Name: _____

Math 135, Quiz #8, March 31, 2014

1. Let $f(x)$ be a function with derivative $f'(x) = x^4(e^x - 5)$. Find all critical numbers of f and determine if they are a relative max, relative min, or neither.

2. Evaluate the following limits

a) $\lim_{x\to\infty} \dfrac{6x^3 - x^2 + 17x - 1}{2x^3 + 5x^2 + 5}$

b) $\lim_{x\to\infty} \dfrac{\sqrt{x^3 + 9x + 1}}{x^2 - 3x - 1}$

c) $\lim_{x\to 3^+} \dfrac{x^3 - 10}{3 - x}$