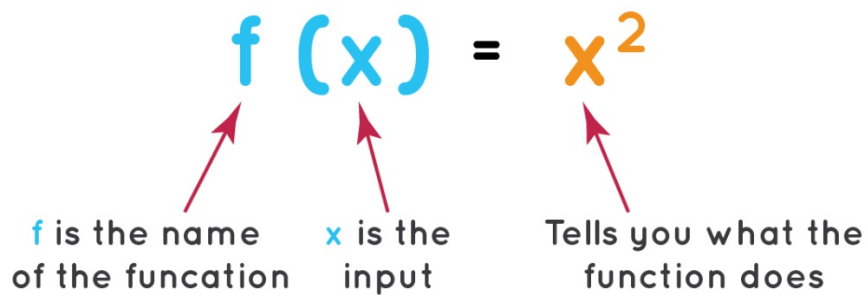

Functions - Day 8

Function Notation

Function Notation



examples:

Written as an Equation	Written in Function Notation
$y = 5x$	$f(x) = 5x$
$y = x + 7$	$g(x) = x + 7$
$y = x^2$	$h(x) = x^2$

$$f(x) = 2x^2 + x - 1$$

$$f(x) = |x - 2| + 8$$

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

$$f(10) = |10 - 2| + 8$$

Find the following values.

$$f(x) = x^2 + 3$$

$$f(3) =$$

$$f(-6) =$$

$$f(0) =$$

Find the following values.

$$f(x) = x^2 + 3$$

$$f(3) =$$

$$3^2 + 3 =$$

$$\textcircled{12}$$

$$f(-6) =$$

$$(-6)^2 + 3 =$$

$$\textcircled{39}$$

$$f(0) =$$

$$0^2 + 3 =$$

$$\textcircled{3}$$

Find the following values.

$$g(x) = -2x - 4$$

$$g(0) =$$

$$g(5) =$$

$$g(-3) =$$

Find the following values.

$$g(x) = -2x - 4$$

$$g(0) =$$

$$-2(0) - 4 =$$

$$\textcircled{-4}$$

$$g(5) =$$

$$-2(5) - 4 =$$

$$\textcircled{-14}$$

$$g(-3) =$$

$$-2(-3) - 4 =$$

$$\textcircled{2}$$

Find the following values.

$$f(x) = 2x^2 - 5 \quad \text{and} \quad g(x) = 3x + 2$$

$$f(10) =$$

$$g(-8) =$$

$$f(0) =$$

Find the following values.

$$f(x) = 2x^2 - 5 \quad \text{and} \quad g(x) = 3x + 2$$

$$f(10) =$$

$$2(10)^2 - 5 =$$

$$\textcircled{195}$$

$$g(-8) =$$

$$3(-8) + 2 =$$

$$\textcircled{-22}$$

$$f(0) =$$

$$2(0)^2 - 5 =$$

$$\textcircled{-5}$$

Find the following values.

$$f(x) = 2x^2 - 5 \quad \text{and} \quad g(x) = 3x + 2$$

$$f(4) + g(2) =$$

$$g(-5) + f(7) =$$

Find the following values.

$$f(x) = 2x^2 - 5 \quad \text{and} \quad g(x) = 3x + 2$$

$$f(4) + g(2) =$$

$$f(4) = 2(4)^2 - 5 = 27$$

$$g(2) = 3(2) + 2 = 8$$

$$27 + 8 = \textcircled{35}$$

$$g(-5) + f(7) =$$

$$g(-5) = 3(-5) + 2 = -13$$

$$f(7) = 2(7)^2 - 5 = 93$$

$$-13 + 93 = \textcircled{80}$$

Find the following values.

$$f(x) = 2x^2 - 5 \quad \text{and} \quad g(x) = 3x + 2$$

$$f(g(5)) =$$

$$g(f(5)) =$$

Find the following values.

$$f(x) = 2x^2 - 5 \quad \text{and} \quad g(x) = 3x + 2$$

$$f(g(5)) =$$

$$g(5) = 3(5) + 2 = 17$$

$$f(17) = 2(17)^2 - 5 = 573$$

$$g(f(5)) =$$

$$f(5) = 2(5)^2 - 5 = 45$$

$$g(45) = 3(45) + 2 = 137$$

Given the function & domain, find the range.

$$f(x) = x^2 + 3x + 4 \quad \mathcal{D} = \{-3, 0, 2, 5\}$$

Given the function & domain, find the range.

$$f(x) = x^2 + 3x + 4 \quad \mathcal{D} = \{-3, 0, 2, 5\}$$

$$f(-3) = (-3)^2 + 3(-3) + 4 = 4$$

$$f(0) = (0)^2 + 3(0) + 4 = 4$$

$$f(2) = (2)^2 + 3(2) + 4 = 14$$

$$f(5) = (5)^2 + 3(5) + 4 = 44$$

$$\mathcal{R} = \{4, 14, 44\}$$

Homework:

**Function Notation
Worksheet**