Domain and Range Notes

4/6/18

Domain = the set of all **input** values (x-coordinate)

Range = the set of all **output** values (y-coordinate)

Proper notation:

Domain: { }

Range: { }

From an input-output table (Function table)

$f(x) = -x - 1$

INPUT	RULE	OUTPUT
x		$f(x)$
-4	$-(-4)-1$ $4-1=3$	3
-1	$-(-1)-1$ $1-1$	0
3	$-(3)-1$ $-3-1$	-4
6	$-(6)-1$ $-6-1$	-7

Domain: $\{-4, -1, 3, 6\}$

Range: $\{3, 0, -4, -7\}$

* Created ordered pairs from table

From ordered pairs

x	y
0	1
2	5
4	-1
8	1
10	1

Ordered Pairs

(0, 1)
(2, 5)
(4, -1)
(8, 1)
(10, 1)

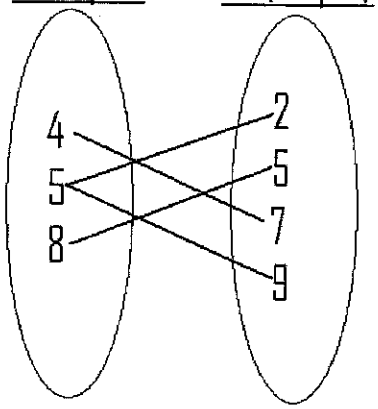
↑ Domain ↑ Range

Domain: {0, 2, 4, 8, 10}

Range: {1, -5, -1}

*Don't need to repeat numbers if found more than once in table.

From function mapping



Ordered Pairs

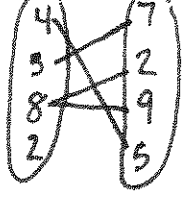
(4, 7)
(5, 2)
(5, 9)
(8, 5)

Domain: {4, 5, 8}

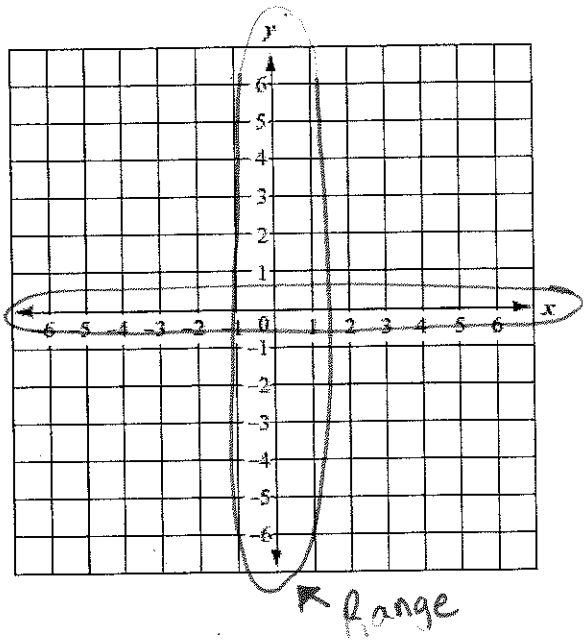
Range: {2, 5, 7, 9}

*Domain could also be found directly from function mapping

Be Careful...



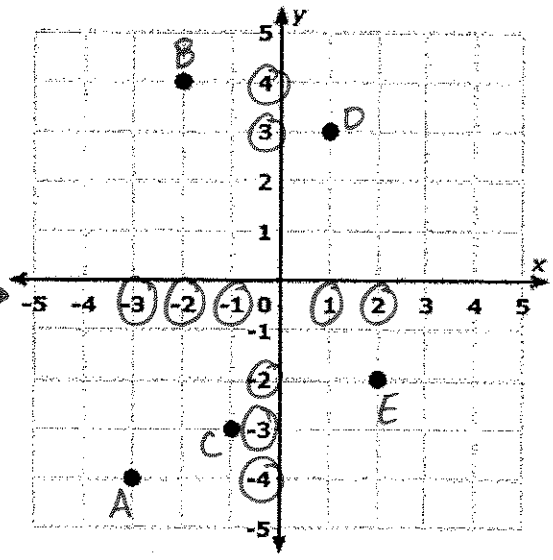
*watch out for extra information



Option #1 - List ordered pairs

Option #2

- look at the graph along the x- and y-axis to find where there is a point
- Circled numbers on axis are the domain and range



(-3, 4)
(-2, 4)
(-1, -3)
(1, 3)
(2, -2)

Domain: $\{-3, -2, -1, 1, 2\}$

Range: $\{-4, -3, -2, 3, 2\}$