MATH 14 LAB 3B1 Fall 2011
Lab Quiz 3 Name: _____

Show all work clearly and in order, and circle your final answers.
Justify your answers algebraically whenever possible.

1. (*2 points*) True or false?
(a) Given any function f whose domain is $(0, 1)$, I know that there is a root of f on the interval $(0, 1)$ when $f(0) = -3$ and $f(1) = 4$.

(b) The intermediate value theorem tells me that when g is a continuous function and $x \leq g(x) \leq x^2$, that $\lim_{x \to 0} g(x) = 0$.

2. (*2 points*) Compute $\lim_{x \to 2} \dfrac{x^2 - 4}{x^2 - x - 2}$.

3. (*2 points*) Compute the slope of the tangent line of the graph $y = 2x^2$ at the point $x = 4$.