

EXERCICIO MIBE3381:

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$$2 \log x - \log(x-16) = 2$$

$$\log x^2 - \log(x-16) = \log 100$$

$$\log \frac{x^2}{x-16} = \log 100$$

$$\frac{x^2}{x-16} = 100 \Rightarrow x^2 = 100x - 1600$$

$$x^2 - 100x + 1600 = 0$$

$$x = \frac{100 \pm \sqrt{(-100)^2 - 4 \cdot 1 \cdot 1600}}{2 \cdot 1} = \frac{100 \pm 60}{2}$$

$$x_1 = \frac{100+60}{2} = 80$$

$$x_2 = \frac{100-60}{2} = 20$$

Comprovaçào:

$$x=80 \Rightarrow \text{¿ } 2 \log 80 - \log(80-16) = 2 ?$$

$$3,806 - 1,806 = 2 \quad \text{Es solução}$$

$$x=20 \Rightarrow \text{¿ } 2 \log 20 - \log(20-16) = 2 ?$$

$$2,602 - 0,602 = 2 \quad \text{Es solução.}$$

$x_1 = 80$; $x_2 = 20$ son las Soluciones