

Unit 5 Day 6 Warm Up

Solve each equation.

1) $\log_9 (x^2 + 8) + \log_9 4 = 2$

2) $\log_6 (x + 6) - \log_6 x = \log_6 8$

3) $\log_4 5 - \log_4 (x - 8) = 1$

4) $\log_9 (x - 10) - \log_9 4 = \log_9 18$

5) $\log_9 x - \log_9 (x + 5) = \log_9 17$

6) $\ln x - \ln (x + 3) = 3$

7) $\log_2 (x + 4) - \log_2 10 = 3$

8) $\log (x - 3) - \log x = 1$

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Solve each equation.

1) $\log_9 (x^2 + 8) + \log_9 4 = 2$ $\left\{ \frac{7}{2}, -\frac{7}{2} \right\}$

2) $\log_6 (x + 6) - \log_6 x = \log_6 8$ $\left\{ \frac{6}{7} \right\}$

3) $\log_4 5 - \log_4 (x - 8) = 1$ $\left\{ \frac{37}{4} \right\}$

4) $\log_9 (x - 10) - \log_9 4 = \log_9 18$
 $\{82\}$

5) $\log_9 x - \log_9 (x + 5) = \log_9 17$

No solution.

6) $\ln x - \ln (x + 3) = 3$

No solution.

7) $\log_2 (x + 4) - \log_2 10 = 3$

 $\{76\}$

8) $\log (x - 3) - \log x = 1$

No solution.