Meramec College Algebra Quiz 3 Fall 2007

Name _____ Score_____/10

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1. Consider the rational function whose rule is $f(x) = \frac{2x - 5}{3x + 4}$.

What are the zeros of f ?

What are the vertical asymptotes for the graph of f ?

What are the horizontal asymptotes for the graph of f ?

2. Consider the polynomial function whose rule is $f(x) = (x - 3)^2(x + 5)(x + 2)^3$
What are the zeros of f and what are their multiplicities ?

Where does the graph cross the x-axis ?

Where does the graph intersect but not cross the x-axis?

3. Suppose f is a polynomial function with the following properties.

a) The real zeros of f are:
-2 with multiplicity 1
2 with multiplicity 3
3 with multiplicity 2

b) As $x \to \infty$, $f(x) \to \infty$
As $x \to -\infty$, $f(x) \to \infty$

Sketch the graph of f .