AFM **4.2 Function Notation** Chapter 4

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| **Lesson Vocabulary****Relation:** A set of \_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_. It can be written as \_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, or a \_\_\_\_\_\_\_\_\_\_\_\_\_.**Domain:** The set of \_\_\_\_\_\_\_ values in an ordered pair. **Range:** The set of \_\_\_\_\_\_\_ values in an ordered pair.**Function:** A relation in which every x value has only one y value. The X’s can’t \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_!!!!!**Vertical Line Test:** A way to test if a graph is a function or not. **Function Notation:** To write a rule in function notation, you use the symbol \_\_\_\_\_\_\_\_ instead of \_\_\_\_\_. It is read “F of X” |

**Identifying Domain and Range**

List the domain and range for each relation.

1. (4, 0) (2, 8) (6, -1) (10, 4)
2.
3.

**Identifying Functions Using the Vertical Line Test**

Drop a straight line through the graph. If it touches it twice, it is not a function!



1.
2.
3.

**Evaluating a Function**

Step 1: Substitute the number inside f( ) into the equation for x.

Step 2: Simplify the equation.

Step 3: Rewrite as a solution set.

Evaluate each of the following.

1. f(x) = 3x + 4 for f(2)
2. f(x) = 3x2 + 4 for f(6)
3. f(x) = -12x + 1 for f(-3)

Evaluate each of the following.

1. f(x) = 3x + 4 for f(x + 1)
2. f(x) = 4(x + 2) for (3x)
3. f(x) = -(x + 3) for (x2 + 2)

**Evaluating a Function with a Given Graph**



Domain:

Range:

Using the graph from above, find the following:

1. f(-2)
2. f(5)
3. f(4) – 8
4. f(4)•f(1)