

## Algebra II Worksheet #1 Unit 11

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Write the exponential equation that corresponds to each logarithmic equation.

1.  $\text{Log}_2 8 = 3$

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2.  $\text{Log}_3 81 = 4$

\_\_\_\_\_

3.  $\text{Log}_{25} 5 = .5$

\_\_\_\_\_

4.  $\text{Log}_5 0.2 = -1$

\_\_\_\_\_

Write the logarithmic equation that corresponds to each exponential equation.

5.  $4^3 = 64$

\_\_\_\_\_

6.  $7^2 = 49$

\_\_\_\_\_

7.  $25^{1.5} = 125$

\_\_\_\_\_

8.  $8^{\frac{-2}{3}} = \frac{1}{4}$

\_\_\_\_\_

Evaluate each of the following logarithms.

9.  $\text{Log}_2 32 =$  \_\_\_\_\_

10.  $\text{Log}_{10} 100 =$  \_\_\_\_\_

11.  $\text{Log}_2 0.25 =$  \_\_\_\_\_

12.  $\text{Log}_{10} 0.001 =$  \_\_\_\_\_

13.  $\text{Log}_3 \frac{1}{27} =$  \_\_\_\_\_

14.  $\text{Log}_8 2 =$  \_\_\_\_\_

15.  $\text{Log}_8 16 =$  \_\_\_\_\_

16.  $\text{Log}_2 1024 =$  \_\_\_\_\_