Calculus: Homework
10/10-10/13

on: Wednesday: test

due: Friday: read pp. 172-175

1. pg. 178 / #8, 12
2. Find $f'(x)$ if $f(x) = \sqrt{x}$.

Monday:

Let *f* be a function with domain the set of all real numbers and having the following properties:

a. $f(x + y) = f(x)f(y)$ for all real numbers *x* and *y*.

b. $\lim_{x \to 0} \frac{f(x)-1}{x} = k$, where *k* is a nonzero real number.

Use these properties and a definition of the derivative to show that $f'(x)$ exists for all real numbers *x*.