

**232 Quiz 1**

**Name:** \_\_\_\_\_

January 19, 2012

**Name:** \_\_\_\_\_

**Name:** \_\_\_\_\_

*Work in groups of three or less. You may use your Notebooks. All members of the group must discuss the problem and agree on a solution. Please do scratch work on separate paper and only put your final answer on the quiz sheet.*

1. Use the chain rule, algebra, and the fact  $\frac{d}{dx}(e^x) = e^x$  to prove that  $\frac{d}{dx}(b^x) = (\ln b)b^x$ . Make sure that the structure and logic of your argument is very, very clear.