

Math 232 Spring 2003
Quiz 3 (2/4)

Name: _____

This quiz is worth 10 points and you have 10 minutes to complete it. Show all work and circle your final answers.

Calculators ARE allowed today.

1. (4 pts) Write the function $f(x) = 2(3^x)$ in the form $f(x) = Ae^{kx}$ for some numbers A and k (you may approximate k).

2. (6 pts) Use the definition of derivative, and the alternate definition of the number e (which says that $\lim_{h \rightarrow 0} \frac{e^h - 1}{h} = 1$) to prove that $\frac{d}{dx}(e^x) = e^x$. Provide reasons for each step in your proof.