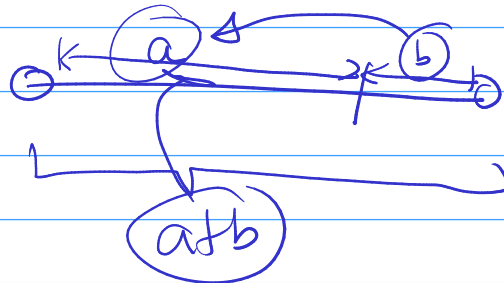
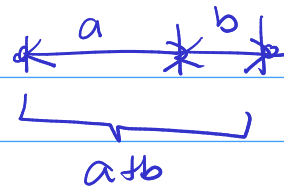


$a+b$



$$\boxed{\frac{a+b}{a} = \frac{a}{b}}$$

Razón aurea

$$\begin{aligned}(a+b)b &= a^2 \\ ab + b^2 - a^2 &= 0 \\ \frac{a^2 - ab - b^2}{b^2} &= 0\end{aligned}$$

$$\begin{aligned}\left(\frac{a}{b}\right)^2 - \frac{a}{b} - 1 &= 0 \\ \text{Si } \varphi = \frac{a}{b} &\Rightarrow\end{aligned}$$

$$\varphi^2 - \varphi - 1 = 0$$

$$\varphi_{1,2} = \frac{1 \pm \sqrt{1+4}}{2} = \frac{1 \pm \sqrt{5}}{2}$$

Tomamos la raíz positiva:

$$\varphi_1 = \frac{1+\sqrt{5}}{2} \approx 1.618033989$$

$$\begin{aligned}1 + \frac{b}{a} &= \frac{a}{b} \\ \text{Si } \varphi = \frac{a}{b} &\Rightarrow\end{aligned}$$

$$\begin{aligned}(1 + \varphi^{-1} = \varphi)\varphi \\ \varphi + 1 &= \varphi^2 \\ \varphi^2 - \varphi - 1 &= 0\end{aligned}$$

φ

Mediante la sucesión de Fibonacci.

$$\varphi = \lim_{n \rightarrow \infty} \frac{F_{n+1}}{F_n} .$$