SECONDARY MATH 2

**CORE STANDARDS**

II.2.F.IF.7

II.2.F.BF.3

LESSON

**2-2**

OBJECTIVE **1. SWBAT interpret and use function notation.**

 **2. SWBAT transform functions by translations, reflections, and/or dilations.**

NOTES FUNCTION NOTATION

  means “function of *x*” (it does not mean *f* times *x*)

  is used in place of *y*. Why? It allows you to communicate what you want for input (*x*).

 For example: If  then 

 FUNCTION TRANSFORMATIONS

 translates (shifts)  to the right *h* units  translates (shifts)  to the left *h* units

  translates (shifts)  up *v* units  translates (shifts)  down *v* units

 reflects  in *x*-axis (up-down flip)  reflects  in *y*-axis (left-right flip)

 dilates  vertically. 

EXAMPLES

**1.** If , find: **2.** If , find:

 a.  a. 

 b.  b. 

 c.  c. 

**3.** Describe how each function below is transformed compared to 

 a.  b.  c. 

**4.** Describe how each function below is transformed compared to 

a.  b.  c. 

PRACTICE **2-2** NAME\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 [SHOW YOUR WORK] [WRITE ALL ANSWERS IN SIMPLIFIED FORM]

Evaluate each given function.

1. 
	1.  b.  c. 
2. 
	1.  b.  c. 
3. 
	1.  b.  c. 
4. 
	1.  b.  c. 
5. Describe how each function below is transformed compared to 
	1.  b.  c. 
6. Describe how each function below is transformed compared to 
	1.  b.  c. 
7. For each of the following graphs, write an absolute value function (equation form) that describes it.
	1. b. c. d.

1. Write a function,, that models the area of a rectangle whose base is 6 units longer than its height.