Quiz 5.4 – Logarithmic Functions

1. (1 pt) alfredLibrary/AUCI/chapter5/lesson4/quiz-/solveexponential1pet.pg

(a) Find the EXACT solution to the exponential equation $800 = 20(1.1)^{4x}$. (*Do not give a decimal approximation.*)

$x =$ _____

(b) Find the EXACT solution to the exponential equation $0.009e^{-1.27x} = 0.001$. (*Do not give a decimal approximation.*)

$x =$ _____

(NOTE: WebWorK accepts 'ln' for the natural logarithm and 'log' for the base-10 logarithm.)

2. (1 pt) alfredLibrary/AUCI/chapter5/lesson4/quiz-/solvelogarithm1pet.pg

(a) Find the EXACT solution to $2\ln(3x+2) = 26$. *(Do not give a decimal approximation.)*

$x =$ _____

(b) Find the EXACT solution to $6\log_{10}(x) = 10$. *(Do not give a decimal approximation.)*

$x =$ _____

3. (1 pt) alfredLibrary/AUCI/chapter5/lesson4/quiz/changebase1pet.pg

(a) Evaluate the expression, correct to six decimal places, using the Change of Base Formula and the "ln" key on a calculator.

$\log_2 4 = \frac{\quad}{\quad} =$ ____

(b) Evaluate the expression, correct to six decimal places, using the Change of Base Formula and the "log" (base 10) key on a calculator.

$\log_7 7 = \frac{\quad}{\quad} =$ ____

(NOTE: WebWorK accepts 'ln' for the natural logarithm and 'log' for the base-10 logarithm.)