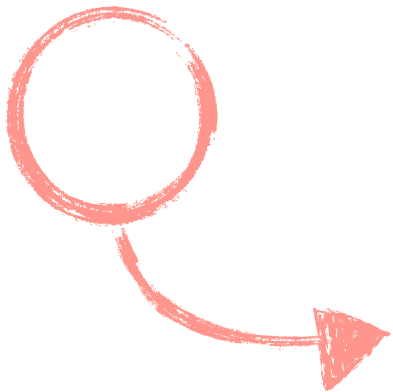
relations



can be replaced by familiar symbols
such as $<$ , $\not<$ , $>$ , $\not>$ , $=$ , $\neq$

## exercise 1

Suppose there are two sets A= {4, 36, 49, 50} and B = {1, -2, -6, -7, 7, 6, 2}

Define "*(a, b) is in the relation R if a is a square of b*"

## exercise 2

Suppose there are two sets A= {1,2,3,4,5,6} and B = {1,2,3,4}

Define the relation $(a, b) \in R$ iff $(a - b) \mod 2 = 0$.

# relations

- a relation $R$ from the set $A$ to the set $B$ is a subset $A \times B$
  - relation $R$ consists of ordered pairs $(a, b)$ where $a \in A$ and $b \in B$
  - we say ***is related to*** and can write $a \ R \ b$

can be replaced by familiar symbols such as $<$ , $\not<$ , $>$ , $\not>$ , $=$ , $\neq$

### exercise 1

Suppose there are two sets A= {4, 36, 49, 50} and B = {1, -2, -6, -7, 7, 6, 2}

Define "*(a, b) is in the relation R if a is a square of b*"

### exercise 2

Suppose there are two sets A= {1,2,3,4,5,6} and B = {1,2,3,4}

Define the relation *(a, b)* $\in R$ iff $(a - b) \mod 2 = 0$.

# functions

input-output