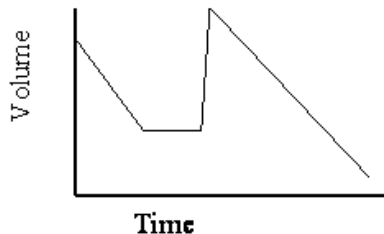


Review

Make an explanation for the following graph



L2: Binary Relations

A **binary relation** is a situation in which two sets of data have a connection to one another, or are dependent to one another. The word binary simply means two sets of numbers.

There are six ways to show a relation between numbers.

x	y
1	3
2	5
3	7

1. table of values: a chart with 2 columns

2. ordered pairs: a set of numbers where the first value is the x and the second is y. (x,y) (1,3) (2,5) (3,7)

3. graph: the ordered pairs plotted on the coordinate plane

x	y
0	1
1	5
2	6
3	6

4. Arrow diagram: similar to the table of values except arrows join the relation

5. equation: an algebraic representation (if there is no pattern you can not get an equation) $y = -x + 7$

6. words: explain what is happening (if there is no pattern you can not get an equation)

(0,1)
(1,1)

In each relation there are two parts

a) Domain: the first column or the **x values**

b) Range: the second column or the **y values**

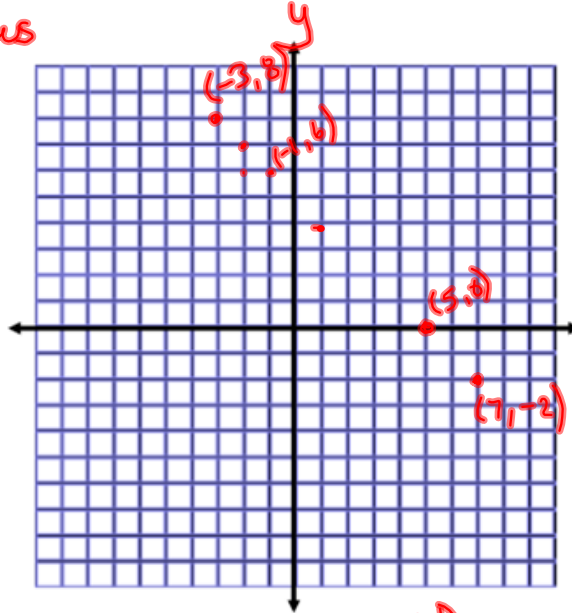
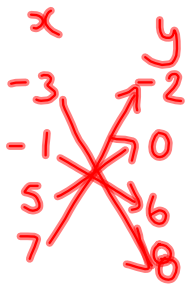
{ }

When the domain or range is given they must be in { }

Eg Given one type of relation, make the other five. Then state the domain and range.

Table of Values

X	Y
-3	8
-1	6
5	0
7	-2



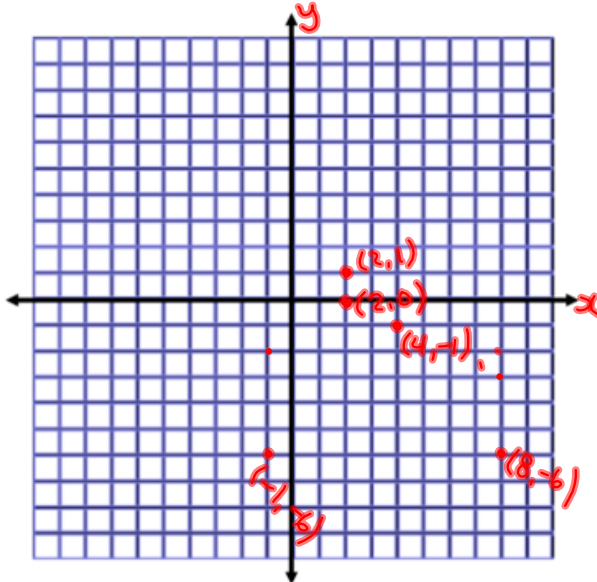
Ordered Pair

- (x, y)
- $(-3, 8)$
- $(-1, 6)$
- $(5, 0)$
- $(7, -2)$

$y = -x + 5$

o Down 2, over 2 right

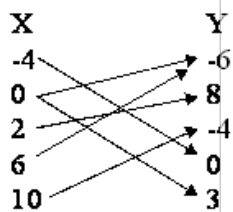
2. Ordered Pairs $(-1, -6), (2, 1), (4, -1), (2, 0), (8, -6)$



x	y
-1	-6
2	0
2	1
4	-1
8	-6

No pattern ∴ no equation.

Eg 3

Ordered Pairs $(-4, 0)$ $(0, -6)$ $(2, 8)$ $(6, -6)$ $(10, -4)$ 