Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Math 8: Writing and Evaluating Functions**

*Directions: Fill in the blanks below as you watch the video.*

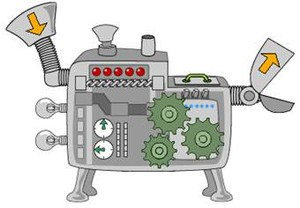
**How do we write functions?**

1. function notation is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. read as "f of x"
3. Example: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Functions are like \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_!

They have an \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and an \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Input = \_\_\_\_\_\_\_\_\_\_ = \_\_\_

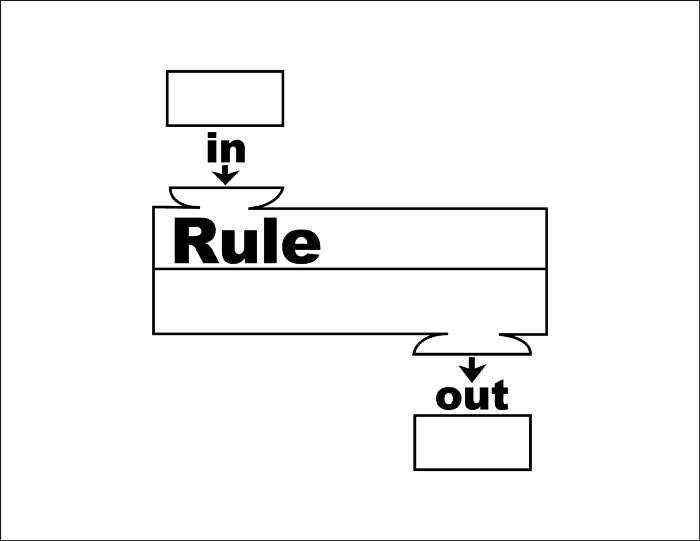


Range = \_\_\_\_\_\_\_\_\_\_ = \_\_\_\_\_ = \_\_\_

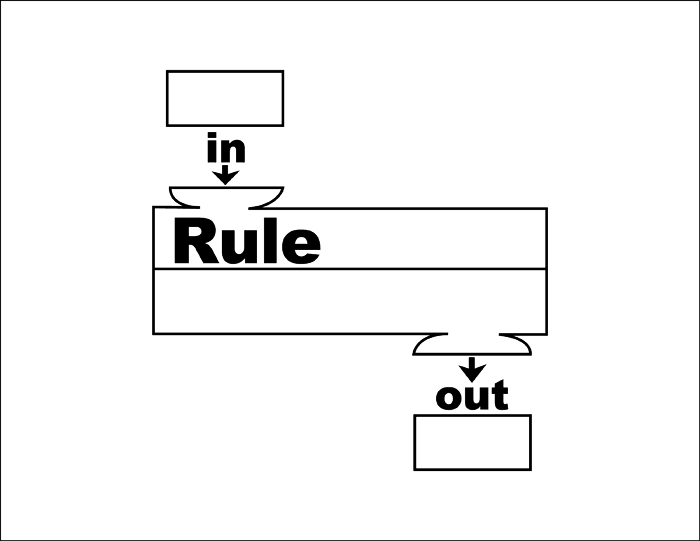
**How do we evaluate functions?**

* Evaluate means \_\_\_\_\_\_\_\_\_\_\_!
* We "solve" functions by substituting (plug in) an \_\_\_\_\_\_ (x) value into our function. Our answer is the \_\_\_\_\_\_\_\_ (f(x)).
* We will always be given a \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_ .A function rule is an \_\_\_\_\_\_\_\_\_\_\_\_ that establishes the relationship between the domain (input or x) and the range (output or y).

**Example 1:** Evaluate f(x) = x + 5 for x = 1.



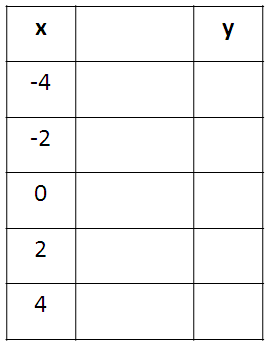
**Example 2 – You Try:** Evaluate f(x) = x/4 for x = -4.



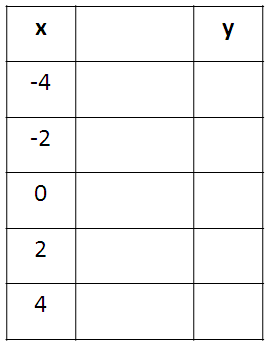
**Example 3:** Find f(-3) and f(2) for f(x) = -2x - 4.

**Example 4 – You Try:** Find f(-5) and f(3) for f(x) = 3x - 1.

**Example 5:** Evaluate f(x) = 3x + 1 for the values given in the table.



**Example 6:** Evaluate f(x) = 10x + 2 for the values given in the table.



**What did we learn?**

**How do we write functions?**

* + - function notation is f(x)
    - read as "f of x"

**How do we evaluate functions?**

* Functions are like machines. They have an input and an output.
* Evaluate means solve!
* We "solve" functions by substituting (plug in) an input (x) value into our function. Our answer is the output (f(x)).
* We will always be given a function rule.A function rule is an equation that establishes the relationship between the domain (input or x) and the range (output or y).