

MAT 123: Introduction to Calculus, R-16  
Fall 2005

Homework 7

Due: Dec. 13, 2005

**N.B.** You must **show all your work** to receive full credit. A correct answer without sufficient explanation will automatically get a **zero**. **You are NOT supposed to use calculators in this assignment.** Please be neat, and write legibly. Don't forget to staple the papers before you hand in.

**Problems.**

1. Use the formal definition of derivative to find the derivative of  $3x^2 + 2$  at  $x = 2$ . (Don't use the power rule).
2. Use the formal definition of derivative to find the derivative of  $\sqrt{x}$  at  $x = a$  (i.e. find  $f'(a)$  for  $f(x) = (\sqrt{x})$ ).