

Logarithm - Solve

L2MS2

Solve for x.

Example 1:

$$\log_3 \left(\frac{1}{3} \right) = x - 5$$

$$(3)^{x-5} = \left(\frac{1}{3} \right)$$

$$(3)^{x-5} = 3^{-1}$$

$$x = 4$$

Example 2:

$$\log_8 (2x)^3 = 2$$

$$8^2 = (2x)^3$$

$$(8^2)^{\frac{1}{3}} = 2x$$

$$4 = 2x$$

$$x = 2$$

Solve for x.

1) $\log_{36} 6 = x + 3$

x =

2) $\log_{3x} 64 = 2$

3) $\log_{32} \left(\frac{1}{4} \right) = x - 1$

x =

5) $\log_{\frac{1}{32}} \left(\frac{x}{8} \right) = \frac{1}{5}$

x =

7) $\log_{x+1} 16 = 4$

x =

9) $\log_9 (x-1) = 3$

x =

10) $\log_{2x} 2^{-4} = 2$

x =

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