

# Logarithmic Equations

**Answer Key**

Solve for x.

1)  $\log_2 x = 9$

$$\underline{x = 512}$$

2)  $\log_9 \left( \frac{1}{81} \right) = x$

$$\underline{x = -2}$$

3)  $\log_{16} x = \frac{1}{2}$

$$\underline{x = 4}$$

4)  $\log_3 x = 4$

$$\underline{x = 81}$$

5)  $\log_3 27 = x$

$$\underline{x = 3}$$

6)  $\log_x 32 = 5$

$$\underline{x = 2}$$

7)  $\log_x 36 = 2$

$$\underline{x = 6}$$

8)  $\log_4 256 = x$

$$\underline{x = 4}$$

9)  $\log_4 x = 3$

$$\underline{x = 64}$$

10)  $\log_2 \left( \frac{1}{32} \right) = x$

$$\underline{x = -5}$$