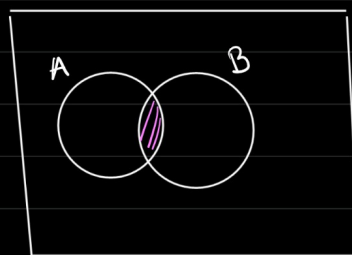## Set

$$A = \{1, 2, 4, 5, 7\}$$
$$B = \{2, 4, 5\}$$
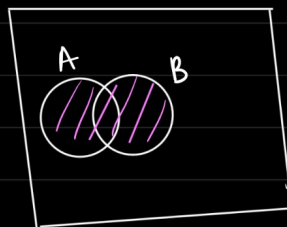
① __Intersection__ (common elements)

$$A \cap B = \{2, 4, 5\}$$

② __Union__ (all distinct elements from both the sample)
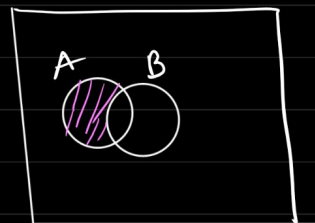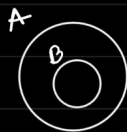
$$A \cup B = \{1, 2, 4, 5, 7\}$$

③ __Difference__ (items which are present only it first set)

$$A - B = \{1, 7\}$$ $A - B$

④ Subset (all the element of B is present in A, then we say B is subset of A)

$$B \longrightarrow A \qquad \text{_____ True}$$
(B is subset of A)

$$X \, A - B \text{ _____ False}$$

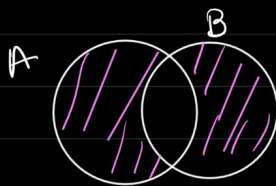⑤ __Superset__ (A is containing all elements of B, A is superset of B)

$$A \longrightarrow B \quad \Rightarrow \text{True}$$
$$B \not\longrightarrow A, \Rightarrow \text{False}$$
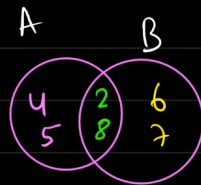
⑥ Symmetric difference (opposite of intersection)

The elements that are distinct in both sets excluding intersection

$A \Delta B = \{1, 7\}$

A ⬭⬭ B

$A = \{4, 5, 2, 8\}$

$B = \{2, 8, 6, 7\}$

A B

4   2   6
5   8   7

$A \Delta B = \{4, 5, 6, 7\}$