+	3+	2+	4+	3+	2+	3+	2+	4+	3+	3+	2+	6+	3+	2+	4+	2+	3+	2+	2+	2+
Hit Penalty	Min Hit	**Inv Save**			5+	4+					4+	4+	4+	4+				5+	6+				4+	R 5+	4+	4+		R 5+			R 5+
MW Save		**FnP**								6+				6+											5+	4+					
Dmg Reduction		**Wounds**	1	1	2	1	2	3	2	1	2	6	3	3	4	3	7	5	10	4	10	8	18	12	10	12	13	22	16	16	24
Limited Rerolls		**Points**	6	11	18	12	19	23	27.5	10.5	19	65	40	30	333333	45	50	80	90	666666	80	125	230	140	220	290	190	400	260	200	490

Unit	Weapons	Other	Termagant	Battle Sister	Genestealer	Necron Warrior	Marine	Chosen	Purgator	Beast Snagga	Lychguard	Crisis Suit	Terminator	Bullgryn	Inceptor	Custodian	Scout Sentinel	Obliterator	Raider	Tyrant Guard	Rhino	Carnifex	Lord of Change	Armiger	Walkrant	T. C'tan	Leman Russ	Knight Despoiler	Land Raider	Tyrannofex	Knight Valiant
Bomber	Bombs																														
	Stubbers	Rapid Fire																													
	Combined		2.6	1.8	1.9	1.4	2.2	2.8	2.1	2.3	2.9	2.2	2.2	2.4	2.5	2.0	3.3	1.8	2.2	3.5	3.5	2.1	1.9	2.4	2.2	2.0	2.2	1.5	2.0	2.6	1.6
Raptor	Stubbers	Rapid Fire																													
	Lacannon																														
	Heavy Phosphor																														
	Combined		3.4	2.9	2.8	2.5	3.5	4.0	4.6	3.2	6.3	3.2	4.2	4.1	3.7	4.1	5.3	3.8	3.0	6.3	5.7	4.5	3.4	3.8	4.3	4.4	4.8	3.0	5.2	7.7	5.2
Cawl	Gun		7.4	9.7	5.6	7.4	4.2	4.6	4.8	6.4	8.8	5.5	3.3	11.8	5.6	4.4	9.6	5.0	7.1	12.6	10.0	6.0	8.7	7.1	7.6	13.8	6.6	5.0	5.8	10.0	5.0
	Gun within 9		7.4	9.7	5.6	7.4	4.2	4.6	4.8	6.3	8.8	4.7	3.3	6.3	2.8	4.4	6.4	2.5	3.6	6.3	5.0	4.0	5.8	5.4	4.5	9.2	3.9	3.1	3.8	5.0	3.1
	Arc-Scourge	Vehicle																													
	Axe																														
	Arc-Scourge	Non Vehicle																													
	Dendrites																														
	Combined	Vehicle, no Dend	4.4	4.7	2.8	4.4	2.3	3.0	2.7	3.6	5.0	2.3	2.4	4.8	1.9	2.8	3.1	1.8	1.8	3.9	3.0	2.9	4.0	2.6	3.2	6.9	2.1	1.6	2.0	4.2	1.7
	Combined	No Vehicle, no Dend	3.5	3.6	2.3	3.4	2.1	2.7	2.4	2.9	4.4	2.9	2.2	4.3	1.8	2.6	3.9	1.7	2.2	3.6	3.8	2.7	3.7	3.6	3.1	6.1	3.0	2.1	2.8	4.0	2.4
Corpuscarii	Shoot		1.8	1.5	1.2	0.9	1.7	2.2	3.2	1.7	3.5	2.0	3.3	2.6	3.4	4.4	4.6	4.1	2.4	4.2	4.1	4.2	3.4	5.7	9.0	3.6	9.0	3.6	8.1	10.6	6.5
	Melee		1.7	1.8	1.1	1.1	2.1	2.6	3.8	1.5	4.2	2.4	4.0	3.2	4.1	5.3	5.5	5.0	2.9	5.0	5.0	5.1	4.1	6.8	10.8	4.4	10.8	4.4	9.7	12.7	7.8
	Combined		0.9	0.8	0.6	0.5	0.9	1.2	1.7	0.8	1.9	1.1	1.8	1.4	1.9	2.4	2.5	2.3	1.3	2.3	2.3	2.3	1.9	3.1	4.9	2.0	4.9	2.0	4.4	5.8	3.5
Ranged Robot	Twin Phosphor	Assuming Cast																													
	Heavy Phosphor																														
			5.8	5.8	3.2	5.0	5.3	7.9	6.6	4.3	6.6	4.7	7.9	9.0	6.5	8.8	13.4	11.1	6.7	11.1	10.9	10.2	5.1	7.5	10.8	8.8	11.4	9.0	18.4	35.3	14.6
Melee Robot	Twin-Fists	Assuming Cast																													
	Flamer	Assuming you charge																													
	Combined		3.7	3.1	2.4	3.7	2.4	2.2	2.3	2.5	3.5	2.0	1.7	4.0	2.6	1.6	3.5	2.0	2.1	3.6	2.9	1.9	2.0	1.7	1.8	3.0	2.1	1.5	2.3	3.8	2.5
Fulgurites	Staff	Lmao	1.7	1.2	1.0	1.3	1.1	1.7	1.0	1.3	1.4	1.0	1.2	2.2	1.4	1.2	2.6	1.3	1.8	2.3	2.3	1.3	1.4	1.5	1.4	1.8	1.4	1.5	1.7	2.2	1.3
Las Strider	Sadness	:(	12.9	8.4	6.4	12.9	4.9	4.4	4.2	7.4	8.9	3.6	4.2	6.9	2.9	2.8	3.8	2.2	2.9	3.8	3.3	2.1	3.2	2.6	2.6	5.6	2.3	2.1	2.4	3.8	2.6
AC Strider	??		9.6	10.5	3.2	6.4	6.1	5.0	9.2	6.1	7.9	3.9	6.3	5.6	6.6	5.6	7.6	6.3	3.8	8.0	7.5	7.2	3.5	5.8	9.2	5.6	10.7	4.1	9.3	16.2	4.4
Breachers	Arc Vehicle Longrange	Assuming RR	-	-	-	-	-	-	-	-	-	3.0	-	-	-	-	5.8	-	3.2	-	6.4	-	-	3.7	-	-	5.1	2.6	4.5	-	3.2
	Arc Non Vehicle Lonrange		7.7	7.0	3.2	6.4	4.1	3.4	5.3	5.5	6.8	-	3.6	6.4	5.0	3.2	-	3.6	-	8.1	-	7.0	5.0	-	6.6	8.0	-	-	-	11.6	-
	Arc Vehicle Halfrange	Assuming RR	-	-	-	-	-	-	-	-	-	1.5	-	-	-	-	2.9	-	1.6	-	3.2	-	-	1.8	-	-	2.5	1.3	2.2	-	1.6
	Arc Non Vehicle Halfrang	Assuming RR	3.9	3.5	1.6	3.2	2.0	1.7	2.6	2.8	3.4	-	1.8	3.2	2.5	1.6	-	1.8	-	4.1	-	3.5	2.5	-	3.3	4.0	-	-	-	5.8	-
	Torsion Infantry		5.8	6.5	2.8	4.8	3.5	6.2	3.9	3.9	3.5	-	5.0	8.6	3.7	5.2	-	4.4	-	4.9	-	-	-	-	-	-	-	-	-	-	-
	Hydraulic																														
	Arc Claw	Vehicle																													
	Arc Claw	Non																													
	Best Melee Vehicle																														
	Best Melee Non Vehicle																														
	Best Anti Infantry	Shooting	3.9	3.5	1.6	3.2	2.0	1.7	2.6	2.8	3.4	-	1.8	3.2	2.5	1.6	-	1.8	-	4.1	-	3.5	2.5	-	3.3	4.0	-	-	-	5.8	-
	Combined Vs Vehicle		6.4	5.3	3.2	6.4	3.1	2.5	3.5	4.6	6.8	1.0	2.4	6.4	3.8	2.1	1.7	2.4	1.0	6.1	2.2	4.6	5.0	1.3	4.4	8.0	1.7	0.9	1.5	7.7	1.1
	Combined Vs non Veh		2.1	2.0	1.1	1.8	1.2	1.0	1.5	1.7	2.3	3.0	1.0	2.1	1.5	0.9	4.4	1.0	2.6	2.4	7.3	2.0	1.7	4.1	1.9	2.7	5.1	2.9	4.5	3.3	3.8
Destroyers	Plasma Overloaded		3.8	3.1	1.9	3.8	1.8	3.0	2.1	2.8	4.0	2.7	2.9	6.9	2.3	2.6	3.5	2.2	1.9	3.6	5.4	3.7	4.5	3.7	3.9	9.5	4.2	2.4	3.5	9.2	3.4
	Heavy Grav Vehicle		-	-	-	-	-	-	-	-	-	3.2	-	-	-	-	5.5	-	2.6	-	4.3	-	-	3.0	-	-	5.1	1.9	4.2	-	1.7
Ikarus Crawler	Missile	Vs Fly																													
	Array	vs Fly																													
	Combined		-	-	-	-	-	-	-	-	-	6.0	-	-	7.2	-	-	-	5.1	-	-	-	4.6	-	-	9.1	-	-	-	-	-
Ikarus Crawler	Missile	Vs Fly																													
	Array	vs Fly																													
	Combined		11.6	12.2	4.0	8.0	7.1	10.0	10.8	8.1	11.1	-	11.9	11.6	-	11.6	10.9	9.1	-	11.4	13.3	11.9	-	10.1	13.5	-	18.3	7.7	15.6	32.7	10.1
Erad Crawler	Erad Longrange		5.4	8.1	3.1	4.5	3.9	7.8	6.1	5.4	6.4	5.2	6.9	13.4	5.8	9.6	11.5	8.1	6.0	9.1	12.0	9.2	11.3	12.3	14.7	23.8	15.9	7.9	13.3	34.6	14.1
	Erad Shortrange		4.5	6.1	3.1	4.5	2.9	2.9	4.1	4.4	6.4	3.4	2.3	7.5	4.4	3.2	6.5	3.6	3.8	6.8	7.2	4.6	7.5	6.2	6.5	11.9	7.6	4.3	6.6	11.5	5.6
Phosphor Crawle	Phosphor		16.8	15.3	8.8	17.5	11.1	18.3	11.5	12.3	14.7	9.7	15.8	33.6	14.6	18.7	33.6	23.6	17.5	26.5	26.3	20.2	16.4	18.0	21.5	34.8	23.2	23.1	38.8	100.8	30.9
Neutron Crawler	Neutron		9.3	12.2	7.0	9.3	5.3	6.4	6.1	8.0	11.1	5.3	4.6	10.0	4.2	6.1	7.5	4.4	5.8	7.6	8.1	5.3	7.9	6.5	6.4	13.9	5.6	4.4	4.9	8.0	4.4
Neutron Crawler	Neutron Heavy (?)		7.0	9.2	5.3	7.0	4.0	4.8	4.6	6.0	8.3	4.0	3.4	7.5	3.2	4.6	5.6	3.3	4.3	5.7	6.1	4.0	5.9	4.9	4.8	10.4	4.2	3.3	3.7	6.0	3.3
Skystalker	Flechette		2.9	2.4	2.9	2.2	4.1	5.1	5.7	3.0	8.2	3.6	5.9	6.2	8.1	10.4	10.9	9.8	5.8	9.9	9.8	10.0	4.1	6.7	10.6	4.3	10.7	4.3	9.6	12.5	7.6
	Melee																														
	Combined		2.3	1.9	2.3	1.8	3.3	4.1	4.6	2.4	6.6	2.9	4.7	5.0	6.6	8.4	8.8	7.9	4.7	8.0	7.9	8.1	3.3	5.4	8.6	3.5	8.6	3.5	7.8	10.1	6.2
Steryl	Flamer		1.5	1.6	1.3	1.3	2.5	3.1	5.2	2.1	7.6	3.3	5.4	2.9	3.8	4.8	5.0	4.5	2.7	9.1	9.0	9.2	3.8	6.2	9.8	4.0	9.9	4.0	8.9	11.5	7.1
	Melee																														
	Combined																														
Raiders	Guns		5.3	3.6	4.4	3.3	5.1	6.3	5.0	6.1	8.4	5.5	5.1	6.4	6.3	4.6	8.4	4.3	5.9	10.1	10.0	5.1	6.3	6.9	5.5	6.6	5.5	4.4	4.9	6.4	3.9
	Melee																														
	Combined		2.2	1.9	1.9	1.7	2.8	3.5	3.6	2.8	5.8	3.3	3.7	3.4	3.8	3.3	5.0	3.1	3.1	7.0	6.9	4.2	3.8	4.7	4.5	4.0	4.5	3.0	4.0	5.2	3.2
Fire Dogo	Carbine	plus 3 or 5 mortals																													
	Pistol																														
	FireDogoHead																														
	Combined	Ok into Chaff	1.3	1.4	1.5	1.4	2.2	2.8	2.7	1.4	4.3	2.1	2.7	3.9	4.0	4.4	6.0	4.3	3.4	5.9	5.8	4.8	3.2	4.0	5.1	3.4	5.1	2.8	4.9	6.4	3.9
Rustie	Sargeant	Infantry																													
	Sargeant																														
	Swords																														
	Razors	infantry																													
	Razors																														
	Swords Combined	Infantry	2.0	1.4	1.9	1.6	2.0	2.5	1.9	2.3	3.4	2.9	2.0	2.9	2.5	1.8	4.4	1.6	3.1	4.1	5.8	3.0	3.7	4.0	3.2	3.9	3.2	2.6	2.9	3.7	2.3
	Swords Combined		2.2	1.7	2.2	1.9	2.5	3.0	2.5	2.9	4.9	2.6	2.6	3.7	3.2	2.3	3.9	2.2	2.8	5.9	5.3	2.7	3.3	3.6	2.9	3.5	2.9	2.3	2.6	3.4	2.1
	Razors Combined	Infantry	2.3	1.7	2.1	2.0	2.0	2.5	1.7	1.5	2.5	-	1.8	2.9	2.0	1.6	-	1.5	-	2.4	-	-	-	-	-	-	-	-	-	-	-
	Razors Combined		-	-	-	-	-	-	-	-	-	4.7	-	-	-	-	5.5	-	3.6	-	9.5	6.1	7.5	6.5	6.5	7.9	6.6	4.2	5.9	7.7	4.7
Rangers/Vang	Plasma																														
	Arc Long Range	Vehicle																													
	Arc Short Range	Vehicle																													
	Rifle																														
	Arc Long Range																														
	Arc Short Range																														
	Radium	Infantry																													
	Radium																														
	Ranger Long Range	Vehicle	3.4	3.3	2.6	3.1	3.5	4.9	4.9	4.0	10.0	3.9	7.1	6.5	4.7	5.4	5.2	4.7	3.3	8.9	7.5	8.6	7.0	5.6	11.0	8.9	5.4	3.6	4.7	16.2	4.0
	Ranger Short Range	Vehicle	3.4	3.3	2.6	3.1	3.5	4.9	4.9	4.0	10.0	3.1	7.1	6.5	4.7	5.4	4.2	4.7	2.7	8.9	5.6	8.6	7.0	4.1	11.0	8.9	3.8	2.6	3.3	16.2	2.7
	Ranger Long Range		3.2	3.1	2.4	2.9	3.1	4.3	4.3	3.6	8.2	5.3	5.9	5.8	4.1	4.6	6.8	4.1	4.1	7.6	11.3	7.5	6.0	8.7	9.2	7.9	9.7	5.6	8.3	13.9	7.2
	Ranger Short Range		3.0	2.8	2.1	2.6	2.8	3.7	3.8	3.2	7.0	5.3	5.0	5.2	3.7	4.0	6.8	3.6	4.1	6.7	11.3	6.6	5.3	8.7	7.9	7.1	9.7	5.6	8.3	12.2	7.2
	Vanguard	Vehicle	16.0	10.5	8.0	16.0	6.1	10.0	6.5	11.8	16.8	2.3	12.0	28.8	7.5	8.0	4.0	6.8	2.7	12.1	4.5	6.6	4.7	3.2	8.2	5.7	3.1	2.1	2.8	11.5	2.3
	Vanguard	Infantry	2.4	2.3	1.5	1.7	2.1	2.7	2.6	1.7	2.9	11.1	3.1	2.6	2.3	2.6	11.5	2.4	8.0	3.1	18.0	7.8	9.4	15.4	9.8	17.0	13.3	9.9	11.1	17.3	10.1
Omnipulus	Infantry		1.2	0.6	0.8	0.6	0.7	0.9	0.5	0.8	0.7	-	0.5	0.8	0.7	0.5	-	0.4	-	0.9	-	-	-	-	-	-	-	-	-	-	-
Omnipulus	Monster		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.7	0.9	-	0.8	1.0	-	-	-	0.9	-
FireDo																															

Points Spent Per Point Killed

Color Coding: Good Bad | Overkill Correction: On | *Sheet by Ponder#6839* | github.com/svknoe/WH40k-Point-Efficiency-Calculator

Wound Penalty	Transhuman	**Toughness**	3	3	4	4	4	4	5	5	5	5	5	6	6	6	7	7	7	8	9	9	10	10	10	11	11	12	12	12	13
Save Bonus	AP Restriction	**Save**	5+	3+	5+	4+	3+	3+	2+	5+	3+	3+	2+	4+	3+	2+	3+	2+	4+	3+	3+	2+	6+	3+	2+	4+	2+	3+	2+	2+	2+
Hit Penalty	Min Hit	**Inv Save**			5+	4+					4+	4+	4+	4+				5+	6+				4+	R 5+	4+	4+		R 5+			R 5+
MW Save		**FnP**								6+				6+											5+	4+					
Dmg Reduction		**Wounds**	1	1	2	1	2	3	2	1	2	6	3	3	4	3	7	5	10	4	10	8	18	12	10	12	13	22	16	16	24
Limited Rerolls		**Points**	6	11	18	12	19	23	27.5	10.5	19	65	40	30	333333	45	50	80	90	566666	80	125	230	140	220	290	190	400	260	200	490

Unit	Weapons	Other	Termagant	Battle Sister	Genestealer	Necron Warrior	Marine	Chosen	Purgator	Beast Snagga	Lychguard	Crisis Suit	Terminator	Bullgryn	Inceptor	Custodian	Scout Sentinel	Obliterator	Raider	Tyrant Guard	Rhino	Carnifex	Lord of Change	Armiger	Walkrant	T. C'tan	Leman Russ	Knight Despoiler	Land Raider	Tyrannofex	Knight Valiant
Ferrumite	Vs Big																														
	vs Small																														
Belleros	vs Big	Direct!																													
	vs Small	Direct!																													
	Stubber																														
	Disruptor																														
	Ferrumite All																														
	Belleros All																														
	Combined Ferrumite		6.9	5.8	4.3	5.4	5.0	5.1	5.9	5.7	8.5	3.2	4.8	5.7	3.9	4.2	5.2	3.7	2.8	5.7	4.7	4.2	4.1	3.4	4.4	6.6	4.3	2.7	4.3	8.4	4.9
	Combined Belleros		3.7	3.9	3.5	3.3	4.5	5.3	5.8	3.8	6.8	3.8	5.1	5.2	4.5	5.0	7.0	4.8	3.8	7.8	8.0	6.5	5.4	6.3	7.6	7.3	8.5	4.1	7.3	10.8	7.1
Dragoon	No Walker																														
	Walker																														
	Dragoon Lance		3.6	2.9	1.8	3.6	1.7	2.8	1.6	2.1	2.8	2.0	2.2	5.2	1.7	1.9	2.6	2.0	1.8	3.4	3.4	2.3	2.8	1.4	1.5	6.0	2.7	0.9	2.2	5.8	1.1

Dark Mode FALSE

v6.2d 2023-06-18

Fixed interaction between AP 0 and 3+ saves in cover.

v6.2c 2023-06-17

Fixed interaction between wound penalties and 'Anti'.
Fixed bug that caused FNP to not work against mortal wounds.
Replaced divide by 0 error message in PPP sheet by ' - '.
Fixed bug that broke flat mortals in excel version of the sheet.

v6.2b 2023-06-16

Fixed bug that caused 'Anti' to not work.

v6.2a 2023-06-16

Blank BS values are now allowed for Torrent weapons.
Wound on Roll' and 'Crit on Roll' have been combined into a single 'Anti' column.
Blast is now 0-N rather than 0-1. This accounts for the possibilty of a single profile having multiple blast weapons.
Fixed interaction between crits and light cover.
Updated targets.

v6.1d 2023-06-06

AP values may now be specified as negative values as well as positive ones. The absolute value is used.
Fixed bug introduced in 6.0a that caused reroll one die to hit/wound to no work properly.

v6.1c 2023-06-05

Fixed bug introduced in 6.1a that caused 'damage' coulmn to be used for number of attacks.

v6.1b 2023-06-05

Fixed bug introduced in 6.1a that caused rows ~50 onwards to not work.

v6.1a 2023-06-04

Minor GUI update.
Fixed 'Blast' bug that caused Blast to make damage calculations throw errors.
Made 'Attacks' column of 'Input' sheet more flexible: Any string on the format 'AdB+C' is valid for any int values of A, B and C.
Fixed bug that in some cases made random damage not work correctly in Google Sheets version.

v6.0b 2023-06-02

Removed unused Targets rows to reduce file size.
Fixed bug that caused dark mode to behave badly in google sheets version.

v6.0a 2023-05-29

Updated to 10th edition rules:
- Crits, Sustained Hits, Lethal Hits, Devastating Wounds, Blast, Reroll a single roll of 1.
Enabled cut/paste and row insertion/deletion in the Targets sheet.
Added support for using multiple unit types for Filter and Targets.
Updated targets.

v5.7a 2023-05-22

Enabled cut/paste and row insertion/deletion in the Input sheet.

v5.6c 2023-05-10

Fixed bug that made the 'End Attack' feature for mortal wounds to not work.

v5.6b 2023-02-02

Fixed bug that in rare cases made Transhuman and Transhitman to not work.

v5.6a 2023-01-30

Added Dark Mode: See setting in upper right of Input sheet.
Added 'no ignore wounds' option.
Added melee/ranged split for damage reduction.
Bug fix: A blank armour save is now interpreted at a 7+ rather than as a 0+.
Updated targets.

v5.5c 2023-01-24

Updated targets.

v5.5b 2023-01-06

Added cap option for mortal wounds.
Updated target stats for Arks of Omen.

v5.5a 2022-11-18

Changed Poison to 'Wound on Roll'
Removed 'Vehicle' filter from mortal wounds.
Added general filter to enable/disable damage rows for any unit type.
Updated target stats.

v5.4e 2022-11-10

Added 'Changelog' sheet.
Added vehicle filter for mortal wounds.
Updated target stats.

v5.4d 2022-10-08

Bug fix: Fixed reroll 1 die to wound in cases where there are no hits.
Bug fix: Corrected overkill penalty.
Added unit size for targets.
Overkill penalties now only apply to target unit of more than 1 model.
Updated target stats.

v5.4c 2022-09-26

Bug fix: A few rows had corrupted formulas.

v5.4b 2022-09-24

Added Deamon saves.
Updated enemy stats.

v5.4a 2022-07-08

Updated UI
Added option for flat number of mortal wounds.
Fixed bug where saves vs mortal wounds were applied twice.
Fixed a bug that stopped combining rows working for some rows.

v5.3d 2022-07-04

Updated target stats.

v5.3c 2022-07-01

Added option of ignoring penalties to hit and wound.

v5.3b 2022-06-21

Added relative referencing to 'Combine' and 'Pick Best'.

v5.3a 2022-05-12

Added Min Hit Roll for defenders.
Added AP reduction (AoC).
Added setting for max overkill penalty.
It is no longer required to insert weapon names.
Updated enemy stats.

v5.2b 2022-03-21

Fixed formula bug for reroll 1 hit that impacted some rows.
Wound on hit roll now correctly doesn't auto wound on rolls of 1.

v5.2a 2022-03-18

Split hit penalties into melee and ranged versions.
Split wound penalties into melee and ranged versions.
Split reroll denying into melee and ranged versions.
Added light cover.
Added ignore light cover.
Added half damage.
Extended auto wound on 6s to auto wound on Xs.
Changed wording of transhuman.
Updated enemy stats.

v5.1c 07.02.2022

Fixed damage 11-16 being broken.
Fixed line 46 being broken.
Changed reroll notation from 'n/6' to 'n' to avoid Google Sheets fraction/date bug.

v5.1b 2022-02-05

Removed rows 151-300 to reduce file size.
Minor performance increase.
Removed six enemy columns.
Updated enemy stats.

v5.1a 2022-02-04

Fixed exploding 6s bug caused by last update.
Replaced Talos by Stormsurge.

v5.0a 2022-02-03

Added descriptions of legal inputs.
Shifted PPP color range downwards:
- From (green = 1.5, yellow = 4, red = 10) to (green = 0.8, yellow = 2.8, red = 8)

Fixed bug that caused mortal wounds to ignore FNP.
Fixed poison bug.
Added more damage profiles.
Added a distinction between melee and ranged attacks.
Updated enemy point costs, changed enemy selection.

Added more special rules for attackers:
- Auto hits
- Auto wound on hit rolls
- Reroll one failed hit roll
- Auto wounds
- Reroll one failed wound roll
- Reroll damage rolls
- Reroll 1 damage roll
- Ignore invuls

Added more special rules for defenders:
- Invul saves vs melee.
- Invul saves vs ranged.
- Save vs mortal wounds.
- No rerolls from melee
- No rerolls from ranged

v4.1c 2021-12-21

Updated enemy stats.

v4.1b 2021-11-13

Bug fix: The armor value of the fourth enemy was hardcoded to 5, rather than being read from the enemies sheet.

v4.1a 2021-11-12

Added option to ignore overkill calculations.
Added display of colour coded defensive abilities to output sheets.
Reduced column widths for easier viewing.
Update enemy stats.

v4.0a 2021-11-06

Updated reroll interaction with penalties.
Added roll modifier caps.
Added wound modifiers.
Added exploding 6s to hit.
Added damage reduction abilities.
Added Ignore AP abilities.
Added Transhuman Physiology.
Updated stats for enemies.
Updated user guide with new abilities and Enemies sheet.
Added more syntax explanations to Input sheet.

Rework of interactions between (random) damage, FNP and target wounds.

v3.3b 2018-12-16

Updated point costs for enemies.

v3.3a 2018-04-14

Added the option of letting a unit to choose weapon types based on the target.
Changed some enemies and updated point costs.

v3.2e 2018-03-10

Fixed the title of the PPP sheet.

v3.2d 2018-03-10

The 'rend dmg mod' sheet had the wrong forumla from line 114 onwards.

v3.2c 2018-02-05

Fixed a bug where poison did not respond to changing the targets vehicle status.

v3.2b - Not uploaded

Bug fix

v3.2a 2017-11-07

Fixed the interaction between to hit penalties and rerolls to hit.

v3.2 2017-11-06

Added an optional input sheet for enemies.
Added support for to hit penalties for enemy targets.
Removed the partial support for Quatum Shielding.
Removed support for Rapacious Hunger.
Updated Hive Tyrant stats for enemy targets.
Replaced Bloodthirster with Daemon Prince in enemy targets.
Fixed an error that caused snipers with multiple attacks to cause too few mortal wounds.

v3.1 2017-11-05

Fixed the chance to rend.
Updated the reroll to hit input to reflect the user manual.

v3.0 2017-10-22

Major update.
Changes to the input sheet, making it more use friendly.
Reorganisation of the calculations, making the sheet easier to update later. This also fixed multiple errors, such as the interaction between rending and extra damage on a '6'.
Fixed the interaction between reroll to wound, and effects on a '6' to wound.
Fixed the broken reroll ones to hit, making it no longer apply twice.
Added Melta
Added All is Dust
Added user manual
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