

(20)

Relations & Functions

Relation: a set of ordered pairs: (x, y)

$(x, y) \in R \iff x \in A \text{ and } y \in B$

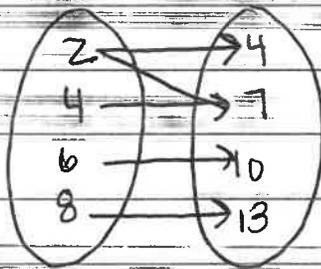
Domain: the x -values of a relation (or input)

Range: the y -values of a relation (or output)

Function: a special type of relation where every x -value has exactly one y -value
(x 's can't repeat)

Ordered Pair: $\{(2, 4), (4, 7), (6, 10), (8, 13), (2, 7)\}$

Mapping Diagram



Table's

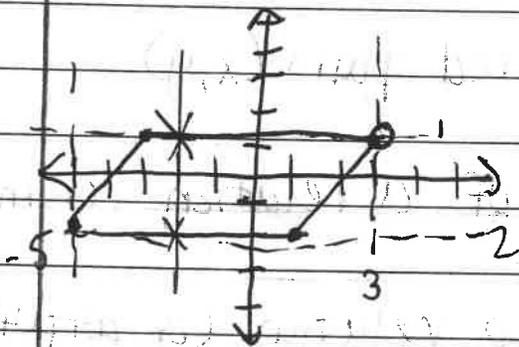
x	y
2	4
4	7
6	10
8	13
2	7

Domain: 2, 4, 6, 8

Range: 4, 7, 10, 13

Function: No because the 2's repeat

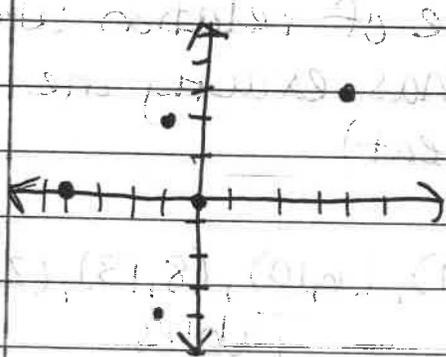
Domain, Range & Function on a Graph



D: $-5 \leq x < 3$ or $[-5, 3)$

R: $-2 \leq y \leq 1$ or $[-2, 1]$

F: No



$(-4, 0), (-1, 2), (-1, -5), (0, 0), (4, 3)$

D: $-4, -1, 0, 4$

R: $0, 2, -5, 0, 3$

F: No