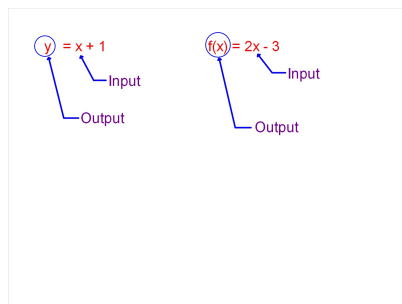


Given $f(x) = x^2 + 2x - 1$ Same as $y = x^2 + 2x - 1$

Find $f(3) = (3)^2 + 2(3) - 1 = 14$

Same as find y when $x=3$



Given: $g(x) = x^2 + 2x - 1$

Find each of the following:

- $g(5)$
 $y = 25 + 10 - 1$
 $g(5) = 34$
- $g(0)$
 $0^2 + 2(0) - 1$
 $0 - 1 = -1$
- $g(w)$
 $y = w^2 + 2w - 1$
- $g(a+3)$
 $g(a+3) = a^2 + 8a + 14$

Given $g(x) = x^2 - 2x$

Find the Range for the following Domain: $\{-5, 0, 2, 5\}$

$g(-5) = 35$
 $g(0) = 0$
 $g(2) = 0$
 $g(5) = 15$

Range $\{0, 15, 35\}$

What is Function Notation?

- Another way to write $y =$
- Instead of writing $y = x^2 + 1$
Function Notation writes it as: $f(x) = x^2 + 1$
- How do you say: $f(x)$ "f of x"
- f is the function name
- x is the independent variable (domain)

Given: $y = 2x + 7$

Find y when $x = 3$ $y = 2(3) + 7$

In Function Notation:
 $y = 2x + 7$ → $f(x) = 2x + 7$

Find y when $x = 3$ → Find $f(3)$ $f(3) = 2(3) + 7$

Given: $f(x) = 2x + 6$ and $g(x) = x - 1$

What do you think $f(g(x))$ is?

$f(g(x)) = 2(x-1) + 6$
 $2x - 2 + 6$
 $2x + 4$

Composite functions