

2.1 Relations & Functions

Relation - A pairing or connection between things

Domain - The x-coordinates/inputs

Range - The y-coordinates/outputs

Ways to represent relations

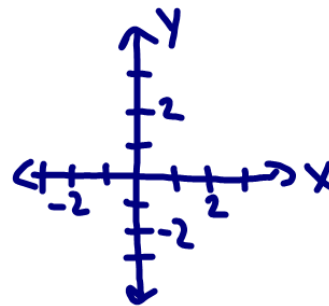
Ordered pairs

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

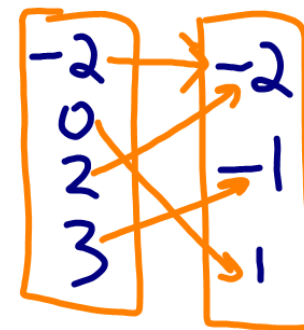
Table

x	y
2	-2
-2	2
0	1
3	-1

Graph



Mapping



Example

Relation $(-2, -3), (-1, 1), (1, 3), (2, -2) \dot{\vdash} (3, 1)$

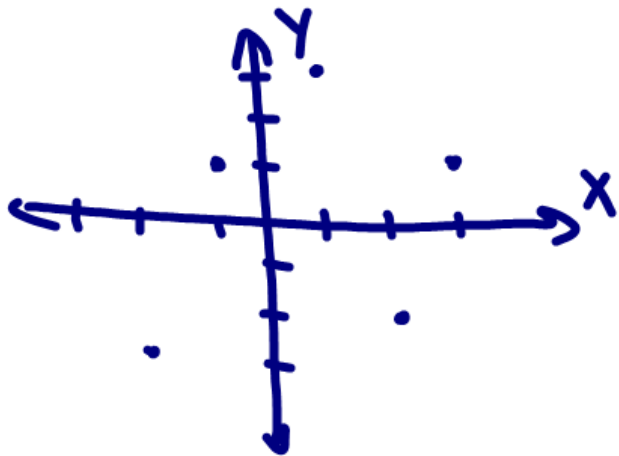
(a) Name domain & range

Domain: $-2, -1, 1, 2, 3$

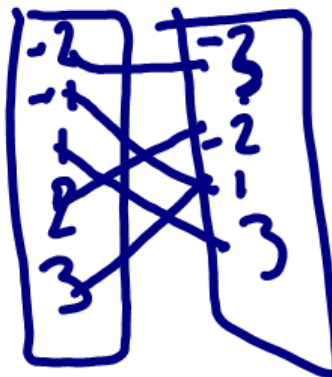
Range: $-3, 1, 3, -2$

(b) Graph & map it

Graph



Mapping

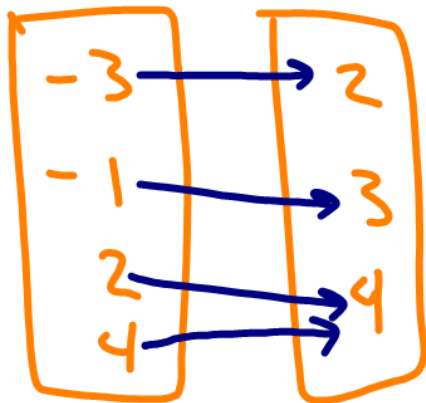


Function: Where the x isn't Cheating

* Each x goes with one y

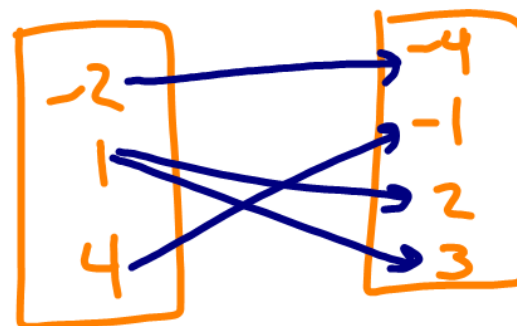
Example

Input Output



A Function

Input Output



1 is with 2 & 3,
is cheating

Not a function