

## LOGARITMOS

### Problema 43:

Sabiendo que  $\log 2 = 0,301030$  y  $\log 3 = 0,477121$ . Hallar:

$$\log \sqrt[3]{0,405}$$

### Solución Problema 43:

$$\log \sqrt[3]{0,405} = \log(0,405)^{1/3} = \frac{1}{3} \log 0,405 = \frac{1}{3} \log \frac{405}{1000} =$$

$$\frac{1}{3} (\log 405 - \log 1000) = \frac{1}{3} [\log(3^4 \cdot 5 \cdot 1) - 3]$$

$$= \frac{1}{3} [\log 3^4 + \log 5 + \log 1 - 3] = \frac{1}{3} [4 \cdot \log 3 + \log 5 + \log 1 - 3]$$

$$= \frac{1}{3} [4 \cdot \log 3 + \log \frac{10}{2} + \log 1 - 3] = \frac{1}{3} [4 \cdot \log 3 + \log 10 - \log 2 + \log 1 - 3]$$

$$= \frac{1}{3} [4 \cdot 0,477121 + 1 - 0,301030 + 0 - 3] = \frac{1}{3} (2,908484 - 3,301030)$$

$$\frac{1}{3} (-0,392546) = -0,130848$$