

# Idleon Formulas

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# 1 Introduction

TODO

## 2 Global

### 2.1 XP needed to lvl up

$$\begin{aligned} \text{XP}_{\text{Class}} &= \left\lceil \left( 15 + \text{lvl}^{1.9} + 11 \times \text{lvl} \right) \times \left( 1.208 - \min \left\{ 0.164, \frac{0.215 \times \text{lvl}}{\text{lvl} + 100} \right\} \right)^{\text{lvl}} - 15 \right\rceil \\ \text{XP}_{\text{Skill}} &= \left\lceil \left( 15 + \text{lvl}^2 + 15 \times \text{lvl} \right) \times \left( 1.225 - \min \left\{ 0.164, \frac{0.135 \times \text{lvl}}{\text{lvl} + 50} \right\} \right)^{\text{lvl}} - 30 \right\rceil \\ \text{XP}_{\text{Smithing}} &= \left\lceil \left( 15 + \text{lvl}^2 + 13 \times \text{lvl} \right) \times \left( 1.225 - \min \left\{ 0.164, \frac{0.135 \times \text{lvl}}{\text{lvl} + 50} \right\} \right)^{\text{lvl}} - 30 \right\rceil \end{aligned}$$

### 2.2 Fighting Formulas

#### 2.2.1 Damage done

#### 2.2.2 Damage taken per hit

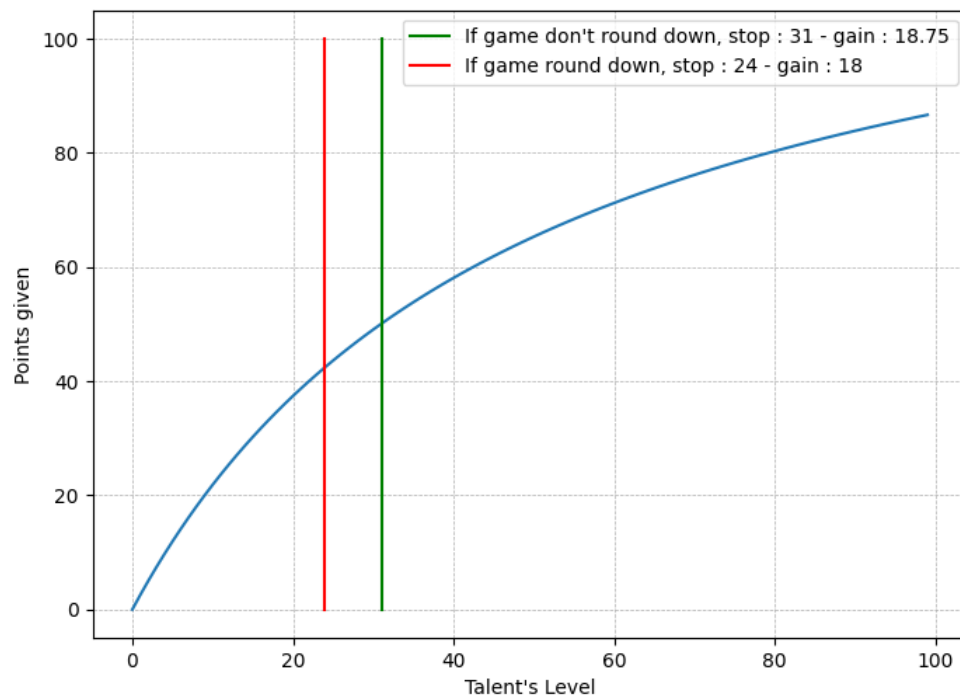
$$\text{Damage} = \left\lceil \frac{\text{attack}_{\text{enemy}} - 2.5 \times \text{defense}^{0.8}}{\max \left\{ 1, 1 + \frac{\text{defense}^{1.5}}{100} \times \frac{\text{defense}}{\max\{1, \text{attack}_{\text{enemy}}\}} \right\}} \right\rceil$$

# 3 Talents

## 3.1 Star Talents

### 3.1.1 Stonks!

$$\text{Points} = 130 \times \frac{x}{x + 50}$$



**Figure 3.1.1:** Where to stop leveling up Stonks!

## 4 Alchemy

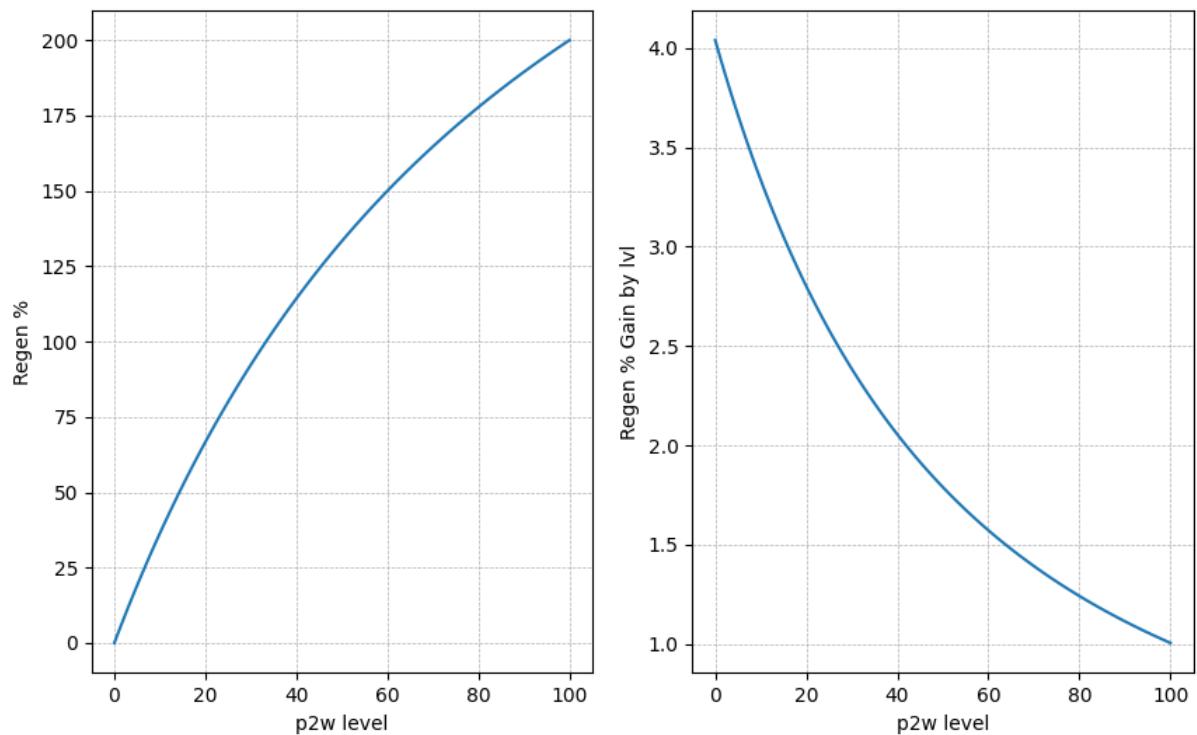
### 4.1 P2W tab

#### 4.1.1 Cauldron

$$\begin{aligned}\text{regen}_{\%} &= \frac{16 + 0.5 \times (\text{regenLvl} - 1)}{15} \times \text{regenLvl} \times 3 \\ \text{newBubble} &= 1 + \frac{\text{newBubbleLvl} \times 2.5}{\text{newBubbleLvl} + 100} \\ \text{boostReqLow}_{\%} &= 70 \times \frac{\text{boostLvl}}{100 + \text{boostLvl}}\end{aligned}$$

#### 4.1.2 Liquid

$$\begin{aligned}\text{regen}_{\%} &= 400 \times \frac{\text{regenLvl}}{100 + \text{regenLvl}} \\ \text{cap} &= \text{capLvl}\end{aligned}$$



**Figure 4.1.1:** How much regen you gain with p2w

### 4.1.3 Vials

$$\text{cap} = \text{capLvl}$$

$$\text{rng} = 250 \times \frac{\text{rngLvl}}{100 + \text{rngLvl}}$$

### 4.1.4 Player

$$\text{AlchSpeed}_{\%} = 35 \times \frac{\text{AlchSpeedLvl}}{100 + \text{AlchSpeedLvl}}$$

$$\text{ExtraXP}_{\%} = \frac{11 + 0.5 \times (\text{ExtraXPLvl} - 1)}{10} \times \text{ExtraXPLvl}$$

## 4.2 Liquid & Cauldron

### 4.2.1 Liquid

$$\text{liquid}_{/\text{hour}} = \left( 1 + \frac{\text{decant}_{\%} + \text{RLP2W}_{\%} + \text{vial}_{\%}}{100} \right) \times \left( 1 + \frac{\text{stamp}_{\%} + \sum ((\text{alchLvl} * 2 + 4)^{0.65})}{100} \right)$$

- RLP2W<sub>%</sub> is P2W Liquid Regen

Multiply  $\text{liquid}_{/\text{hour}}$  by 1.5 if you bought the gem upgrade.

### 4.2.2 Cauldron

TODO

## 4.3 Bubble

TODO



## 5 Post Office

TODO

## 6 Other

### 6.1 Boxes

**Beware, the prowess effect in each box affect only the concerned skill although it's only written "prowess".**

#### 6.1.1 Civil War Memory

$$\begin{aligned}\text{damage}_{\text{base}} &= \text{lvl} \\ \text{fightGain}_{\%} &= 13 \times \frac{\text{lvl} - 25}{\text{lvl} - 25 + 200} \\ \text{crit}_{\%} &= 10 \times \frac{\text{lvl} - 100}{\text{lvl} - 100 + 200}\end{aligned}$$

#### 6.1.2 Locally Sourced Organs

$$\begin{aligned}\text{maxHP} &= 1 + \left\lfloor \frac{\text{lvl}}{2} \right\rfloor \\ \text{maxHP}_{\%} &= 0.1(\text{lvl} - 25) \\ \text{selfHeal}_{\%} &= 25 \times \frac{\text{lvl} - 100}{\text{lvl} - 100 + 200}\end{aligned}$$

#### 6.1.3 Magician Starterpack

$$\begin{aligned}\text{maxMP} &= 1 + \left\lfloor \frac{\text{lvl}}{3} \right\rfloor \\ \text{maxHP}_{\%} &= 0.1(\text{lvl} - 25) \\ \text{fasterCD} &= 17 \times \frac{\text{lvl} - 100}{\text{lvl} - 100 + 200}\end{aligned}$$

#### 6.1.4 Bolvl of Unwanted Stats

$$\begin{aligned}\text{accuracy} &= 0.25\text{lvl} \\ \text{defence} &= 0.3(\text{lvl} - 25) \\ \text{MobExp}_{\%} &= 29 \times \frac{\text{lvl} - 100}{\text{lvl} - 100 + 170}\end{aligned}$$

#### 6.1.5 Dwarven Supplies

$$\begin{aligned}\text{efficiency}_{\text{mining}} &= 50 \times \frac{\text{lvl}}{\text{lvl} + 200} \\ \text{prowess}_{\%} &= 40 \times \frac{\text{lvl} - 25}{\text{lvl} - 25 + 150} \\ \text{AFKGain}_{\text{mining}} &= 15 \times \frac{\text{lvl} - 100}{\text{lvl} - 100 + 175}\end{aligned}$$

### 6.1.6 Blacksmith Box

$$\begin{aligned} \text{XP}_{\text{Smithing}} &= 50 \times \frac{\text{lvl}}{\text{lvl} + 200} \\ \text{prodSpeed}_{\%} &= 75 \times \frac{\text{lvl} - 25}{\text{lvl} - 25 + 200} \\ \text{toCraft}_{\%} &= 30 \times \frac{\text{lvl} - 100}{\text{lvl} - 100 + 150} \end{aligned}$$

### 6.1.7 Taped Up Timber

$$\begin{aligned} \text{efficiency}_{\text{choppin}} &= 50 \times \frac{\text{lvl}}{\text{lvl} + 200} \\ \text{prowess}_{\%} &= 40 \times \frac{\text{lvl} - 25}{\text{lvl} - 25 + 150} \\ \text{AFKGain}_{\text{choppin}} &= 15 \times \frac{\text{lvl} - 100}{\text{lvl} - 100 + 175} \end{aligned}$$

### 6.1.8 Carepack From Mum

$$\begin{aligned} \text{notConsume}_{\%} &= 23 \times \frac{\text{lvl}}{\text{lvl} + 200} \\ \text{hFoodEffect}_{\%} &= 30 \times \frac{\text{lvl} - 25}{\text{lvl} - 25 + 150} \\ \text{pFoodEffect}_{\%} &= 30 \times \frac{\text{lvl} - 100}{\text{lvl} - 100 + 175} \end{aligned}$$

### 6.1.9 Sealed Fishheads

$$\begin{aligned} \text{efficiency}_{\text{fishing}} &= 50 \times \frac{\text{lvl}}{\text{lvl} + 200} \\ \text{prowess}_{\%} &= 40 \times \frac{\text{lvl} - 25}{\text{lvl} - 25 + 150} \\ \text{AFKGain}_{\text{fishing}} &= 15 \times \frac{\text{lvl} - 100}{\text{lvl} - 100 + 175} \end{aligned}$$

### 6.1.10 Potion Package

$$\begin{aligned} \text{brewSpeed}_{\%} &= 70 \times \frac{\text{lvl}}{\text{lvl} + 200} \\ \text{alchXP}_{\%} &= 60 \times \frac{\text{lvl} - 25}{\text{lvl} - 25 + 150} \\ \text{craniumTime} &= 0.1(\text{lvl} - 100) \end{aligned}$$

### 6.1.11 Bug Hunting Supplies

$$\begin{aligned} \text{efficiency}_{\text{catching}} &= 50 \times \frac{\text{lvl}}{\text{lvl} + 200} \\ \text{prowess}_{\%} &= 40 \times \frac{\text{lvl} - 25}{\text{lvl} - 25 + 150} \\ \text{AFKGain}_{\text{catching}} &= 15 \times \frac{\text{lvl} - 100}{\text{lvl} - 100 + 175} \end{aligned}$$

### 6.1.12 Non Predatory Loot Box

$$\begin{aligned}\text{dropRate}_{\%} &= 50 \times \frac{\text{lvl}}{\text{lvl} + 200} \\ \text{Luck} &= 0.25(\text{lvl} - 25) \\ \text{crystalSpawn}_{\%} &= 65 \times \frac{\text{lvl} - 100}{\text{lvl} - 100 + 200}\end{aligned}$$

## References