QUIZ 6 - MATH 111 Friday, October 14

YOUR NAME:_____ George Voutsadakis

Read each problem **very carefully** before starting to solve it and do only what is asked. Each problem is worth around 5 points. It is necessary to show **all** your work. Correct answers without explanations are worth 0 points. GOOD LUCK!!

1. [4 points] Consider $f(x) = 5(x+3)(2x+1)(3x-2)$. Find the following:

   (a) $f(x)$ in general form.

   (b) The degree, leading term and leading coefficient of f.

   (c) The y- and x-intercepts.

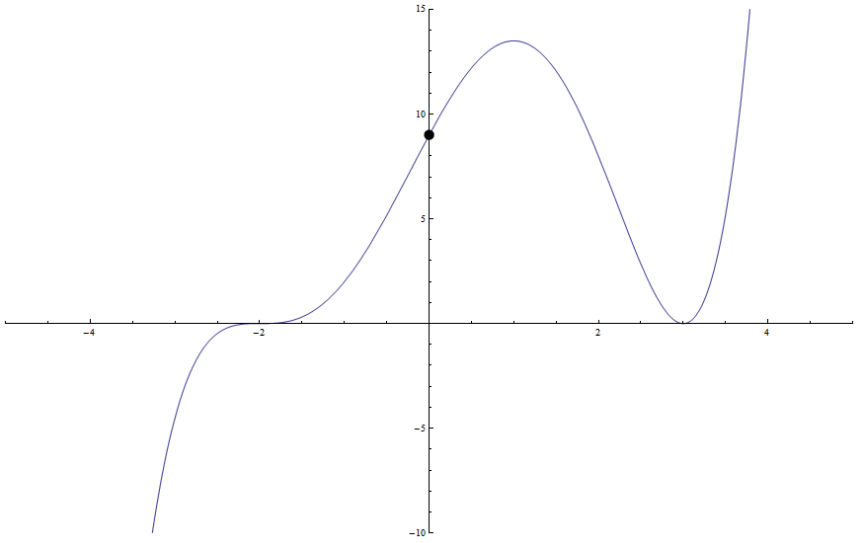
2. [4 points] Consider $f(x) = x(x+1)^2(x-2)$.

   (a) Identify the end behavior.

   (b) Find the roots and their multiplicities.

   (c) Sketch the graph of $y = f(x)$
   (use the space on the right and
   label all important points).

3. [4 points] Consider the following graph.



(a) Find the roots and their multiplicities.

(b) Identify the end behavior.

(c) Find a possible equation for the function whose graph is shown.