Calculus I Quiz One Form A Summer 2007 **(20 Points)**

Name:_____

1) Given $f(x)=\frac{3}{x+1}$ find $\frac{f(x+h)-f(x)}{h}$ (5 Points)

2) A box with an open top is to be constructed from a rectangular piece of cardboard with dimensions 15 inches by 25 inches by cutting out equal squares of side x at each corner and then folding up the sides. Express the volume V of the box as a function of x and state the domain of this function. (5 Points)

3) The manager of a furniture factory finds that it costs $2200 to manufacture 100 chairs in one day, and $4800 to produce 300 chairs in one day. (2 Points Each)

a) Express the cost as a function of the number of chairs produced, assuming that it is linear.

b) What is the slope of the graph and what does it represent?

c) What is the y-intercept of the graph and what does it represent?

4) Use the following table to evaluate the expressions. (4 Points)

x	1	2	3	4	5	6
f(x)	3	1	4	2	2	5
g(x)	6	3	2	1	2	3

a) (f o g o g)(1) =

b) (g o g o f)(1) =

c) (g o f)(3) =

d) (f o g)(6) =