GeoSense: XP-formler (R = 10 rundor)

Stora formler

Antal rundor är alltid $R = 10$, så

$$S_{\max} = 2000 \cdot 10 = 20000.$$

Definiera

$$q = \max\left(0, \min\left(1, 1 - \frac{S}{20000}\right)\right), \qquad M_{\text{perf}} = 1 + \frac{1}{2}\, q^2.$$

Solo / Öva

$$\boxed{XP_{\text{solo}} = \text{round}\left(40\, f_d \cdot 0.07 \cdot \left[1 + \frac{1}{2}\left(\max\left(0, \min\left(1, 1 - \frac{S}{20000}\right)\right)\right)^2\right]\right)}$$

1v1 (riktig match)

$$\boxed{XP_{\text{1v1}} = \text{round}\left(40\, f_d\, (1 + 4w)\, M_q \cdot \left[1 + \frac{1}{2}\left(\max\left(0, \min\left(1, 1 - \frac{S}{20000}\right)\right)\right)^2\right]\right)}$$

Förklaring av variabler

- S = din **totalpoäng** i matchen (lägre = bättre).
- f_d = **svårighetsfaktor (spikad skala)**:

$$f_d = \begin{cases} 1, & \text{easy} \\ 1.8, & \text{medium} \\ 3, & \text{hard} \end{cases}$$

- $w \in \{0, 1\}$ = **vinstindikator** (1 om du vinner, annars 0).
- M_q = **queue-multiplikator**:

$$M_q = \begin{cases} 1.25, & \text{om matchen startas via queue} \\ 1, & \text{annars} \end{cases}$$

- q = normaliserad "kvalitet" (clampad till $[0, 1]$).
- M_{perf} = **prestationsfaktor** i intervallet $[1, 1.5]$.

Exempel (Solo / Öva)

Exempel 1: Medium, $S = 3000$

$$f_d = 1.8, \quad 1 - \frac{S}{20000} = 1 - \frac{3000}{20000} = 0.85, \quad q = 0.85$$

$$M_{\text{perf}} = 1 + \frac{1}{2}(0.85)^2 = 1 + 0.36125 = 1.36125$$

$$XP_{\text{solo}} = \text{round}(40 \cdot 1.8 \cdot 0.07 \cdot 1.36125) = \text{round}(6.8607) \approx \boxed{7}$$

Exempel 2: Easy, $S = 12000$

$$f_d = 1, \quad q = 1 - \frac{12000}{20000} = 0.4, \quad M_{\text{perf}} = 1 + \frac{1}{2}(0.4)^2 = 1.08$$

$$XP_{\text{solo}} = \text{round}(40 \cdot 1 \cdot 0.07 \cdot 1.08) = \text{round}(3.024) \approx \boxed{3}$$

Exempel (1v1)

Exempel 3: Hard, vinst, via queue, $S = 6000$

$$f_d = 3, \quad w = 1, \quad M_q = 1.25, \quad q = 1 - \frac{6000}{20000} = 0.7$$

$$M_{\text{perf}} = 1 + \frac{1}{2}(0.7)^2 = 1.245$$

$$XP_{\text{1v1}} = \text{round}(40 \cdot 3 \cdot (1 + 4 \cdot 1) \cdot 1.25 \cdot 1.245) = \text{round}(933.75) \approx \boxed{934}$$

Exempel 4: Easy, vinst, ej queue, $S = 3000$

$$f_d = 1, \quad w = 1, \quad M_q = 1, \quad q = 1 - \frac{3000}{20000} = 0.85, \quad M_{\text{perf}} = 1.36125$$

$$XP_{\text{1v1}} = \text{round}(40 \cdot 1 \cdot (1 + 4) \cdot 1 \cdot 1.36125) = \text{round}(272.25) \approx \boxed{272}$$

Bonus: Jämförelse (visar varför skalan spelar roll)

Hard, vinst, ej queue, $S = 5000$ **(med spikad skala)**

$$f_d = 3, \quad w = 1, \quad M_q = 1$$

$$q = 1 - \frac{5000}{20000} = 0.75, \quad M_{\text{perf}} = 1 + \frac{1}{2}(0.75)^2 = 1.28125$$

$$XP_{\text{1v1}} = \text{round}(40 \cdot 3 \cdot 5 \cdot 1 \cdot 1.28125) = \text{round}(768.75) = \boxed{769}$$