NAME_____ 15 April 2009

MATH 121 — QUIZ IX

Consider the function $f(x) = x^2(x-3)$.

1) What is the degree of f? *[Hint: first make it look like our usual polynomials.]*

2) What are the roots of f?

3) What are the x-intercepts of the graph of f?

4) What does the graph of f look like near each of its x-intercepts? Make a little zoomed-in picture of what it will look like there, for each x-intercept.

5) Make a general sketch of $f(x)$, using what you found in **3)** and **4)**, above.