Math 166: Honors Calculus II Name:_____
Quiz 2 *Jan. 28, 1999*

1. a) Define the natural logarithm function, $\log(x)$, and the natural exponential function, $\exp(x)$.

   b) Define a^x for $a > 0$ and $x \in$.

   c) Prove that $\log(xy) = \log(x) + \log(y)$, $x, y > 0$.

2. Compute the following integrals. (Justify your answers.)

a) $\int \sec(x)\,dx$

b) $\int x\log(x)\,dx$

c) $\int_0^1 2^{-x}\,dx$