

Name: _____

Date: _____

Homework: Solving Logarithmic Equations

Solve each of the following logarithmic equations.

1) $\ln x + \ln 10 = 2$

2) $\log_7 x - \log_7 2 = \log_7(2x + 18)$

3) $\log_{12} x + \log_{12}(x - 2) = \log_{12} 48$

4) $\log_2 x + \log_2(x + 3) = 4$

5) $\log x + \log(x - 7) - \log(x - 6) = \log 6$

7) Is the following equation true or false? Explain your answer.

$$\log_2 8 + \log_3 x = \log_2 8x$$

8) What is the sum of the first 4 terms of the arithmetic sequence in which the 8th term is 10 and the 14th term is 29.5?

9) Is the following statement true or false? Explain your answer.

$(4i - 3)(4i + 3)$ is an imaginary number