

Assignment : Logarithmic Equation

Date _____

Solve each equation.

1) $\log_{20}(-a - 2) = \log_{20}(-2a - 10)$

2) $\log_4(-3x - 7) = \log_4(-2x - 1)$

3) $8\log_9 5n = 0$

4) $3\log_4 5x = 12$

5) $\log_{17}(-4b - 2) = \log_{17}(b^2 + 1)$

6) $\log_2 b^2 = \log_2(12 - b)$

7) $\log_3 8 + \log_3(x + 5) = 4$

8) $\log_3 3x^2 - \log_3 4 = 5$

9) $\log_7(x + 5) + \log_7 6 = \log_7 27$

10) $\log_8 -4x - \log_8 2 = \log_8 54$

Answers to Assignment : Logarithmic Equation

1) $\{-8\}$

2) $\{-6\}$

3) $\left\{\frac{1}{5}\right\}$

4) $\left\{\frac{256}{5}\right\}$

5) $\{-3, -1\}$

6) $\{3, -4\}$

7) $\left\{\frac{41}{8}\right\}$

8) $\{18, -18\}$

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

10) $\{-27\}$

