

## Algebra II Worksheet #1 Unit 11 selected solutions

Write the exponential equation that corresponds to each logarithmic equation.

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

$$\mathbf{3^4 = 81}$$

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

$$\mathbf{5^{-1} = 0.2}$$

Write the logarithmic equation that corresponds to each exponential equation.

6.  $7^2 = 49$

$$\mathbf{\text{Log}_7 49 = 2}$$

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

$$\mathbf{\text{Log}_8 (1/4) = -2/3}$$

Evaluate each of the following logarithms.

10.  $\text{Log}_{10} 1000 = \mathbf{3}$

12.  $\text{Log}_{10} 0.01 = \mathbf{-2}$

14.  $\text{Log}_8 2 = \mathbf{1/3}$

16.  $\text{Log}_2 1024 = \mathbf{10}$