

Name: \_\_\_\_\_

Score: \_\_\_\_\_

**Logarithm - Solve**

L1MS1

Solve for x.

Example 1:

$$\log_{64} 4 = x$$

$$64^x = 4$$

$$4^{3x} = 4$$

$$x = \frac{1}{3}$$

Example 2:

$$\log_5 x^{\frac{1}{2}} = 2$$

$$5^2 = x^{\frac{1}{2}}$$

$$5^4 = x$$

$$x = 625$$

Solve for x.

1)  $\log_4 2 = x$

$$x = \underline{\hspace{2cm}}$$

3)  $\log_6 \left(\frac{1}{6}\right) = x$

$$x = \underline{\hspace{2cm}}$$

5)  $\log_{\frac{1}{2}} \left(\frac{1}{8}\right) = x$

$$x = \underline{\hspace{2cm}}$$

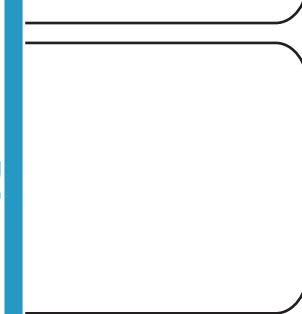
7)  $\log_x 6 = \frac{1}{2}$

$$x = \underline{\hspace{2cm}}$$

9)  $\log_4 x = 3$

$$x = \underline{\hspace{2cm}}$$

2)  $\log_x 64^{\frac{1}{3}} = 2$



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$$x = \underline{\hspace{2cm}}$$

10)  $\log_{125} 25 = x$

$$x = \underline{\hspace{2cm}}$$