HW 6: §2.1-2.3

Complete the following problems to the best of your ability. **SHOW ALL OF YOUR WORK.** Unshown work will not be graded. You may use a calculator.

1. Let $f(x) = \sqrt{2x-1} + 2$.

   (a) Find the net change of f from 1 to 5.

   (b) Find the average rate of change of f from 1 to 5.

2. Consider the following table that gives the number A of giant octopus attacks as a function of x, the number of years since 1950.

A	0	5	10	15	20
x	2	5	8	11	14

   (a) Find the average rate of change in A from 1950 to 1965.

   (b) Find the average rate of change in A from 1955 to 1960.

(c) What kind of function do these data represent?

(d) Find an equation that models this function.

3. Find a linear function with the following characteristics.

   (a) One that goes through the points $(-2, 1)$ and $(0, -3)$.

   (b) One with slope $1/2$ that goes through the point $(2, 3)$.

4. Take the lines from problem 3a and 3b and write them in point-slope form.

Optional Problems:

2.1: 1-20, 22, 27-32
2.2: All
2.3: All