Math 1050 - Quiz 2

1. Suppose $f(x)=\sqrt{x^2-7x+12}$

a) Find $f(c)$
b) Find $f(2x+1)$
c) What is the domain of f?

2. Use the online graphing tool or your graphing calculator to approximate (one-decimal place accuracy) the zeros of $f(x)=x^2-x-21$.

3. Use a graphing calculator (or the online grapher) to determine the intervals for which the function $f(x)=12x^3-9x$ is increasing.

4. Write a formula for $f^{-1}(x)$, the inverse of the function given by

$$f(x)=\frac{5x+2}{4x-3}$$.

5. A rock is dropped from the top of a cliff that is *200* feet high.

a) How long will the stone take to hit the ground? Hint: Use the falling body formulas: $s(t)=-16t^2+v_0t+s_0$ $v(t)=-32t+v_0$
What is the speed of the stone when it hits the ground?

6. Find the coordinates of the intercept points of the function

$f(x)=4x^2+x-60$.

7. Use the online graphing tool or your graphing calculator to approximate (one-decimal place accuracy) the maximum and minimum values of the function

$f(x)=9x^3-16x$ is increasing.

8. Suppose $f(x)=x^2-4x+3$ and $g(x)=4x+5$.

a) Find $f\left(g(3)\right)$
b) Find $g\left(f(3)\right)$
c) Find $f\left(g(x)\right)$
d) Find $g\left(f(x)\right)$