

SETS

PERIOD -7

SUBJECT : MATHEMATICS
CHAPTER NUMBER: 6
CHAPTER NAME :SETS

CHANGING YOUR TOMORROW

Learning outcome

1. Students will be able to know about sets and representation of a set
2. Students will be able to know about Subset, Proper subset, Super set, Universal set and complement of a set
3. Students will use a **Venn diagram** to compare and contrast information and recognize relationships between concepts

$$A = (5, 6, 7, 8, 9)$$

$$B = (4, 5, 6, 7)$$

$$C = (1, 2, 3, 4, 5)$$

$$(i) A \cup B = (4, 5, 6, 7, 8, 9)$$

$$(A \cup B) \cup C = (1, 2, 3, 4, 5, 6, 7, 8, 9)$$

$$(ii) B \cup C = (1, 2, 3, 4, 5, 6, 7)$$

$$A \cup (B \cup C) = (1, 2, 3, 4, 5, 6, 7, 8, 9)$$

$$(iii) A \cap B = (5, 6, 7)$$

$$(A \cap B) \cap C = (5)$$

$$(iv) B \cap C = (4, 5)$$

$$A \cap (B \cap C) = (5)$$

$$(v) (A \cup B) \cup C = (1, 2, 3, 4, 5, 6, 7, 8, 9)$$

$$A \cup (B \cup C) = (1, 2, 3, 4, 5, 6, 7, 8, 9)$$

Yes, these are equal.

$$(vi) (A \cap B) \cap C = A \cap (B \cap C)$$

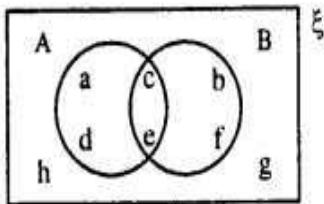
$$\{5\} = \{5\}$$

Yes, these are equal.

2)

From the given diagram find :

(i) $A \cup B$ (ii) $A' \cap B$
 (iii) $A - B$ (iv) $B - A$
 (v) $(A \cup B)'$



(i) $A \cup B = \{a, c, d, e\} \cup \{b, c, e, f\}$
 $\Rightarrow A \cup B = \{a, b, c, d, e, f\}$

(ii) $A' = \{b, f, g, h\}$
 $A' \cap B = \{b, f, g, h\} \cap \{b, c, e, f\}$
 $\Rightarrow A' \cap B = \{b, f\}$

(iii) $A - B = \{a, c, d, e\} - \{b, c, e, f\}$
 $\Rightarrow A - B = \{a, d\}$

(iv) $B - A = \{b, c, e, f\} - \{a, c, d, e\}$
 $= \{b, f\}$

(v) $A \cup B = \{a, b, c, d, e, f\}$
 $\therefore (A \cup B)' = \{h, g\}$

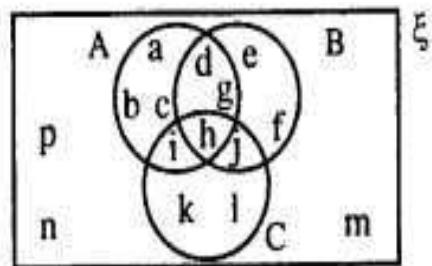
Use the given diagram to find :

(i) $A \cup (B \cap C)$

(ii) $B - (A - C)$

(iii) $A - B$. (iv) $A \cap B'$

Is $A \cap B' = A - B$?



Home assignment

Exercise 6

**THANKING YOU
ODM EDUCATIONAL GROUP**

