


SET

A SET IS A WELL DEFINED COLLECTION OF OBJECTS.

Elements of the Set

Set (N)



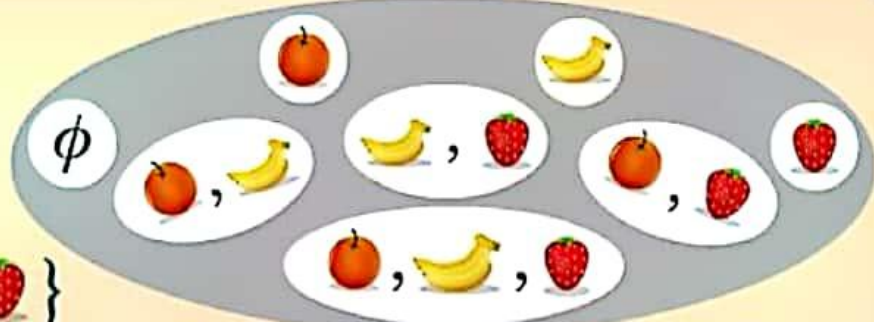
$\in \Rightarrow$ 'IS AN ELEMENT OF'
EXAMPLE: $4 \in N$

$\notin \Rightarrow$ 'IS NOT AN ELEMENT OF'
EXAMPLE: $12 \notin N$

$N = \{1, 2, 3, 4, 5, 6, 7, 8, 9\}$

1. POWER SET

POWER SET $P(A)$




SET $A = \{\text{Apple}, \text{Banana}, \text{Strawberry}\}$

2. EMPTY SET

NO ELEMENT


$\{\}$ or ϕ



3. FINITE SET


FINITE NUMBER OF ELEMENT

$\{1, 2, 3\}$



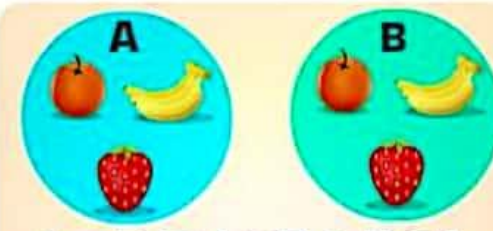
5. SUBSET

$A \subseteq B,$
 $\text{Apple} \in A \Rightarrow \text{Apple} \in B$

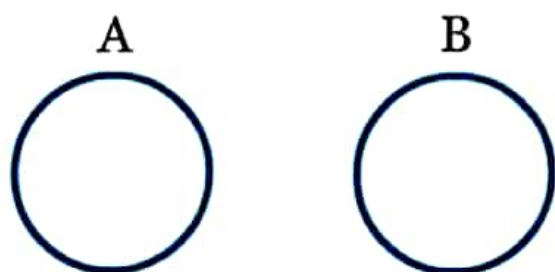


4. EQUAL SET

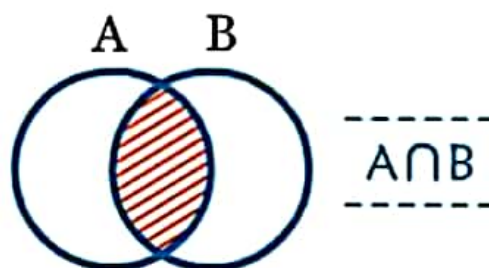
$A = B$ IF $A \subseteq B$ & $B \subseteq A$



OPERATION OF SETS

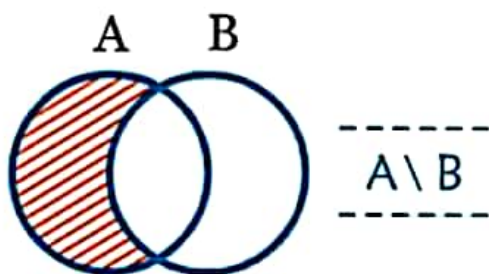


DISJOINT SET A AND B



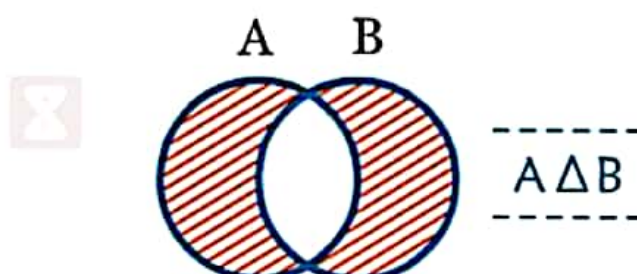
$A \cap B$

THE INTERSECTION OF A AND B



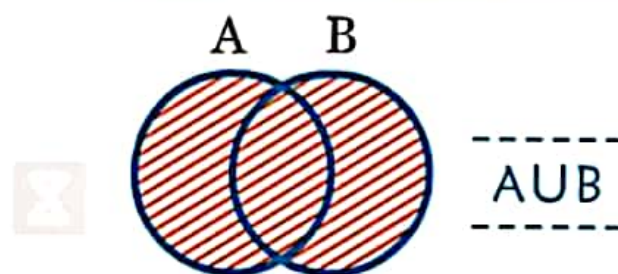
$A \setminus B$

THE RELATIVE COMPLEMENT OF B IN A



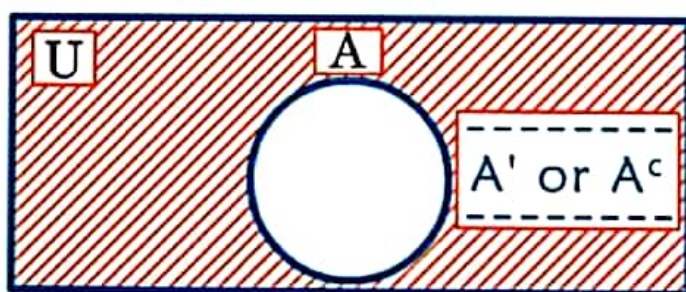
$A \Delta B$

THE SYMMETRIC DIFFERENCE OF A AND B



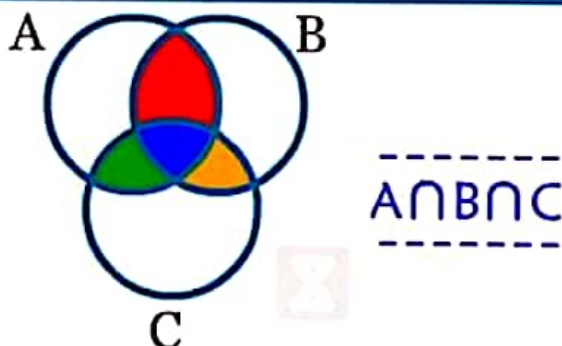
$A \cup B$

THE UNION OF A AND B



A' or A^c

COMPLEMENT OF SET A



$A \cap B \cap C$

$$A \cup B \cup C = A + B + C - (A \cap B) - (B \cap C) - (C \cap A) + (A \cap B \cap C)$$