Math 111 Worksheet #4
October 9, 2007

1. The current exchange rate between the dollar and the euro is that \$1 is equal to .7065 euros. Let D = currency amount in dollars and E = the corresponding amount in euros.

   (a) How much is \$500 worth in euros?

   (b) Find $E = f(D)$ (E as a function of D.)

   The current exchange rate between the euro and the loonie (Canadian dollar) is that 1 euro is equal to 1.389 loonies.

   (c) Find $L = g(E)$ where L = value in loonies.

   (d) How much is \$500 worth in loonies?

   (e) Find and interpret $L = g(f(D))$. What are the units of the input and output variable?

   (f) Find and interpret $g(f(10))$.

2. Suppose the quantity sold q (in millions) of a particular energy drink on a given day is a function of its price p (in dollars) given by $q = f(p) = -.3p + 1.35$.

   (a) How many drinks are sold if the price is \$2.00?

   (b) Find the inverse function $p = f^{-1}(q)$. What are the units of the input and output variable?

   (c) Find $f^{-1}(.75)$.

   (d) Find and interpret $f(2.5)$ and $f^{-1}(.6)$.