Key

Math 1

Name _____

Lesson 1-4 Average Rate of Change HW

Date _____

1. Find the average rate of change between the following points. $\quad$ $x_1\ y_1\ x_2\ y_2$
$(-2,5)\ (8,-1)$

$$\frac{\Delta y}{\Delta x} = \frac{y_2 - y_1}{x_2 - x_1} = \frac{-1-5}{8--2} = \frac{-6}{10} = \boxed{-\frac{3}{5} = -0.6}$$

2. Sammie's savings account balance changed from $1,450 in January 2014 to $3030 in May 2014.

   a. What would be the independent and dependent variables in this problem?
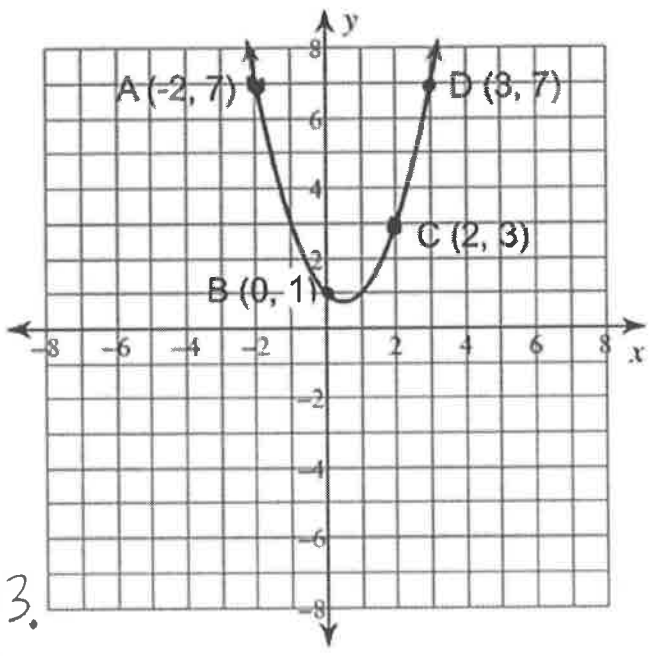
   Independent: Month (time)   Dep: # in account

   b. Find the average rate of change per month. Round your answer to the nearest dollar.

$$\frac{3030 - 1450}{5 - 1} = \frac{1580}{4} = \boxed{\$395 \text{ per month}}$$

3. Find the average rate of change from A – B.
   Describe the pattern of change.

$$\frac{1-7}{0--2} = \frac{-6}{2} = \boxed{-3}$$

Large decrease.

4. Find the average rate of change from A – C.
   Describe the pattern of change.

$$\frac{3-7}{2--2} = \frac{-4}{4} = \boxed{-1}$$

Decrease, but not as much as #3.

5. Find the average rate of change from A – D.
   Describe the pattern of change.

$$\frac{7-7}{3--2} = \frac{0}{5} = \boxed{0}$$

No increase or decrease.
Same height.

6. Using the table, find the average rate of change from when x = 1 and x = 4

$$\frac{-11-1}{4-1} = \frac{-12}{3} = \boxed{-4}$$

x	f(x)
0	5
1	1
2	-3
3	-7
4	-11

A(-2, 7)   D (8, 7)
C (2, 3)
B (0, 1)