Chapter 2.4: More Interpreting Derivatives

Calculus I

College of the Atlantic. Fall 2014

1. Suppose that $f(50) = 30$ and $f\prime(50) = -1.5$. Estimate $f(52)$.

2. Let $f(r)$ give the area in cm^2 of a pizza as a function of its radius r in cm.

   (a) What is the meaning of $f(5)$?
   (b) What is the meaning of $f^{-1}(200)$?
   (c) What is the meaning of $f'(6)$?
   (d) Why is $f'(6) > f'(5)$?

3. Let $g(v)$ be the fuel efficiency in mpg of a car traveling at v miles per hour. What is the practical meaning of the statement:

$$g'(55) = -0.54\ ?$$

4. Let $C(n)$ be the cost of providing a COA education to n students. What is the practical meaning of the following quantities?

   (a) $C(350)$
   (b) $C'(350)$