Discussion (circle): 10 AM 11 AM 12 PM Name: _____

Math 180, Quiz 3: Thursday, February 7, 2013

Take fifteen minutes to complete this quiz. Please show all your work, and write your name on the front *and* back of the paper before turning it in.

1. **(4 pts)** Consider the function $f(x) = \dfrac{x+1}{x^2+2x+3}$. On which intervals is $f(x)$ continuous?

2. **(5 pts)** Consider the function $g(x) = x^2 - e^x$. Write an equation (in any form you like) for the line tangent to the graph of $g(x)$ through the point $(0, -1)$.

3. **(1 pt)** Evaluate $\displaystyle\lim_{x\to\infty} \frac{2x}{3-x}$.