

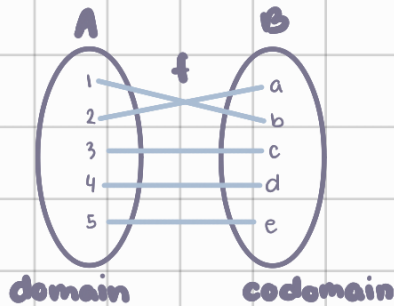
Lesson one

02/15/24

RELATIONS: ordered pair (not all relation is a function)

function: part of relation (all function is a relation)

→ every input only has one output



many to one is ok!

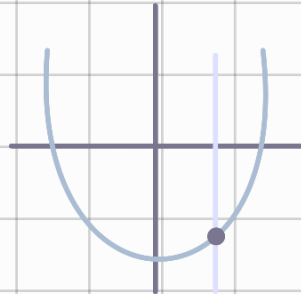
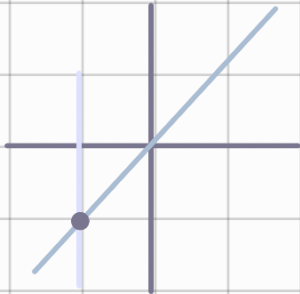
one to many is not ok!

domain: pre-image

codomain: possible image

range: the pairing of domain

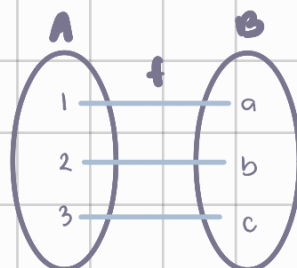
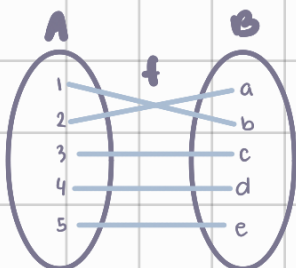
vertical line test: should hit only one point of the graph



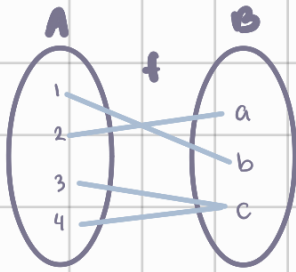
it is not a function if it hits two or more points!

Types of function

Injective (one to one) no sharing

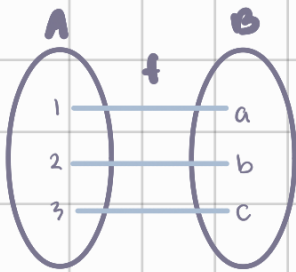


Surjective (onto) can share codomain, but all codomains must have a pair



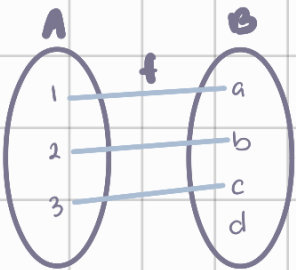
range is equal to codomain

Bijective (both injective & surjective)

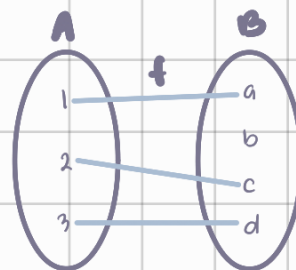


domain has no shares & nothing is left out in the codomain

Into function codomain has an element that has no pair

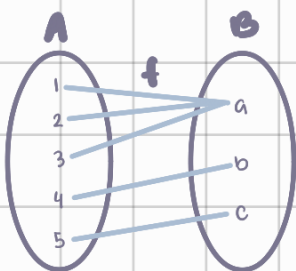


One to one into both injective and into

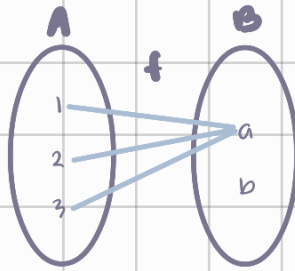


domain has no shares & something is left in the codomain

many to one



many to one into



many to one onto

