Name: _____   Date: _____

Rate of Change

$$Rate\ of\ Change\ = \frac{\rule{4cm}{0.4pt}}{\rule{4cm}{0.4pt}} = \frac{y_2 - y_1}{x_2 - x_1}$$

Rate of Change with Points:
1. Find the rate of change, given the following points:
   A. $(5,1)$ and $(-1,3)$.   B. $(12,5)$ and $(10,-3)$.

Rate of Change with functions:

2. Find the rate of change for **f(x) = -2x – 6 from [0, 2].**

3. Find the rate of change for **f(x) = 2x² – 3 from [-2, 1].**

4. Find the rate of change for **f(x) = 2x² + 3x – 4 from [-3, -1].**

Rate of Change with Tables
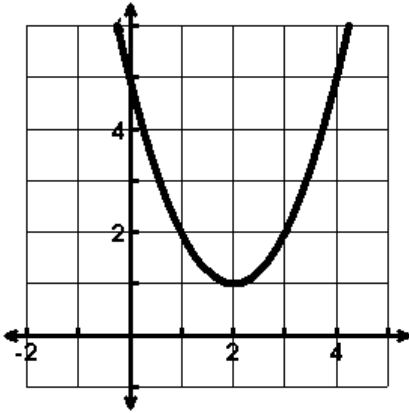
5. Find the rate of change using the table.

   A. Find the rate of change from 0 to 2.

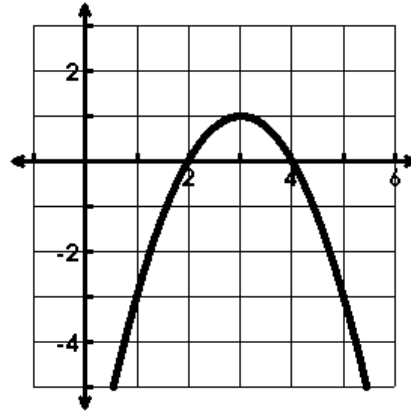   B. Find the rate of change from -1 to 3.

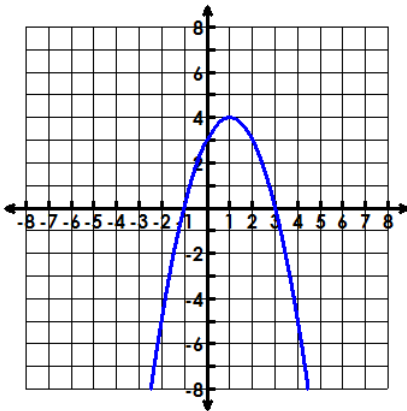| x	f(x)
-1	-10
0	-4
1	2
2	10
3	22

Rate of Change with Graphs

6. Find the rate of change from [0, 2]

7. Find the rate of change from [2, 5]

8. Find the rate of change from [-1, 2]

9. Find the rate of change from [-4, -2]