

## Logarithmic Properties Practice

Write each equation in exponential form.

1.)  $\log_3 81 = 4$

2.)  $\log_8 2 = \frac{1}{3}$

3.)  $\log_{10} \frac{1}{100} = -2$

Write each equation in logarithmic form.

4.)  $3^3 = 27$

5.)  $5^{-3} = \frac{1}{125}$

6.)

$\frac{1}{4} = 256$

Evaluate each expression.

7.)  $\log_7 7^3$

8.)  $\log_{10} 0.001$

9.)  $\log_8 4096$

10.)  $\log_4 32$

11.)  $\log_3 1$

12.)  $\log_6 \frac{1}{216}$

Solve each equation.

13.)  $\log_x 64 = 3$

14.)  $\log_4 0.25 = x$

15.)  $\log_4(2x-1) = \log_4 16$

16.)  $\log_{10} \sqrt{10} = x$

17.)  $\log_7 56 - \log_7 x = \log_7 4$

18.)  $\log_5(x+4) + \log_5 x = \log_5 12$

