MATH 113: College Algebra with Applications Name:

QUIZ 10

This quiz covers section 3.5.

Exercise 1: Follow the seven steps to graph the following rational function: $f(x) = \frac{4x}{x^2-1}$

(6+1 bonus points)

Exercise 2: Let $f(x) = x^2 + 1$. Use (make) the graph of f(x) to complete the following statements:

As $x \to 1^-$, $f(x) \to$_____

As $x \to -1^+$, $f(x) \to$_____

As $x \to \infty$, $f(x) \to$_____ (2 points)

Exercise 3: $f(x) = -x^2 - 7x + 10$.

Find the vertex of the graph of f.

State whether the function has a minimum value or a maximum value, and state what that value is.

What is the range of f?

Does f(x) have a y-intercept? Why? (2 points)