

Evaluating Functions

I can evaluate functions using **FUNCTION NOTATION**

I can determine whether an **ORDERED PAIRS** is a **SOLUTION** to the function or not.

Function Notation:

$$y \rightarrow f(x)$$

Write the equation in **FUNCTION NOTATION**

$$y = 8x + 6$$

Equation

$$f(x) = 8x + 6 \text{ - function}$$

Write the equation in **FUNCTION NOTATION**

$$y = -7x - 9$$

$$f(x) = -7x - 9$$

Evaluate the function

$$f(x) = -2x + 10 \text{ for } x = 2$$

$$f(2) = 6$$

$$f(2) = (-2 \cdot 2) + 10$$

$$f(2) = -4 + 10$$

$$(2, 6)$$

Evaluate the function

$$f(n) = 3n - 7 \text{ for } n = -4$$

$$f(-4) = -19$$

$$f(-4) = 3 \cdot (-4) - 7$$

$$f(-4) = -12 - 7$$

$$(-4, -19)$$

Evaluate the function rule $f(x) = x - 7$ to find the **RANGE** of the function for the **DOMAIN**

$\{5, 7, 11\}$

$\rightarrow (x, y) \rightarrow x \text{ values}$

$(x, y) \rightarrow x \text{ values}$

$$\text{Range} = \{-2, 0, 4\}$$

$x \cdot x \cdot x$

$$\text{for } x = 5 \rightarrow y = 5 - 7 = -2$$

$$(5, -2)$$

$$\text{for } x = 7 \rightarrow y = 7 - 7 = 0$$

$$(7, 0)$$

$$\text{for } x = 11 \rightarrow y = 11 - 7 = 4$$

$$(11, 4)$$

For the following **INPUT/OUTPUT table, determine which of the following **ORDERED PAIRS** are **SOLUTIONS** to the function $h(x) = -1/3x - 6$. Write **YES** or **No** for each one

x	h(x)	$h(x) = -\frac{1}{3}x - 6$ Work	YES or NO
-3	-5	$-5 \stackrel{?}{=} (-\frac{1}{3}) \cdot (-3) - 6$ $-5 = 1 - 6$ $-5 = -5$ ✓	Yes (solution)
0	6	$6 \stackrel{?}{=} (-\frac{1}{3}) \cdot (0) - 6$ $6 \neq -6$ ✗	No (Not a solution)
-6	-4	$-4 \stackrel{?}{=} (-\frac{1}{3}) \cdot (-6) - 6$ $-4 \stackrel{?}{=} 2 - 6$ $-4 = -4$ ✓	Yes (solution)