

**Objective:** Students will be able to determine when a relation is a function.

**Function** – a set of ordered pairs such that every input is paired with exactly one output

**Domain** – set of all x-values } Can be written as:

- a list of numbers {0,1,5,8,10}

**Range** – set of all y-values } interval notation  $\rightarrow [-2,8]$       $[4, \infty)$       $(-\infty, \infty)$

## Functions

Domain: \_\_\_\_\_

Range: \_\_\_\_\_

Domain: \_\_\_\_\_

Range: \_\_\_\_\_

x	y
-2	-2
-1	2
0	6
1	10
2	14

Domain: \_\_\_\_\_

Range: \_\_\_\_\_

Domain: \_\_\_\_\_

Range: \_\_\_\_\_

Domain: \_\_\_\_\_

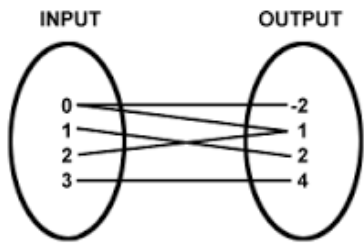
Range: \_\_\_\_\_

Domain: \_\_\_\_\_

Range: \_\_\_\_\_

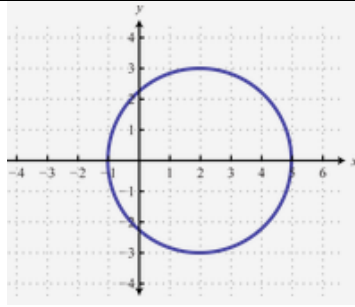
**Vertical Line Test:** Quick check to verify if a graph is a function. If it is a function, any vertical line drawn should only intersect the graph once.

**Not functions**



Domain: \_\_\_\_\_

Range: \_\_\_\_\_



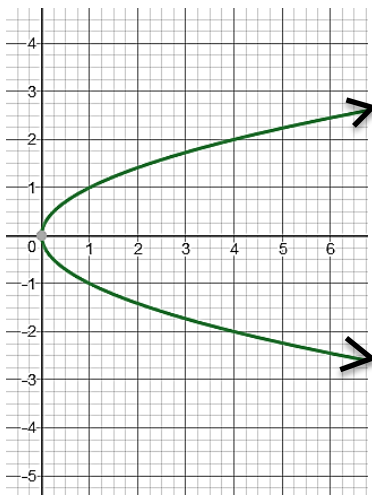
Domain: \_\_\_\_\_

Range: \_\_\_\_\_

X	Y
1	2
2	4
1	5
3	8
4	4
5	10

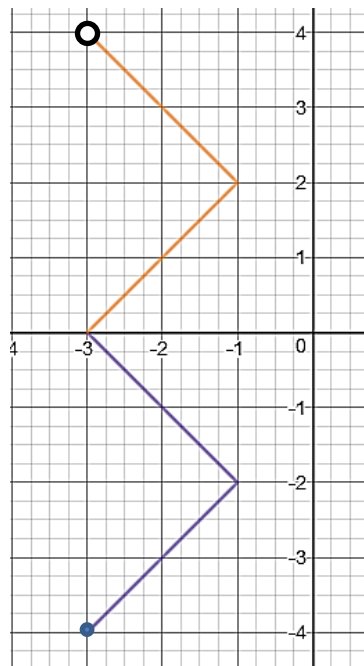
Domain: \_\_\_\_\_

Range: \_\_\_\_\_



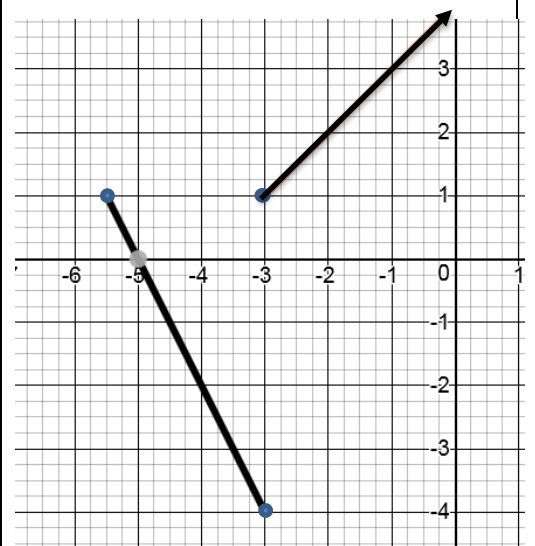
Domain: \_\_\_\_\_

Range: \_\_\_\_\_



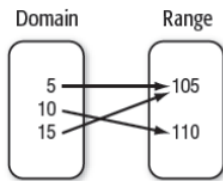
Domain: \_\_\_\_\_

Range: \_\_\_\_\_



Domain: \_\_\_\_\_

Range: \_\_\_\_\_



Function?      YES      NO

Domain: \_\_\_\_\_

Range: \_\_\_\_\_

x	y
-2	-1
-2	1
-1	0
1	0
2	1

Function?      YES      NO

Domain: \_\_\_\_\_

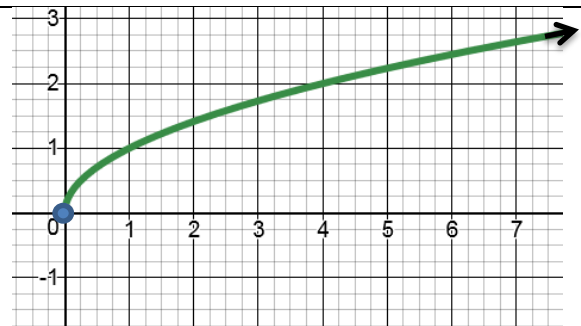
Range: \_\_\_\_\_

$\{(-3, 4), (-2, 4), (-1, -1), (3, -1)\}$

Function?      YES      NO

Domain: \_\_\_\_\_

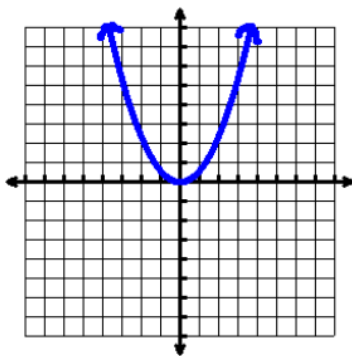
Range: \_\_\_\_\_



Function?      YES      NO

Domain: \_\_\_\_\_

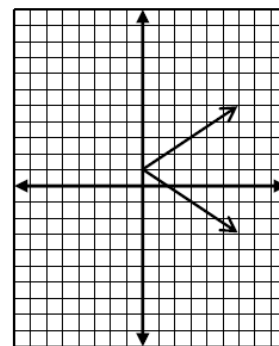
Range: \_\_\_\_\_



Function?      YES      NO

Domain: \_\_\_\_\_

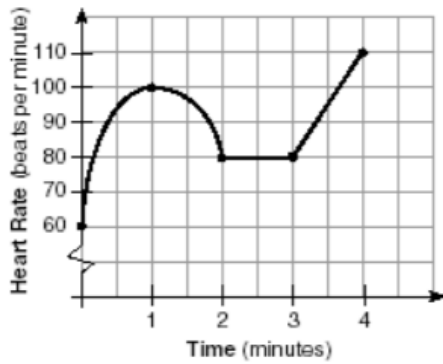
Range: \_\_\_\_\_



Function?      YES      NO

Domain: \_\_\_\_\_

Range: \_\_\_\_\_



Function?      YES      NO

Domain: \_\_\_\_\_

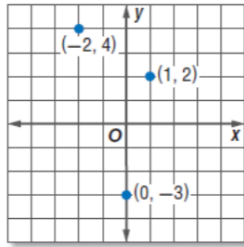
Range: \_\_\_\_\_

Week (w)	Balance (b)
1	\$10
2	\$24
3	\$38
4	\$52
5	\$66
6	\$80

Function?      YES      NO

Domain: \_\_\_\_\_

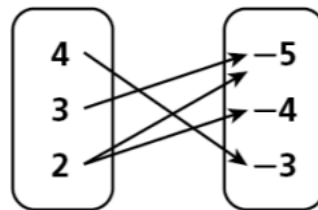
Range: \_\_\_\_\_



Function?      YES      NO

Domain: \_\_\_\_\_

Range: \_\_\_\_\_



Function?      YES      NO

Domain: \_\_\_\_\_

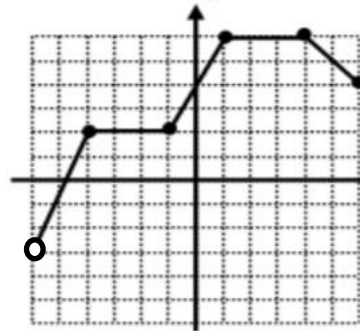
Range: \_\_\_\_\_

$\{(-6, -4), (-3, -1), (1, 2), (2, 4), (3, 7)\}$

Function?      YES      NO

Domain: \_\_\_\_\_

Range: \_\_\_\_\_



Function?      YES      NO

Domain: \_\_\_\_\_

Range: \_\_\_\_\_