

EJERCICIO M1BP0339:

"achiimages.com"

Sabiendo:

$$\log 2 = 0,3010$$

$$\log 3 = 0,4771$$

Hallar:

$$\begin{aligned} a) \quad \boxed{\log 14,4} &= \log \frac{144}{10} = \log 144 - \log 10 = \\ &= \log 12^2 - 1 = \log (3 \cdot 4)^2 - 1 = \\ &= 2 \log (3 \cdot 4) - 1 = 2(\log 3 + \log 4) - 1 = \\ &= 2(0,4771 + \log 2^2) - 1 = \\ &= 2(0,4771 + 2 \log 2) - 1 = \\ &= 2(0,4771 + 2 \cdot 0,3010) - 1 = \boxed{1,1582} \end{aligned}$$

$$\begin{aligned} b) \quad \boxed{\log (1,6 \cdot 0,32)} &= \log 1,6 + \log 0,32 = \\ &= \log \frac{16}{10} + \log \frac{32}{100} = \\ &= \log 16 - \log 10 + \log 32 - \log 100 = \\ &= \log 2^4 - 1 + \log 2^5 - 2 = \\ &= 4 \cdot \log 2 - 1 + 5 \cdot \log 2 - 2 = \\ &= 4 \cdot 0,3010 - 1 + 5 \cdot 0,3010 - 2 = \boxed{-0,291} \end{aligned}$$

$$\begin{aligned} c) \quad \boxed{\log 5,12} &= \log \frac{512}{100} = \log 512 - \log 100 = \\ &= \log 2^9 - 2 = 9 \cdot \log 2 - 2 = 9 \cdot 0,3010 - 2 = \\ &= \boxed{0,709} \end{aligned}$$

Continúa...

$$\begin{aligned}
 d) \quad \boxed{\log 16,2} &= \log \frac{162}{10} = \log (2 \cdot 3^4) - \log 10 = \\
 &= \log 2 + \log 3^4 - \log 10 = \\
 &= 0,3010 + 4 \cdot \log 3 - 1 = \\
 &= 0,3010 + 4 \cdot 0,4771 - 1 = \boxed{1,2094}
 \end{aligned}$$

$$\begin{array}{r|l}
 162 & 2 \\
 81 & 3 \\
 27 & 3 \\
 9 & 3 \\
 3 & 3 \\
 1 &
 \end{array}$$

$$\begin{aligned}
 e) \quad \boxed{\log 0,3} &= \log \frac{3}{10} = \log 3 - \log 10 = \\
 &= 0,4771 - 1 = \boxed{-0,5229}
 \end{aligned}$$

$$\begin{aligned}
 f) \quad \boxed{\log 0,02} &= \log \frac{2}{100} = \log 2 - \log 100 = \\
 &= 0,3010 - 2 = \boxed{-1,699}
 \end{aligned}$$