Practice problems for 3.2 Logarithmic Functions

The following problems will help you practice the material you learned today. Once you are finished check your solutions. Once done, you can work on your WeBWorK homework.

1. Determine x and put these in logarithmic form.

   $$2^{-5} = \frac{1}{x} \qquad\qquad \left(\frac{3}{4}\right)^{-2} = x$$

   $$\left(\frac{4}{25}\right)^{-\frac{1}{2}} = x \qquad\qquad 10^x = 10{,}000$$

2. Determine x and put these in exponential form.

   $$\log_3 \frac{1}{27} = x \qquad\qquad \log_{10} x = -3$$

   $$\log_x \frac{27}{64} = -\frac{1}{3} \qquad\qquad \log_x 1 = 0$$

3. Sketch the graph:

   $$f(x) = \ln(x - 2)$$
   $$f(x) = \ln(-x) + 1$$

4. Determine these values without a calculator:

   $$\ln e^{-2} = \qquad \ln(1) = \qquad \ln(\frac{1}{e^3}) =$$

   $$\ln e = \qquad \ln(5e) = \qquad \ln(\frac{3}{e^2}) =$$