

**Exponential Functions 5 – Logarithmic Functions
Homework #10**

Rewrite the equation in exponential form.

1) $\log_4 1024 = 5$ 2) $\log_{36} \frac{1}{6} = -\frac{1}{2}$ 3) $\log_{12} 144 = 2$ 4) $\log_{1/2} 4 = -2$

Rewrite the equation in logarithmic form.

5) $14^2 = 196$ 6) $2^{-6} = \frac{1}{64}$ 7) $16^{1/2} = 4$ 8) $3^0 = 1$

Simplify each logarithm below without using a calculator.

9) $\log_6 36$ 10) $\ln 1$ 11) $\log_3 \frac{1}{9}$
12) $\log_6 (6^5)$ 13) $\log_{1/4} \frac{1}{4}$ 14) $\log_9 3$

Use a calculator to evaluate the following. Round to three decimal places.

15) $\log 8$ 16) $\log \sqrt{2}$ 17) $\log 2.54$ 18) $\ln 4.6$

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