

Rewriting & Evaluating Logarithms

Date _____ Period _____

Rewrite each equation in exponential form.

1) $\log_7 343 = 3$

2) $\log_7 \frac{1}{343} = -3$

3) $\log_2 64 = 6$

4) $\log_{14} 196 = 2$

5) $\log_4 \frac{1}{64} = -3$

6) $\log_{17} 289 = 2$

7) $\log_{19} 361 = 2$

8) $\log_{11} 121 = 2$

Rewrite each equation in logarithmic form.

9) $12^x = y$

10) $9^{\frac{1}{2}} = 3$

11) $8^u = v$

12) $20^1 = 20$

13) $2^0 = 1$

14) $y^x = 162$

$$15) 8^{-\frac{12}{13}} = p$$

$$16) y^x = 74$$

Evaluate each expression.

$$17) \log_2 \frac{1}{16}$$

$$18) \log_4 64$$

$$19) \log_3 9$$

$$20) \log_4 1$$

$$21) \log_3 243$$

$$22) \log_5 125$$

$$23) \log_4 16$$

$$24) \log_7 49$$

$$25) \log_6 1$$

$$26) \log_7 49$$

$$27) \log_7 \frac{1}{49}$$

$$28) \log_2 -1$$