

Assignment

① A class has 135 students. The following gives the no. of students studying one more of the subjects in this class.

Mathematics — 100

Physics — 70

Chemistry — 46

Maths + Physics — 30

Maths + Chemistry — 28

Physics + Chemistry — 23

$M + P + C = 18$

find the following

① How many students are enrolled in Maths alone, Physics alone & Chemistry alone

② The no. of students who have not offered any of these subjects

③ Give Universal set $U = \{a, b, c, d, e, f, g\}$
 $A = \{b, c, d, e\}$, $B = \{a, b, e\}$

Draw Venn - Diagram to represent the relationship b/w the given sets.
 Use the Diagram to find the following sets :-

(a) A'

(b) $A - B$

(c) $B - A$

- (3) Suppose that 100 of the mathematics students at a College take at least one of the languages French, German & Russian. Also suppose

60 study French

40 " German

37 " Russian

15 " French & German

20 " French & Russian

10 " German & Russian

Draw a Venn Diagram & fill in the correct no. of students in each region. Also determine the no. of students who study all three subjects

- (4) Show that for any two sets

$$A \subseteq B \quad A - (A \cap B) = A - B$$

Also find the values $A - (A \cap B)$

- (5) and $A - B$ for set

$$A = \{1, 2, 3, 4, 5\} \quad , \quad B = \{2, 3, 4, 5, 6\}$$

- (6) $A = \{1, 3, 4\}$, $B = \{2, 3, 4\}$ and $C = \{1, 2, 3\}$

then find

$$(A \times B) - (A \times C) \quad \text{and} \quad (A \times C) \cap (B \times A)$$