

Quiz Log Equations

Date _____ Period _____

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

1) $-5 \cdot 12^{m-5} = -15$

- A) 5.4771 B) 6.0986
C) 6.3704 D) 5.4421

2) $10^{9x} - 6 = 22$

- A) No solution. B) 0.3702
C) 0.1608 D) 0.3126

3) $9^{x+9} + 1 = 63$

- A) -7.2076 B) -4.8729
C) -4.8862 D) -7.1217

Solve each equation.

4) $\log 4a = \log 28$

- A) {5} B) {15}
C) {1} D) {7}

5) $\log_9 (4 - m) = \log_9 (-5m + 1)$

- A) $\left\{\frac{6}{17}\right\}$ B) {-2}
C) {7} D) $\left\{-\frac{3}{4}\right\}$

6) $\log_{13}(2n + 7) = \log_{13}(10 - n)$

- A) $\{9\}$ B) $\{4\}$
C) $\{1\}$ D) $\{-12\}$

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

7) $\log(4x - 1) + \log 8 = \log 47$

- A) $\{-8.1111\}$ B) $\{0.85\}$
C) $\{1.7188\}$ D) $\{0.1905\}$

8) $\log 8 + \log(4 - 4x) = 1$

- A) $\{0.6875\}$ B) $\{-3.9167\}$
C) $\{26\}$ D) $\{5.3333\}$

Solve each equation.

9) $\log_5 9 + \log_5(x - 10) = 2$

- A) $\{12\}$ B) $\left\{\frac{115}{9}\right\}$
C) $\left\{\frac{107}{2}\right\}$ D) $\left\{-\frac{1}{2}\right\}$

10) $\log_7 3x - \log_7 5 = 1$

- A) $\left\{\frac{35}{3}\right\}$ B) $\{29\}$
C) $\left\{-\frac{7}{12}\right\}$ D) $\{194\}$