Quiz 2 September 5, 2000

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

$$a) \frac{d}{dx}(x^{1/x})$$

$$b) \int_0^1 \frac{e^x}{1 + e^x} \, dx$$

2. Let 
$$f(t) = 3e^{-kt}$$
. Find k such that  $f(2) = \frac{1}{4}f(1)$ .