

Practice with logs and exponentials eqns, change from log to exponential, evaluate

Solve each equation.

1) $4^{-2x} = 4^{-x}$

2) $6^{1-2p} = 1$

3) $4^{3b+3} \cdot 16 = 4^2$

4) $6^{2m+2} = 6^{2-3m}$

5) $64^{-v} = 16^{2-v}$

6) $5^{x-3} \cdot 5^{2-x} = 5^{2x+1}$

7) $\log_{20} 23 = \log_{20} (3x - 1)$

8) $\log_{12} (-x - 2) = \log_{12} 30$

9) $\log (5n - 10) = \log 4n$

10) $-5 \log_8 (8n - 6) = 5$

11) $10 + \log_6 x = 12$

12) $\log_5 (r - 8) = 4$

Rewrite each equation in exponential form.

13) $\log_{121} 11 = \frac{1}{2}$

14) $\log_x \frac{5}{3} = y$

$$15) \log_{12} 144 = 2$$

$$16) \log_2 v = 17$$

Rewrite each equation in logarithmic form.

$$17) \left(\frac{7}{5}\right)^6 = n$$

$$18) a^b = 195$$

$$19) 18^{-2} = \frac{1}{324}$$

$$20) x^y = 54$$

Evaluate each expression.

$$21) \log_{216} 6$$

$$22) \log_6 36$$

$$23) \log_{343} 7$$

$$24) \log_2 64$$

Use a calculator to approximate each to the nearest tenth.

$$25) \log_3 52$$

$$26) \log_4 2.9$$