

## LOGARITMOS

Problema 108:

Justifica la igualdad:

$$\log(a + b) + \log\left(\frac{a}{b} - 1\right) = \log\left(\frac{a}{b} + 1\right) + \log(a - b)$$

Solución Problema 108:

$$\log(a + b) + \log\left(\frac{a}{b} - 1\right) = \log\left(\frac{a}{b} + 1\right) + \log(a - b)$$

$$\log(a + b) + \log\left(\frac{a}{b} - 1\right) = \log(a + b) + \log\left(\frac{a - b}{b}\right) =$$

$$= \log(a + b) + \log(a - b) - \log b = \log(a + b) - \log b + \log(a - b) =$$

$$= \log\left(\frac{a + b}{b}\right) + \log(a - b) = \log\left(\frac{a}{b} + \frac{b}{b}\right) + \log(a - b) =$$

$$= \log\left(\frac{a}{b} + 1\right) + \log(a - b)$$