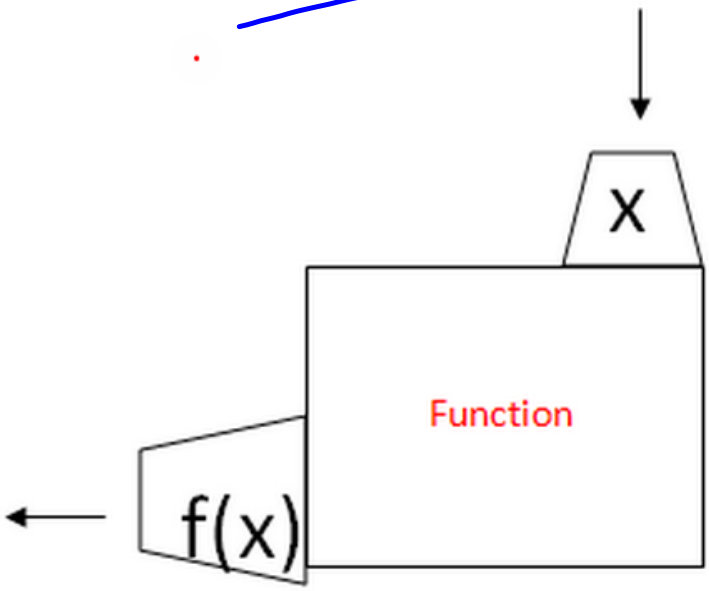
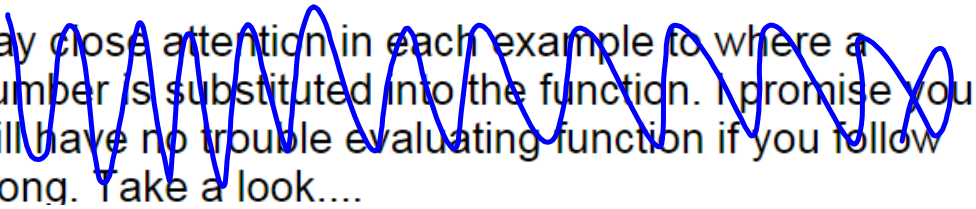
Functions



If you can substitute and evaluate a simple equation, then you can evaluate functions. Remember, a function is basically the same as an equation. The only difference is that we use that fancy function notation (such as "f(x)") instead of using the variable y.

Pay close attention in each example to where a number is substituted into the function. I promise you will have no trouble evaluating function if you follow along. Take a look....



Example 1

f(x) = 6x -1 **Find f(5)** **Original Problem**

f(x) = 6x -1 Find f(5) ← Notice how 5 replaces the x in the function notation.

f(5) = 6(5) -1 Substitute 5 for x in the original function.

f(5) = 29 Evaluate! This is your answer!

This answer means that if you substitute 5 for x, into this function, you will get an answer of 29! You "used" to write: y = 29. Now, in place of y, you will use f(5).

**(The 5 can be replaced with whatever number you substitute into the equation.)

Example 2

Find the functional values f(-2), and f(3) for the function:
$f(x) = x^2 + 1$

This problem involves 2 steps because you are asked to find two values for the function. You must evaluate for f(-2) and f(3).

Step 1: $f(x) = x^2 + 1$	**find f(-2)**	**Original Problem**
$f(-2) = (-2)^2 + 1$	Substitute (-2) for x in the original function	
$f(-2) = 4 + 1$	Evaluate!	
$f(-2) = 5$	**This is your answer to part 1.**	
Step 2: $f(x) = x^2 + 1$	**find f(3)**	**Original Problem**
$f(3) = 3^2 + 1$	Substitute 3 for x in the original function.	
$f(3) = 9 + 1$	Evaluate!	
$f(3) = 10$	**This is your answer to part 2.**	

Our final solution to the function, $f(x) = x^2 + 1$ is:

$f(-2) = 5$ & $f(3) = 10$

This means:

If we substitute -2 for x We get an answer of 5

If we substitute 3 for x We get an answer of 10