Math 166: Honors Calculus II Name:_____
Quiz 7 *Mar. 18, 1995*

1. a) Define $\lim_{x \to \infty} f(x) = A$.

b) State L'Hopital's Rule.

2. Compute the following limits. Be sure to justify your answers.

a) $\lim_{x\to 0} \dfrac{\log(\cos(ax))}{x^2}$

b) $\lim_{x\to\infty} x^5\Big[\sin\Big(\dfrac{1}{x}\Big) - \dfrac{1}{x} + \dfrac{1}{6x^3}\Big]$

c) $\lim_{x\to-\infty} \dfrac{\sqrt{x^2+4x+8}}{\sqrt[3]{8x^3+4x+1}}$