

10/11/16

Solve base 10 logs using technology

Turn up Tuesday.

My favorite song is "You and Me" by Greazy because its catchy & I love Greazy.

$$2H \text{ at } 2.5$$

$$\log_2 12$$

$$\log_2(4 \cdot 3) \rightarrow \log_2 3 + \log_2 4 \rightarrow 1.585 + 2 = 3.585$$

$$\log_2 \left(\frac{7}{3} \right)$$

$$\log_2(7 \div 3) \log_2 7 - \log_2 3 \rightarrow 2.807 - 1.585 = 1.222$$

$$1.) 3^{x+4} = 3^5 \quad x+4=5 \quad \boxed{x=1} \quad 2.) \left(\frac{1}{2}\right)^x = \left(\frac{1}{2}\right)^{-3} \quad x=-3$$

$$3.) \frac{3}{4}^x = \left(\frac{3}{4}\right)^3 \quad x=3$$

$$3^{2x+7} = 81 \rightarrow 2x+7=4$$

$$3^{2x+7} = 3^4 \rightarrow \frac{2x+7}{7} = \frac{4}{7} \quad \frac{2x}{7} = \frac{-3}{7} \quad x = \frac{-3}{2}$$

$$4.) \log_2 X - \log_2 13 = 0 \rightarrow \log_2 X = \log_2 13 \rightarrow \boxed{x=13}$$

$$5.) \log_2(2x-4) - \log_2 8 = 0 \rightarrow \log_2(2x-4) = \log_2 8 \rightarrow 2x-4=8$$

$$\boxed{x=6} \quad \frac{2x}{2} = \frac{12}{2}$$

$$6.) \log_2(x+2) - \log_2 9x = 0 \rightarrow \log_2(x+2) = \log_2 9x$$

$$\frac{x+2}{-x} = \frac{9x}{-x} \quad \frac{2}{8} = \frac{8x}{8} \quad \boxed{\frac{1}{4} = x}$$

$$7.) \frac{\log_2 X}{\log_2 14} = 1 \rightarrow \log_2 X - \log_2 14 = 0 \rightarrow \log_2 X = \log_2 14 \rightarrow \boxed{x=14}$$

$$2x=14$$

given : $\log_3 3 = 1$, $\log_3 9 = 2$, $\log_3 2 = 0.6$

$$\log_3 108 \rightarrow \log_3 9 + \log_3 3 + \log_3 2^4 \rightarrow \log_3 9 + \log_3 3 + \log_3 2^4$$
$$\therefore 2 + 1 + .6 + .6 = \boxed{4.2}$$

1.) $10^x = 50 \rightarrow \log_{10} 50 = x$

$$1.7 = x$$

b.) $3(10^x) = 0.3 \rightarrow \log$

$$\therefore 3(10^x) = 94.87 \rightarrow 1.5 = x$$

$\log_{10} \frac{x}{3} = y$