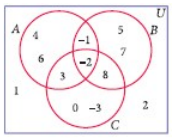
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Questions:

5 Marks

1. Using the adjacent Venn diagram, find the following sets:
   (i) A-B
   (ii) B-C
   (iii) A′∪B′)
   (iii) A′∩B′
   (iv) (B∪C)′
   (vi) A-(B∪C)
   (vii) A-(B∩C)



2. In a colony, 275 families buy Tamil newspaper, 150 families buy English newspaper, 45 families buy Hindi newspaper, 125 families buy Tamil and English newspapers, 17 families buy English and Hindi newspapers, 5 families buy Tamil and Hindi newspapers and 3 families buy all the three newspapers. If each family buy atleast one of these newspapers then find.
   (i) Number of families buy only one newspaper.
   (ii) Number of families buy atleast two newspapers.
   (iii) Total number of families in the colony.

3. A survey of 1000 farmers found that 600 grew paddy, 350 grew ragi, 280 grew corn, 120 grew paddy and ragi, 100 grew ragi and corn, 80 grew paddy and corn. If each farmer grew atleast any one of the above three, then find the number of farmers who grew all the three.

4. In a party of 45 people, each one likes tea or coffee or both. 35 people like tea and 20 people like coffee. Find the number of people who
   (i) like both tea and coffee.
   (ii) do not like Tea.
   (iii) do not like coffee

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5. Out of 500 car owners investigated, 400 owned car A and 200 owned car B, 50 owned both A and B cars. Is this data correct?

2 Marks

6. If n(A) = 25, n(B) = 40, n(A∪B) = 50 and n(B′) = 25 , find n(A∩B) and n(U).

7. If n(A) = 300, n(A∪B) = 500, n(A∩B) = 50 and n(B′) = 350, find n(B) and n(U).

8. If U = {x : x ∈ N, x ≤ 10}, A = {2,3,4,8,10} and B = {1,2,5,8,10}, then verify that n(A ∪ B) = n(A) + n(B) − n(A ∩ B).

9. In a class, all students take part in either music or drama or both. 25 students take part in music, 30 students take part in drama and 8 students take part in both music and drama. Find
   (i) The number of students who take part in only music.
   (ii) The number of students who take part in only drama.
   (iii) The total number of students in the class.