

$$F_{20}=?$$

1, 1, 2, 3, 5, 8, 13, 21, 34, 55... F_{10}

$$\frac{21}{13} = 1.615384...$$

złota liczba, liczba phi, φ

$$\boxed{F_n} = \frac{\varphi^n - \psi^n}{\sqrt{5}}$$

$$\varphi = \frac{1 + \sqrt{5}}{2} \approx 1.61803 \dots$$

$$\psi = \frac{1 - \sqrt{5}}{2} = \boxed{1 - \varphi} \approx -0.61803 \dots$$

$$F_n = \frac{\varphi^n - (1 - \varphi)^n}{\sqrt{5}}$$



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