

Logs Day 1

Date _____

Solve each equation.

1) $\log_5 (3x - 9) = \log_5 (2x - 5)$

2) $\log_{20} (4x - 9) = \log_{20} 3x$

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

4) $\log_{12} (5x - 6) = \log_{12} (3x + 4)$

5) $\log_{18} (5x + 2) = \log_{18} (-3x + 10)$

6) $\log_{15} (5x - 1) = \log_{15} (x^2 + 3)$

7) $\log_2 (-2x + 3) = \log_2 x^2$

8) $\log_{14} (-6x + 1) = \log_{14} (x^2 + 6)$

9) $\log_{13} (25 + 3x^2) = \log_{13} 4x^2$

10) $\log (81 + 3x) = \log (x^2 + 3x)$

11) $\log_{11} (3x + 2) = 3$

12) $\log_4 (2x + 8) = 3$

13) $\log_2 (3x - 9) = 2$

14) $\log_2 (6x + 4) = 2$

$$15) \log_3 (2x + 7) = 0$$

$$16) \log_9 (-2x - 9) = 4$$

$$17) \log_5 x^2 - \log_5 2 = \log_5 18$$

$$18) \log_2 x^2 + \log_2 5 = \log_2 5$$

$$19) \log_8 2 - \log_8 x = \log_8 21$$

$$20) \log_5 7 - \log_5 x = \log_5 61$$

$$21) \log_7 x^2 - \log_7 9 = 2$$

$$22) \log_4 x^2 - \log_4 9 = 2$$

$$23) \log_5 x + \log_5 8 = \log_5 33$$

$$24) \log_3 x + \log_3 10 = \log_3 6$$

$$25) \log_3 (x^2 + 9) - \log_3 10 = 2$$

$$26) \log_6 (x^2 + 6) - \log_6 7 = 1$$

$$27) \log_9 2x^2 + \log_9 2 = 1$$

$$28) \log_3 7 + \log_3 5x^2 = \log_3 35$$