January 13, 2006 QUIZ 1a MATH 104 NAME _____

(9) 1. A company which produces widgets has an initial investment of $5000.00. If each widget costs $9.25 to produce and can be sold at a price of $15.75, find:

(a) the equation for the total cost $C(x)$ and the total revenue $R(x)$;

(b) the break even point (the intersection of the cost and revenue functions–round off your answer to the closest integer));

(c) how many widgets must be sold to yield a profit of $500.00? (again, round off your answer to the closest integer)

(6) 2. Let $f(x) = \frac{5}{x}$ and $g(x) = x^2 + 1$. Find:

(a) $f(g(x)) =$

(b) $g(f(-2)) =$

(c) $g(2 + f(5)) =$