

Name: _____

Solving Logs & Exponentials

Solve each equation.

1) $2^{3-2n} = 2^2$

2) $2^{2v+3} \cdot 2^{3v} = 2^3$

3) $16^{2a} \cdot 16^a = 2^2$

4) $64^{2x+2} = \frac{1}{4}$

Solve each equation. Round your answers to the nearest ten-thousandth.

5) $9^{-10n} - 4 = 16$

6) $8^{b+8} + 1 = 16$

7) $8^{-10n-4} - 7 = 35$

8) $19^{1-4m} - 3 = 59$

Solve each equation.

9) $\log 29 = \log (3x - 1)$

10) $\log_{19} (2k - 10) = \log_{19} (k - 5)$

11) $9 + \log_8 4b = 13$

12) $6 + \log_8 (x + 3) = 7$

13) $\ln 4 - \ln -x = 1$

14) $\log_6 3 - \log_6 (x - 1) = 1$

15) $\log_2 (x + 4) - \log_2 7 = 1$

16) $\log x + \log (x + 21) = 2$