

## Solución

$$= 6.96 \quad : \quad (d = 10^{\frac{17.644 - 3.58\log_{10}(0.85671) - \frac{0.17609}{1.02635}}{7.35}} - 25.4)) \text{ Decimal: } d = 231.59012\dots \quad (1)$$

## Pasos

$$(-0.84 \cdot 0.35) + (7.35\log_{10}(d+25.4)) - 10.39 + \frac{0.17609}{1.02635} + 3.58\log_{10}(0.85671) = 6.96$$

Multiplicar los numeros:  $0.84 \cdot 0.35 = 0.294$

$$-0.294 + 7.35\log_{10}(d+25.4) - 10.39 + \frac{0.17609}{1.02635} + 3.58\log_{10}(0.85671) = 6.96$$

Agrupar términos semejantes

$$7.35\log_{10}(d+25.4) + \frac{0.17609}{1.02635} + 3.58\log_{10}(0.85671) - 0.294 - 10.39 = 6.96$$

Restar:  $-0.294 - 10.39 = -10.684$

$$7.35\log_{10}(d+25.4) + 3.58\log_{10}(0.85671) + \frac{0.17609}{1.02635} - 10.684 = 6.96$$

Restar  $3.58\log_{10}(0.85671)$  de ambos lados

$$7.35\log_{10}(d+25.4) + 3.58\log_{10}(0.85671) + \frac{0.17609}{1.02635} - 10.684 - 3.58\log_{10}(0.85671) = 6.96 - 3.58$$

Simplificar

$$7.35\log_{10}(d+25.4) + \frac{0.17609}{1.02635} - 10.684 = 6.96 - 3.58\log_{10}(0.85671)$$

Restar  $\frac{0.17609}{1.02635} - 10.684$  de ambos lados

$$7.35\log_{10}(d+25.4) + \frac{0.17609}{1.02635} - 10.684 - \left( \frac{0.17609}{1.02635} - 10.684 \right) = 6.96 - 3.58\log_{10}(0.85671) - \left( \frac{0.17609}{1.02635} - 10.684 \right)$$

**Simplificar**

*Mostrar pasos*

$$7.35\log_{10}(d+25.4) = 17.644 - 3.58\log_{10}(0.85671) - \frac{0.17609}{1.02635}$$

Dividir ambos lados entre 7.35

$$\frac{7.35\log_{10}(d+25.4)}{7.35} = \frac{17.644}{7.35} - \frac{3.58\log_{10}(0.85671)}{7.35} - \frac{0.17609}{7.35 \cdot 1.02635}$$

Simplificar

$$\log_{10}(d+25.4) = \frac{17.644 - 3.58\log_{10}(0.85671) - \frac{0.17609}{1.02635}}{7.35}$$

Aplicar las propiedades de los logaritmos:  $a = \log_b(b^a)$

$$\frac{17.644 - 3.58\log_{10}(0.85671) - \frac{0.17609}{1.02635}}{7.35} = \log_{10}\left(10^{\frac{17.644 - 3.58\log_{10}(0.85671) - \frac{0.17609}{1.02635}}{7.35}}\right)$$

$$\log_{10}(d+25.4) = \log_{10}\left(10^{\frac{17.644 - 3.58\log_{10}(0.85671) - \frac{0.17609}{1.02635}}{7.35}}\right)$$

Cuando los logaritmos tienen la misma base:  $\log_b(f(x)) = \log_b(g(x)) \Rightarrow f(x) = g(x)$

Para  $\log_{10}(d+25.4) = \log_{10}\left(10^{\frac{17.644 - 3.58\log_{10}(0.85671) - \frac{0.17609}{1.02635}}{7.35}}\right)$ , resolver  $d+25.4 = 10^{\frac{17.644 - 3.58\log_{10}(0.85671) - \frac{0.17609}{1.02635}}{7.35}}$

$$d+25.4 = 10^{\frac{17.644 - 3.58\log_{10}(0.85671) - \frac{0.17609}{1.02635}}{7.35}}$$

*Mostrar pasos*

Resolver  $d+25.4 = 10^{\frac{17.644 - 3.58\log_{10}(0.85671) - \frac{0.17609}{1.02635}}{7.35}}$ :  $d = 10^{\frac{17.644 - 3.58\log_{10}(0.85671) - \frac{0.17609}{1.02635}}{7.35}} - 25.4$

$$d = 10^{\frac{17.644 - 3.58\log_{10}(0.85671) - \frac{0.17609}{1.02635}}{7.35}} - 25.4$$

*Mostrar pasos*

Verificando las soluciones:  $d = 10^{\frac{17.644 - 3.58\log_{10}(0.85671) - \frac{0.17609}{1.02635}}{7.35}} - 25.4$  Verdadero

La solución es

$$d = 10^{\frac{17.644 - 3.58\log_{10}(0.85671) - \frac{0.17609}{1.02635}}{7.35}} - 25.4$$