

Problems for Venn diagram

Important Formulas:

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

$$n(BC) = n(U) - n(B)$$

- 1) In a group of 400 people, 250 can speak Hindi and 200 can speak English. If 50 people cannot speak neither English nor Hindi then,
 - a) How many people can speak both Hindi and English?
 - b) How many people can speak only English?
 - c) How many cannot speak Hindi?
- 2) In a group of 70 people, 37 like coffee, 52 like tea and each person likes at least one of the two drinks. How many people only like coffee?
- 3) In a group of 65 people, 40 like cricket, 10 like both cricket and tennis. How many like tennis only and not cricket? How many like tennis?
- 4) In a committee, 50 people speak French, 20 speak Spanish and 10 speak both Spanish and French. How many speak at least one of these two languages?
- 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?
- 6) In a survey it was found that 21 people liked product A, 26 liked product B and 29 liked product C. If 14 people liked products A and B, 12 people liked products C and A, 14 people liked products B and C and 8 liked all the three products. Find how many liked product C only.
- 7) In a legislative body of 200 people, the number of Democrats is 50 less than 4 times the number of Republicans. If one fifth of the legislators are neither Republican nor Democrat, how many of the legislators are Republicans?
(A) 42 (B) 50 (C) 71 (D) 95 (E) 124
- 8) In a small town, 16 people own Fords and 11 people own Toyotas. If exactly 15 people own only one of the two types of cars, how many people own both types of cars.
(A) 2 (B) 6 (C) 7 (D) 12 (E) 14
- 9) A school has a total enrollment of 90 students. There are 30 students taking physics, 25 taking English, and 13 taking both. What percentage of the students are taking either physics or English?
(A) 30% (B) 36% (C) 47% (D) 51% (E) 58%
- 10) 30% of the members of G are in H,
20% of the members of H are in G.
Col A: Members in G
Col B: Members in H