Quiz 1   MAC-2311   Fall 2013   **Name:** _____

To receive full credit you should completely justify each answer.

1. (12 pts) Compute each of the following limits. If the limit does not exist or is infinite specify so.

$(a) \displaystyle\lim_{x \to 3} \frac{x^2 - 5x + 6}{3x - x^2}$

$(b) \displaystyle\lim_{x \to 2} \frac{x - 8}{x^2 - 4x + 4}$

$(c) \displaystyle\lim_{x \to 0} \frac{1 - \cos(3x)}{\sin^2 x}$

$(d) \displaystyle\lim_{x \to -\infty} \frac{\sqrt{4x^2 + 9}}{x + 10}$