

PRE-DO NOW LESSON - SUBSETS

Two sets are only subsets of each other if ALL elements from one set are found in the other.

Example:

$U = \text{All Odd Integers}$

$W = \{33, 35, 37, 39, 41, 43\}; Z = \{37, 41\}$

$Z \subset W$, since all elements of set Z are in set W

$W \not\subset Z$, since all elements of set W are NOT in set Z



DO NOW – SETS

Consider the following set of numbers:

$$U = \left\{ -7, -\frac{3}{4}, 0, 0.\bar{6}, \sqrt{5}, \pi, 7.3, \sqrt{81} \right\}$$

1. Define a new subset of numbers, W , that contains all of the whole numbers from U .
2. Define a new subset of numbers, G , that contains all of the integers from U .
3. Define a new subset of numbers, I , that contains all of the irrational numbers from U .
4. Find I' . What are these numbers called?
5. State whether $W \subset G$ is true or false, and explain.



YESTERDAY'S QUIZ RESULTS - SETS

- **Class Average – 74%**

- Club 100%
- **Jonathan Santoyo**
- **Jailene Zelaya**

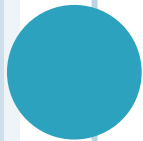
- Club 90%+
- **Joselyn Rojas**



QUIZ CORRECTIONS!

- 4 Minutes





INTRO TO FUNCTIONS

6/24/2014

FUNCTIONS

- A function is a mathematical machine.
- Function notation, $f(x)$ is used. (“ f of x ”)
- We say f is a function of x .
- This function is named f , but it can be called anything.



FUNCTIONS (CONT)

- A function takes in elements of a set (**inputs**), does something with them, and gives back elements of a set (**outputs**).
- The inputs (domain) are the set of x -values.
- The outputs (range) are the set of $f(x)$ values.



VENDING MACHINE FIELD TRIP!



FUNCTIONS (CONT)

- A function relates **each element** of the input set with **exactly one** element of the output set.
- It is NOT a function if an element of the input set matches with more than one element of the output set.



EVALUATING A FUNCTION

○ Let $h(x) = x^2 + 3x - 5$

1. $h(2)$

2. $h(-6x)$

3. $h(y + 3)$



EVALUATING A FUNCTION

○ Let $g(t) = \frac{3t+1}{t^2-t+4}$

1. $g(-3)$

2. $g(8n)$

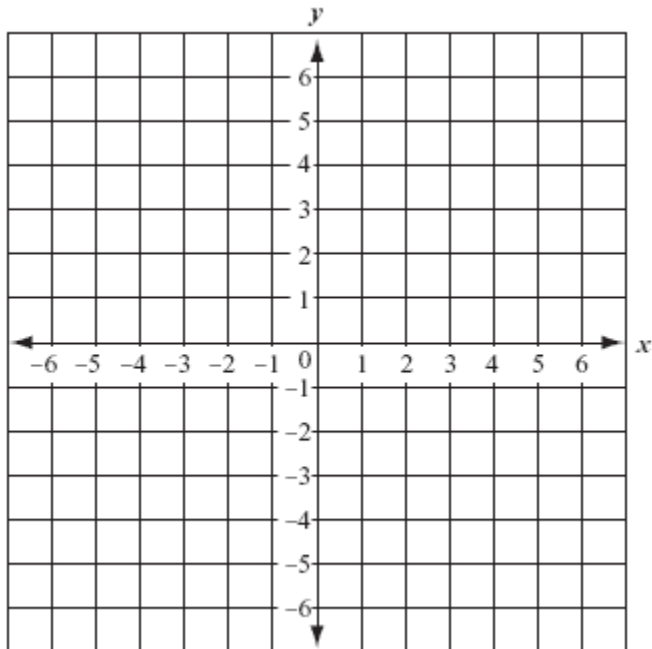
3. $g\left(\frac{1}{3}\right)$



IS IT A FUNCTION?

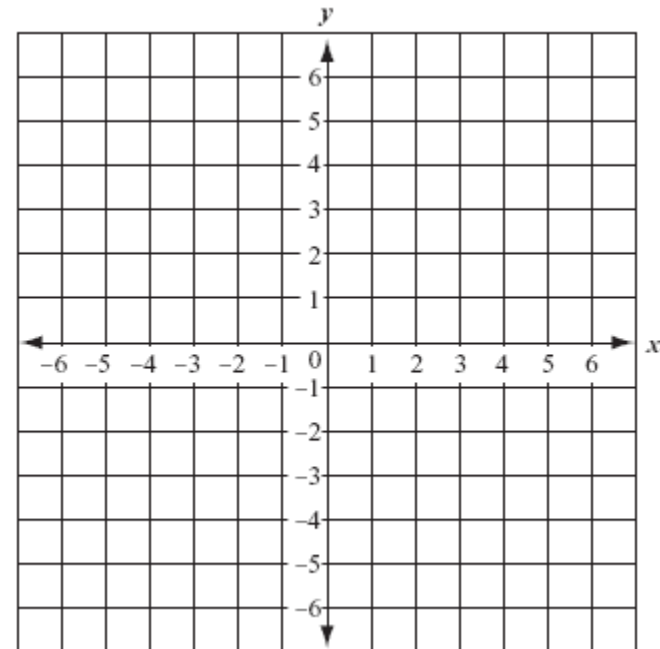
○ $2y + 3x = 6$

x	$f(x)$



○ $y^2 + 3x = 6$

x	$f(x)$



FUNCTIONS WORK



EXIT TICKET

- Good luck!

