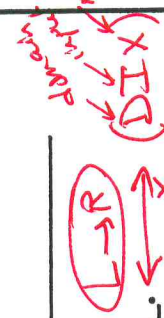


What is a Relation?

A relation is a Set of Ordered pairs (x, y)



The set of x-values is called the Domain.

The set of y-values is called the Range.

Given Ordered Pairs

Is the relation a function? If so, state the domain and range.

ex. $\{(1,6), (3,2), (5,7), (6,3), (8,4)\}$

Domain = $\{1, 3, 5, 6, 8\}$
Range = $\{2, 3, 4, 6, 7\}$

ex. $\{(2,4), (3,6), (3,1), (5,7), (7,8)\}$

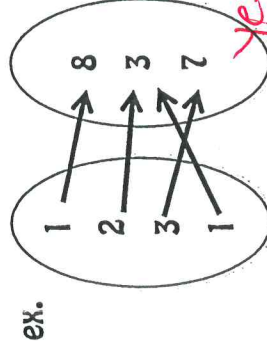
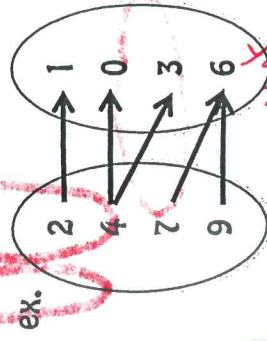
Domain = $\{2, 3, 5, 7\}$
Range = $\{1, 4, 6, 7, 8\}$

Function (Not Repeating x)

Not a function (3 is repeating)

Given a Mapping

Is the relation a function? If so, state the domain and range.



What is a Function?

A function is a RELATION where

every input has exactly one output (y)

1) If x values repeat, then the relation is not a function.

2) If a vertical line intersects a graph in more than 1 point then it is not a function.

Given a Table

Is the relation a function? If so state the domain and range.

ex.

x	y
1	3
2	1
4	6
2	4
7	8

Not a function (Repeating x)

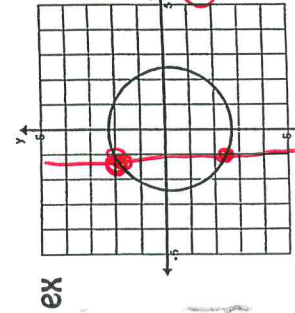
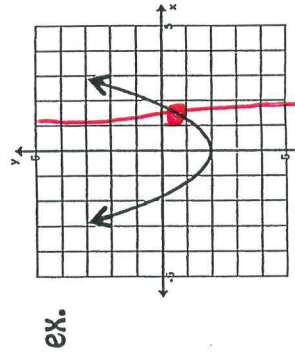
ex.

x	y
1	4
3	1
5	8
7	2
9	6

Function

Given a Graph

Is the relation a function? If so, state the domain and range.



ex.
 didn't pass the vertical line test \Rightarrow Not a function