

# NERD STUFF

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Poe Refugee's damage calculator to calc damage past dummy cap!

<https://docs.google.com/spreadsheets/d/1qIP900Zu2QPBpgC1kCTXcmJ4QIWtdAYx05GGwNlprkM/edit#gid=0>

Torchlight tickrate 0.032258064516129 (31 ticks per second)

(this is also the maximum amount of hits per second etc etc-> 31)

The damage cap is 15 Trillion all sources combined now.

breakpoints on attack speed is 5,6,7.5,15 and 30

How damage is generally calculated

Base \* ( flat % + flat % +flat % etc) = base A

base A \* (1+Additional A%) \* (1+Additional B%) \* (1+Additional C%)

## Damage Calculation



Similar to the calculation of stats, damage = Base Damage x (1 + all damage increase percentages) x (1 + additional damage increase percentage 1) x (1 + additional damage increase percentage 2)...

(This doesn't apply to additional damage to life, the sources are all added together first before being multiplied - Fl4k)

- At skill levels 21-30, the bonus damage and bonus summon damage provided are increased by 8% → 10%. For example:

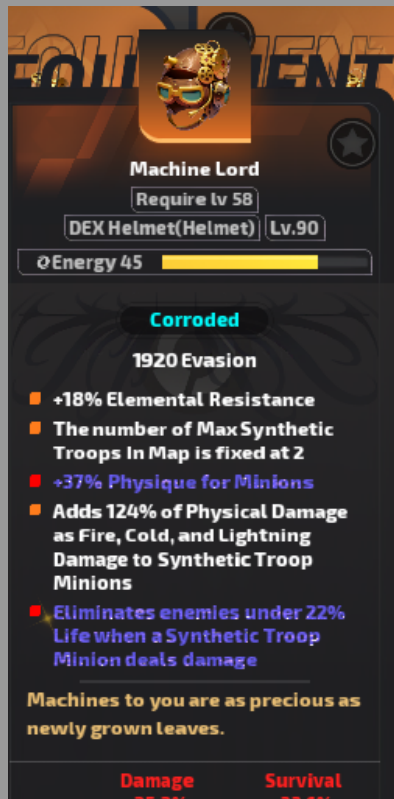
Level 21 skills have an additional 10% higher base damage than level 20 skills

Level 31 skills have an additional 8% higher base damage than level 30 skills

+Shadows

$2 + (\text{shadows} - 1) \times 0.3$

## Best SS20 Cull



1s sources

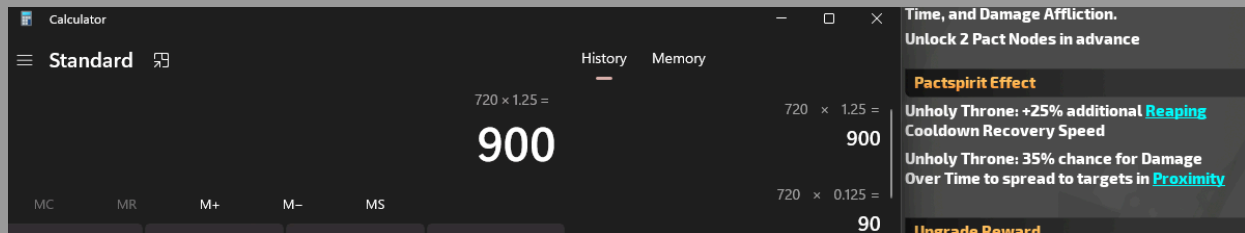
Reap Cooldown Reduction	Reap CDR (seconds)	RPS
100%	0.5	2.00000 RPS
200%	0.3333	3.00030 RPS
300%	0.25	4.00000 RPS
400%	0.2	5.00000 RPS
500%	0.16667	6.00018 RPS
600%	0.1428	7.00490 RPS
700%	0.125	8.00000 RPS
800%	0.1111	9.00901 RPS
900%	0.1	10.00000 RPS
1000%	0.0909	11.00110 RPS
1100%	0.08333	12.00048 RPS
1200%	0.07692	13.00078 RPS
1300%	0.071428	14.00056 RPS
1400%	0.0666666	15.00015 RPS

ETC you aren't guna cap ur reap cdr to the tickrate of the server 4 Second sources

Reap Cooldown Reduction	Reap CDR (seconds)	RPS
100%	2.0000	0.50000 RPS
200%	1.3333	0.75002 RPS
300%	1.0000	1.00000 RPS
400%	0.8000	1.25000 RPS
500%	0.6667	1.50008 RPS
600%	0.5714	1.75070 RPS
700%	0.5000	2.00000 RPS
800%	0.4444	2.25023 RPS
900%	0.4000	2.50000 RPS
1000%	0.3636	2.75028 RPS
1100%	0.3333	3.00003 RPS
1200%	0.3077	3.25026 RPS
1300%	0.2857	3.50012 RPS
1400%	0.2667	3.75009 RPS

Level 1 soulking would bring you to a breakpoint at 720 reap cdr for 10 reaps per second on 1s

sources and 2.5 reaps per second on 4s sources



## Penetration

To calculate the damage in this situation, we account for the mob's resistance, the penetration effect, and the fact that resistance can go negative.

### Key Information:

- Base damage = 100.
- Mob resistance = 30%.
- Penetration = 100%.

### Step-by-Step Calculation:

#### 1. Apply Penetration:

Damage penetration reduces resistance directly by 1% for every 1% penetration.

$$\text{New Resistance} = \text{Original Resistance} - \text{Penetration}$$

Substituting the values:

$$\text{New Resistance} = 30\% - 100\% = -70\%.$$

#### 2. Effect of Negative Resistance:

Negative resistance amplifies damage. If resistance is  $-70\%$ , the damage multiplier is:

$$\text{Damage Multiplier} = 1 - (\text{Resistance Percentage}) = 1 - (-0.7) = 1.7.$$

#### 3. Calculate Final Damage:

Multiply the base damage by the damage multiplier:

$$\text{Final Damage} = \text{Base Damage} \times \text{Damage Multiplier}.$$

Substituting the values:

$$\text{Final Damage} = 100 \times 1.7 = 170.$$

### Conclusion:

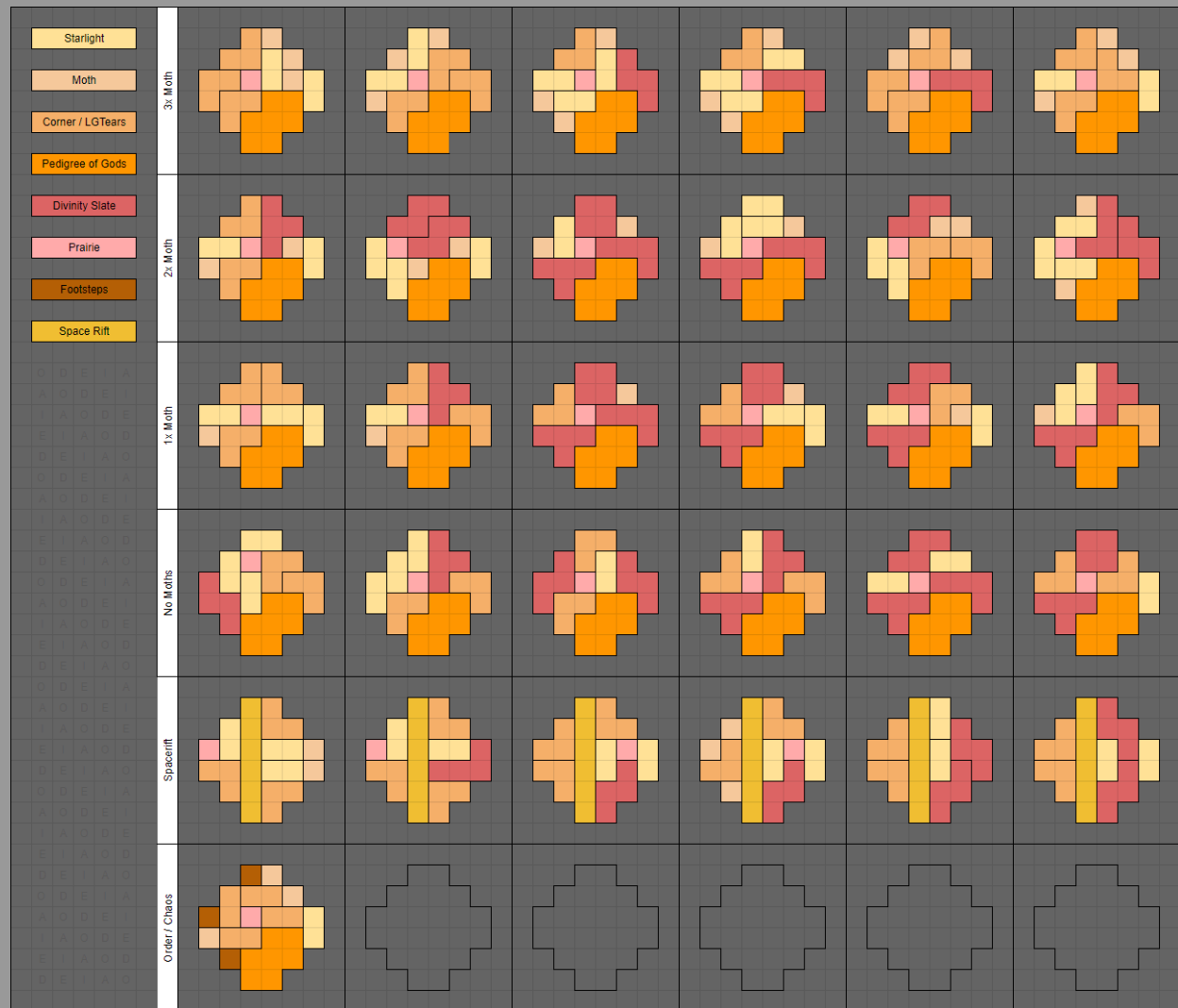
With 100% damage penetration and 30% initial resistance (allowing resistance to go negative), you would deal 170 damage.

**Monsters' Armor DMG Reduction for incoming damage is calculated using the following formula:**  
**Monster DMG Reduction = Monster Armor / (0.9 x Monster Armor + 30000)**  
**Monster Armor in the formula increases with the enemy's level, ranging from 0 to 27273.**

Question: How does ignore resistance actually work? and what is the base resistance of mobs? After testing ignore resistance with penetration it seems as though it removes any interactions with resistance making things like penetration and -% res not get calculated.

Answer: The base resistance of monsters is set at 30%. When an effect grants "ignore resistance," it forcibly reduces a monster's resistance to 0%, overriding any other modifiers or interactions. This mechanic ensures that neither penetration nor resistance reduction affects the monster once its resistance is negated.

Slate setups if ur into that thing



Double corruption chance for mirror tier item

There is only **1 favorable outcome** (the pair of affixes you want). Thus, the probability of hitting the specific pair of affixes is:

$$P(\text{Specific 2 affixes}) = \frac{1}{15} = 0.0667 \text{ (6.67\%)}. \quad \text{_____}$$

### Step 2: Combine with the 30% chance to double corrupt.

Since the double corruption only occurs 30% of the time, the total probability of both successfully double corrupting the item **and** hitting the specific 2 affixes is:

$$P(\text{Double Corruption} + \text{Specific 2 affixes}) = P(\text{Double Corruption}) \times P(\text{Specific 2 affixes}) = 0.3 \times 0.0667 = 0.02 \text{ (2.00\%)}. \quad \text{_____}$$

### Final Answer:

The chance of successfully double corrupting an item and hitting **2 specific affixes you want out of a pool of 6** is:

2.00%

Question: Does pre-crafting an affix on gear that you don't want to roll increase your odds to get the affix you want to roll? or is it a fixed chance regardless?

Answer: No, the odds are independent and fixed.

Casting/Cast/Casted: Triggered, Automated, Manual, Channeled

Using/Use/Used: Manual, Channeled, (Unless specified on an activation)

Recent/Recently: 4 seconds

Nearby: 6m

Aura calculator by ChromaticRed:

<https://docs.google.com/spreadsheets/d/1J4Kk5FvvkynQGKPTLXARxDJYDtyUP0p-4uJ5YbUkdHA/edit?usp=sharing>

Aeterna Candle crafting chart:

<https://torchcodex.com/latest/en/soulCandleFusion.html>

Kong / dream / nightmare / aeterna

Q: As the question, do chalk/kong or purple drop pet work on dream/city of aeterna/mist village content?

A: The Kong's outer ring applies to all. The rest apply to Aeterna Treasure Chest and Nightmare drops (excluding Bubbles).

Q: For the overview, I just want to ask if the flame fuel pact spirit works when we open the bubble of a nightmare/chest of aeterna city? Thank you so much.

A: Bubbles are ineffective, Aeterna is effective.

Q: Does "additional fluorescent memory dropped" affect bubbles from nightmares? does "additional fluorescent memory dropped" work inside POB or only kong's legendary trait?

A: It does not affect Nightmare bubbles. Only Kong's outer ring effect works.

Fastest map layouts

Best Boss Rush Zones:

Glacial: Demiman village / Blustery Canyon

Blistering: Confession Chapel

Steel forge: Cloud walls/Alleys of the lost

Thunder wastes: Prayer Sanctuary

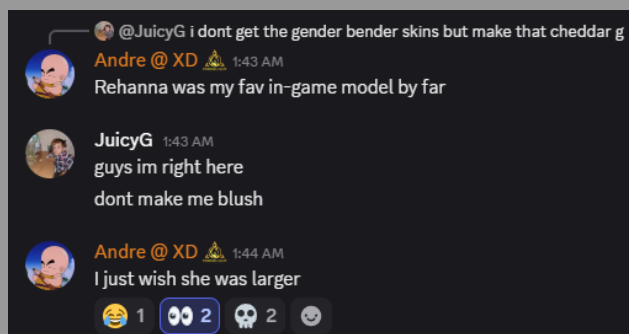
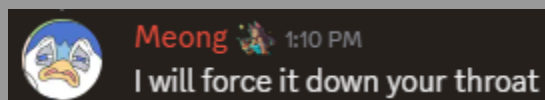
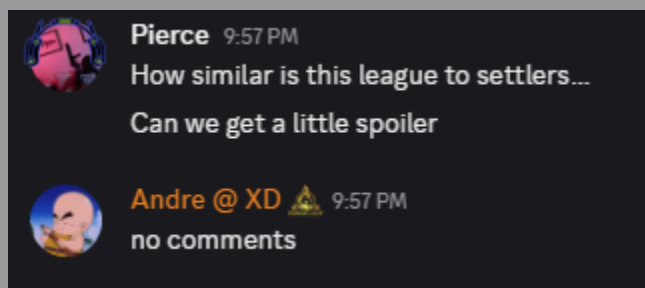
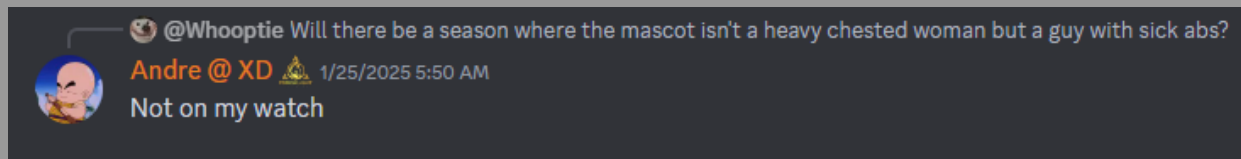
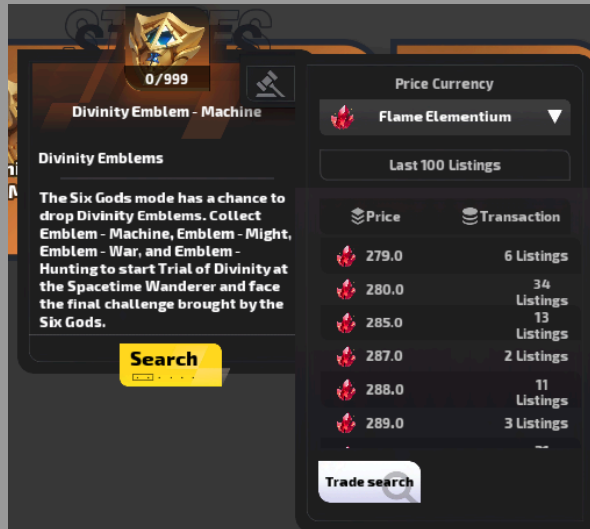
Voidlands: Filthy Forest



# MEMES

Question: I ran over 100 maps with god of machines tree, and I have only dropped one divinity emblem. Are there any certain conditions you need to meet in order to drop the emblems, or is it just pure luck?

Answer: Just an issue of chance.



Question: With the recent "Compass Rework" and then the immediate release of the Compass Pact Spirit; are we to expect "Fossil Pact Spirits", "Beacon Pact Spirits", are coming to the game? It seems many farming strategies are already gated behind real life money Pact Spirits. If this is the direction the game is going can you please explain why and your design focus around these pact spirits?

Answer: Our current philosophy in designing and developing Pacts is likely to remain consistent in upcoming seasons. However, we are committed to implementing additional ways for the broader player base to obtain free pacts and introducing more catch-up mechanics.