

Math 126: Calculus II
Quiz 3 *September 14, 1999*

Name: _____
Section: _____

1. Calculate the following, carefully **showing your work** and **all** important steps.

a) $\lim_{t \rightarrow 0} \frac{t \sin t}{1 - \cos t}$.

b) $\lim_{x \rightarrow 0} x^x$.

2. Consider the functions $f(x) = x^2 e^x$ and $g(x) = e^{2x}$. Which one grows faster as $x \rightarrow \infty$? Carefully **show your work** and **all** important steps.