

Name: _____

Date: _____

Solving Logarithmic Equations**Solve each equation.**

1) $\log x - \log 4 = 3$

2) $-3 \log_3(x - 2) = -12$

3) $\log(16 + 2b) = \log(b^2 - 4b)$

4) $-\log_5 7x = 2$

5) $\log x + 5 = 2$

6) $\log_{12}(v^2 + 35) = \log_{12}(-2v - 1)$

7) $2 \log_7 - 2x = 0$

8) $\log x + \log 2 = 4$

9) $\log 10 + \log x = 1$

10) $\log_6(x + 1) - \log_6 x = \log_6 29$



1) $\log x - \log 4 = 3$

{20}

2) $-3 \log_3(x - 2) = -12$

{84}

3) $\log(16 + 2b) = \log(b^2 - 4b)$

{8, -2}

4) $-\log_5 7x = 2$

{ $\frac{1}{35}$ }

5) $\log x + 5 = 2$

{-100}

6) $\log_{12}(v^2 + 35) = \log_{12}(-2v - 1)$

{-6}

7) $2 \log_7 - 2x = 0$

{ $-\frac{1}{2}$ }

8) $\log x + \log 2 = 4$

{ $\frac{25}{2}$ }

9) $\log 10 + \log x = 1$

{5}

10) $\log_6(x + 1) - \log_6 x = \log_6 29$

{ $\frac{1}{28}$ }