Name:_____

Date:_____

Evaluating Functions

Gathering Information: 4 Different Way to Represent Functions

#1 Table	How can we tell if a table of values is a function?
	x	y
-2	15
-1	-7
0	8
1	2
2	0		

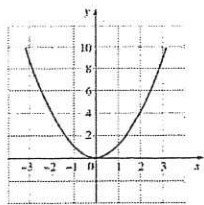| **#2 Ordered Pairs** $\{(1, 6), (2, 3), (4, 3), (5, 7)\}$	How can we tell if a set of ordered pairs is a function?
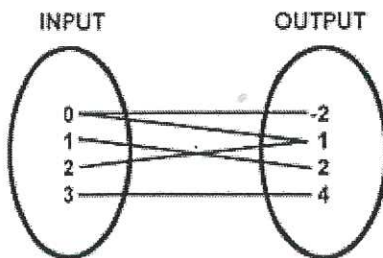
#3 Arrow Diagram INPUT OUTPUT 0 → -2 1 → 1 2 → 2 3 → 4	How can we tell if an arrow diagram is a function?
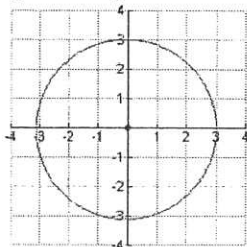
#4 Graphically	How can we tell if a graph is a function?

1. Determine if the following graph is a function. Explain.	2. Determine if the following table of values is a function. Explain.

Input	Output
4	2
10	8
3	1

Evaluate:

What are the missing values?	Let $g(x)=2x^2 + x - 3$ What does g(2) mean?

Input	Output
x	y
6	12
14	
9	15
	17

Rule:

Function:

How can we evaluate g(2)?

Let's Practice:

Given the following functions: $f(x)=x^2 + 4x$ $g(x)=4x + 5x$ $h(x)=\frac{x}{2}+ 3x$ $k(x)=x^2 - 1$

a) Evaluate: f(2)	b) Evaluate: g(3)
c) Evaluate: h(10)	d) Evaluate: f(x-1)
e) Find the sum of f(3) and g(2)	f) Find the product of k(5) and h(2)

Directions: Evaluate the following functions. Make sure to show all work in the spaces provided.

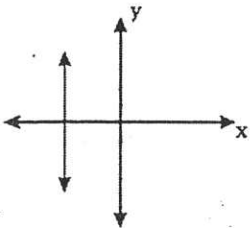|	
1. Let g(x)=$3x + 10$ Find g(5)	2. Let h(x)=$5x + 10x$ Find h(8)
3. Let f be a function such that f(x) =2x-4 is defined on the domain $2 \le x \le 6$. The range of this function is (1) $0 \le y \le 8$ (3) $2 \le y \le 6$ (2) $0 \le y \le \infty$ (4) $\infty \le y \le \infty$	4. **Challenge yourself.** Let f(x)=$2x + x + 7$ Find f(x+2)
5. Is the following a graph a function? Explain. 	6. Are the following ordered pairs considered a function? Explain. {-1, 5), (2, 5), (3, 5) (8, 5)}