Name : _____ Score : _____

Logarithm - Solve

L1ES1

Solve for x.

Example 1:

$\log_5 25 = x$

$5^x = 25$

$5^x = 5^2$

$x = \mathbf{2}$

Example 2:

$\log_4 x = 2$

$4^2 = x$

$x = \mathbf{16}$

Solve for x.

1) $\log_x 32 = 5$

x = ____

2) $\log_3 x = 3$

x = ____

3) $\log_3 \left(\frac{1}{81}\right) = x$

x = ____

4) $\log_5 \left(\frac{1}{25}\right) = x$

x = ____

5) $\log_x 36 = 2$

x = ____

6) $\log_2 x = 4$

x = ____

7) $\log_9 x = \frac{1}{2}$

x = ____

8) $\log_x 2 = \frac{1}{3}$

x = ____

9) $\log_6 x = 2$

x = ____

10) $\log_4 256 = x$

x = ____

Name : _____ **Answer key** Score : _____

L1ES1

Logarithm - Solve

Solve for x.

Example 1:

$\log_5 25 = x$

$5^x = 25$

$5^x = 5^2$

$x = \mathbf{2}$

Example 2:

$\log_4 x = 2$

$4^2 = x$

$x = \mathbf{16}$

Solve for x.

1) $\log_x 32 = 5$

$x =$ **2**

2) $\log_3 x = 3$

$x =$ **27**

3) $\log_3 \left(\frac{1}{81}\right) = x$

$x =$ **–4**

4) $\log_5 \left(\frac{1}{25}\right) = x$

$x =$ **–2**

5) $\log_x 36 = 2$

$x =$ **6**

6) $\log_2 x = 4$

$x =$ **16**

7) $\log_9 x = \frac{1}{2}$

$x =$ **3**

8) $\log_x 2 = \frac{1}{3}$

$x =$ **8**

9) $\log_6 x = 2$

$x =$ **36**

10) $\log_4 256 = x$

$x =$ **4**