Name:

This quiz covers: 4.1, 4.2, 4.3, and 4.5.

Directions: Complete all question and **show all applicable work.** Partial credit will be given. All questions are equally weighted.

1.) A 10 foot ladder is sliding down a wall at 2 feet per second. How fast is the ladder's base sliding away from the wall when the base is 6 feet from the wall? Be sure to draw a diagram.

2.) Compute: $\displaystyle\lim_{x \to \infty} \frac{e^{2x}}{x^2}$

(more on back)

Name:

3.) Find all maximums and minimums of the function $f(x) = 2x^3 + 3x^2 - 2x$ on the interval $[-5, 5]$. Be sure to label each as one of the following: local minimum, local maximum, absolute minimum or absolute maximum. You must show your work to receive credit.