

Business PreCalculus MATH 1643 Section 004, Spring 2014
Worksheet 26

1- Write each expression in expanded form:

a. $\ln \frac{x(x^3+1)}{(x-1)^2}$.

b. $\log_3 \frac{\sqrt{x^2+1}}{x+3}$.

2- Write each expression in condensed form:

a. $\frac{1}{2} \log x - \log y + \log z$.

b. $2 \ln x - 3 \ln y + 4 \ln z$.

3- State whether each of the following is true or false:

a. $\log(x+2) = \log x + \log 2$.

b. $\log \frac{x}{4} = \frac{\log x}{\log 4}$.

c. $\log_2 3x = 3 \log_2 x$.

4- Solve the following:

a. $2 + \log(2x+5) = 3$.

b. $\ln(x-1) = 1$.

5- Evaluate the following logarithms:

a. $\log \sqrt{3} + \frac{1}{2} \log 3 + 3 \log 3$.

b. $-\ln 5 + \ln 25 + \ln \frac{1}{5}$.