

Logs Review WS #1

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Solve each equation. REMEMBER TO CHECK YOUR ANSWERS!!

1) $\log_{12} (1 - 3n) = \log_{12} (-5n - 1)$

2) $\log_{15} (x - 5) = \log_{15} (2x + 2)$

3) $\log_3 (k^2 + 25) = \log_3 (-10k + 1)$

4) $\log_{20} (15 - 2x^2) = \log_{20} (-x^2 - 2x)$

5) $-7\log_5 (x - 6) = 14$

6) $\log_3 (n - 7) + 5 = 6$

$$7) -3 + \log_{11} (8m + 2) = -4$$

$$8) 10 \log_7 (-8p + 4) = 30$$

$$9) -1 - \log_6 (-9r + 7) = 0$$

$$10) -3 - 10 \log_{12} (10n + 10) = -3$$

$$11) 7 \log (9 - 5m) - 5 = 9$$

$$12) 7 \log_5 (-10x - 8) - 9 = -23$$

$$13) \log_5 (x + 8) + \log_5 2 = \log_5 59$$

$$14) \log_4 10 + \log_4 2x = \log_4 9$$

$$15) \log_2 7 - \log_2 (x - 1) = 5$$

$$16) \log_6 10 - \log_6 -3x = 2$$

$$17) \log_6 (3x^2 + 6) + \log_6 4 = 2$$

$$18) \log (4x^2 - 9) - \log 4 = \log 28$$

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

$$19) 10^{0.1 - 7n} - 0.2 = 78.8$$

$$20) -5.7 \cdot 9^{-8p - 1} = -61$$

$$21) 5^{-10x - 1} = 50^{6x}$$

$$22) 2^{7 - 4a} = 48^{2a}$$