

Name: \_\_\_\_\_

Math 105: Fall 2013  
Quiz 7: November 22

Correct answers accompanied by incorrect or incomplete work will not receive full credit. Good Luck!

1. Evaluate the following limits. Be sure to show all work. If you use L'Hopital's Rule show that you can use it.

(a)  $\lim_{t \rightarrow \infty} \frac{2t + 3}{5 - 4t}$

(b)  $\lim_{x \rightarrow 0} \frac{1 - \cos(x)}{\sin(2x)}$

2. FACT: The equation  $e^x - 10x = 0$  is impossible to solve algebraically.

Use the Intermediate Value Theorem (IVT) on  $f(x) = e^x - 10x$  to show that  $e^x - 10x = 0$  has a solution in  $[0, 1]$ .