

# Quiz Tuesday

Recap: 5.2

Day 37

Relation: a set of ordered pairs

Function: a relation is a function if x does NOT repeat.

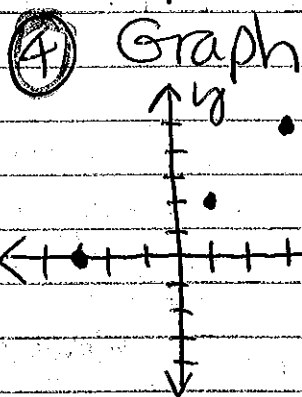
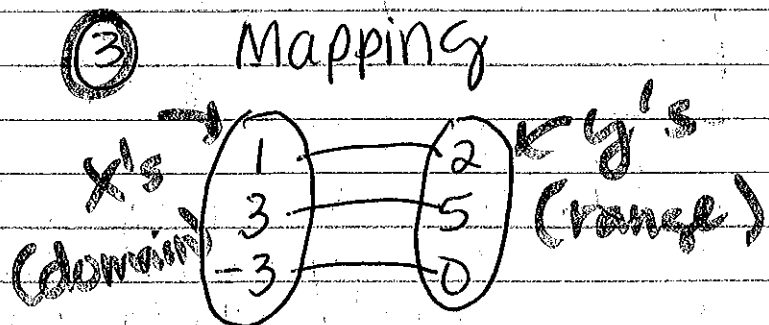
A relation can be written in 5 different

ways:

① a set of ordered pairs  
 $\{(1, 2), (3, 5), (-3, 0)\}$

② table

x	y
1	2
3	5
-3	0



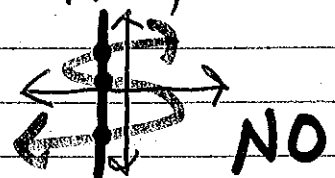
⑤ Equation

ex  $y = 2x$

ex  $y = x - 5$

Vertical Line Test: If you draw a vertical line thru the graph and it crosses more than once, then it's not a function.

(x-repeated)



Domain: X-values      input  
 Range: Y-values      output

(ex) Find the range if the domain is  $\{-1.2, 0, 4\}$  for  $y = 5x - 2$

X-values

$$y = 5(-1.2) - 2 = -8$$

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

$$y = 5(4) - 2 = 18$$

Range:  
 $\{-8, -2, 18\}$



Recap: 5.3

Making a table -  
 you choose the x-values  
 and you plug them in, to  
 get the y-values.

$y = 3x - 2$  (choose 3 values)

$y = x^2$  (Parabola U-shaped),  $y = |x|$  (V-shaped) (choose 5 values:  $-2, -1, 0, 1, 2$ )

(ex)  $f(x) = 3x + 4$

X	Y = 3X + 4
0	$y = 3(0) + 4 = 4$
1	$y = (3)(1) + 4 = 7$
-1	$y = (3)(-1) + 4 = 1$ $-3 + 4$

same thing  
 $f(x) =$   
 $y =$

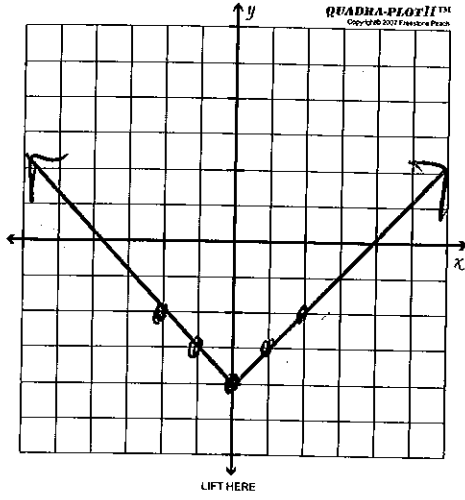
- (0, 4)
- (1, 7)
- (-1, 1)

you choose

# Absolute Value

-v-shaped graph

x	y =  x  - 4	
-2	$y =  -2  - 4 = 2 - 4 = -2$	(-2, -2)
-1	$y =  -1  - 4 = 1 - 4 = -3$	(-1, -3)
vertex 0	$y =  0  - 4 = 0 - 4 = -4$	(0, -4)
1	$y =  1  - 4 = 1 - 4 = -3$	(1, -3)
2	$y =  2  - 4 = 2 - 4 = -2$	(2, -2)



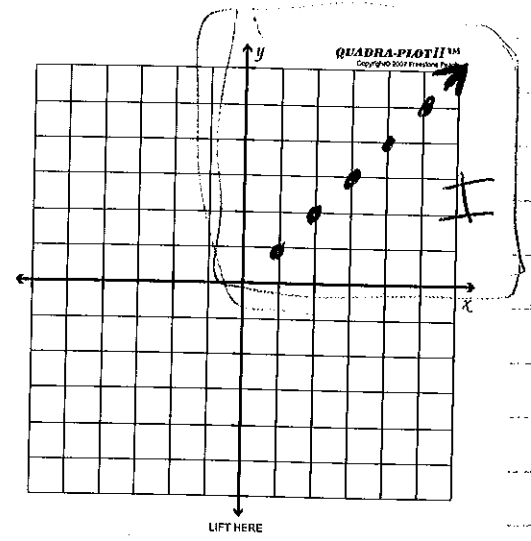
ex. of a (points connected) continuous data

- data where the #'s between the 2 data values have meaning. (ex) temp., weight, length.

## discrete data

data that counts items, such as # of people, or cars.

(not connected)



Parabola  
U-shaped  
curve " $x^2$ "  
↻ ↻

$$y = -x^2 + 3$$

$$x \quad y = -1 \cdot x^2 + 3$$

$$-2 \quad y = -1(-2)^2 + 3 = -1(4) + 3 = -4 + 3 = -1$$

$$-1 \quad y = -1(-1)^2 + 3 = -1(1) + 3 = -1 + 3 = 2$$

$$0 \quad y = -1(0)^2 + 3 = 0 + 3 = 3$$

$$1 \quad y = -1(1)^2 + 3 = -1(1) + 3 = 2$$

$$2 \quad y = -1(2)^2 + 3 = -1(4) + 3 = -1$$

