

Logs Review WS #3

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Solve each equation. REMEMBER TO CHECK YOUR ANSWERS!!

1) $\log_8 2n = \log_8 (3n - 1)$

2) $\log_{11} (4x - 6) = \log_{11} (3x + 7)$

3) $\log_{15} (2k - 1) = \log_{15} (k^2 - 49)$

4) $\log_{18} (-40 - 2a^2) = \log_{18} (-a^2 - 14a)$

5) $-4\log (x - 9) = 8$

6) $8 + \log_2 (x - 7) = 12$

$$7) -10\log_5 (-m-9) = -20$$

$$8) -9\log_7 (2n-7) = -18$$

$$9) 8 + 5\log_3 (4b-1) = 8$$

$$10) 2 - 9\log_9 (10x+10) = -34$$

$$11) -5\log_5 (7n-9) + 9 = 9$$

$$12) 7\log_{12} (5-10p) - 4 = 17$$

$$13) \log_5 -2x + \log_5 7 = 2$$

$$14) \log_4 (x+8) + \log_4 5 = \log_4 30$$

$$15) \log_8 6 - \log_8 3x = \log_8 5$$

$$16) \log_4 9 - \log_4 3x = 2$$

$$17) \log_9 (5x^2 - 9) - \log_9 4 = 1$$

$$18) \log_2 5 + \log_2 (4 - 5x^2) = 2$$

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

$$19) 4^{3.2 - 9x} + 10 = 38$$

$$20) -9 \cdot 12^{4.7v - 1} = -36$$

$$21) 10^{5 - 3k} = 6^{2k}$$

$$22) 8^{-5p - 4.5} = 57^{3p}$$

Answers to Logs Review WS #3 (ID: 3)

1) $\{1\}$

3) $\{8\}$

5) $\left\{\frac{901}{100}\right\}$

7) $\{-34\}$

9) $\left\{\frac{1}{2}\right\}$

11) $\left\{\frac{10}{7}\right\}$

13) $\left\{-\frac{25}{14}\right\}$

15) $\left\{\frac{2}{5}\right\}$

17) $\{3, -3\}$

19) 0.0885

21) 1.3656