Name.....

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Math 1210-2

Quiz 7

November 2, 2007

Show all work for complete credit!

Choose ONE of the two following functions to graph - your choice, the rational function on the front, or the polynomial on the back. If you try both, INDICATE CLEARLY which one you want graded. (On an exam, you would not have a choice, so should be prepared for either variety.)

1) Let $f(x) = \frac{x^2 + x - 6}{x - 1}$. Sketch the graph $y = f(x)$. You should find and label all x and y-intercepts, asymptotes, and intervals on which the function is increasing/decreasing, concave up/concave down. Hint: long division will help with parts of this problem.

(10 points)

2) Let $g(x) = x^4 - 2x^2$. Sketch the graph $y = g(x)$. Include x and y-intercepts, the intervals on which $g(x)$ is increasing/decreasing, and on which $g(x)$ is concave up/concave down. Also, find all local extrema and inflection points.

(10 points)