

Math 111 GWS 10 - Logarithmic and Exponential Equations 1

Name: _____

1. Solve the following equations involving exponentials or logarithms.

a. $2 \log_5(x) = \log_5(9)$

c. $\ln(x) = \ln(x + 6) - \ln(x - 4)$

b. $\log_5(x + 6) + \log_5(x + 2) = 1$

d. $\log(x) + \log(x - 21) = 2$

e. $\log_4(x^2 - 9) - \log_4(x + 3) = 3$

g. $2^x = 5$

f. $\log_{1/2}(x - 1) + \log_{1/2}(x + 1) = -2$

h. $8 \cdot 3^x = 5$

i. $5^{x-2} = 3^{3x+2}$

k. $7^{3-x} = 3^{2x-5}$

j. $2^{2x-3} = 5^{x+1}$

l. $\left(\frac{4}{3}\right)^{1-x} = 2^{x+2}$