

Math 166: Honors Calculus II

Name: _____

Quiz 2 *Feb. 1, 1996*

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

b) Prove that $\log(ab) = \log(a) + \log(b)$ for $a, b > 0$.

c) Define the natural exponential function, $\exp(x)$.

d) Define a^x for $a > 0$ and $x \in \mathbb{R}$.

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

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

b) $\int x \log^2(x) dx$

c) $\int x 3^{-x^2} dx$