

SET THEORY

1. If $n(A-B) = 20$, $n(A \cap B) = 30$ and $n(A \cup B) = 84$. Then find $n(B)$.
a) 34 b) 64 c) 50 d) CBD
2. Out of 100 people, 10 play neither cricket nor football, 63 play football while 81 play cricket. What is the probability that out of the 100 people, any person selected at random plays exactly one game out of cricket and football?
a) 0.27 b) 0.36 c) 0.54 d) 0.90
3. Out of 525 students 320 students got distinction in their 10th standard and 251 students got distinction in their 12th standard. It is also known that 38 students didn't get distinction in their 10th and 12th standards.
4. How many students got distinction in either 10th or 12th standards but not both?
a) 413 b) 423 c) 403 d) None
5. What is the difference between the number of students who got distinction in both 10th and 12th standards to that of the students who didn't get distinction in any of 10th and 12th standards?
a) 46 b) 36 c) 52 d) 48
6. What % of the students got distinction in both the standards?
a) 10% b) 12% c) 15% d) 16%

Direction: In a class of 122 people, 56 have Redmi phone. The number of people who have neither a Redmi phone nor Realme phone is 33.33% of the number of people who have "Realme phone". 25% of the people who have Redmi phone also have Realme phone.

7. How many people have a Realme phone but not Redmi phone?
a) 56 b) 46 c) 41 d) 36
8. How many people have Redmi or Realme phone but not both?
a) 86 b) 88 c) 98 d) 78
9. How many people do not have a Realme phone?
a) 42 b) 60 c) 64 d) None

Direction: In the Indian athletic squad sent to the Sydney Olympics, 21 athletes were in the triathlon team 26 were in the pentathlon team and 29 were in the marathon team, 14 athletes can take part in triathlon and pentathlon, 12 can take part in marathon and triathlon, 15 can take part in pentathlon and marathon and 8 can take part in all the three games. All of the players definitely participated.

10. How many players are there in all?
a) 35 b) 43 c) 49 d) None
11. There are 3 clubs A, B & C in a town with 40, 50 & 60 members respectively. While 10 people are

members of all 3 clubs, 70 are members in only one club. How by belong to exactly two clubs?
a) 20 b) 25 c) 50 d) 70

12. There are 59 people who are member of at It one of the 3 clubs A, B & c) A, B, & C have 22, 27 & 28 members respectively. 6 people are members of exactly 2 clubs. How many belong to all the three clubs?
13. There are 68 people who are member of at least one of the 3 clubs A, B & c) A, B, & C have 25, 34 & 25 members respectively. 3 people are members of all 3 clubs. How many belong to exactly one club?
Find A+B:
a) 74 b) 71 c) 61 d) 16

Direction: In a test in which 120 students appeared, 90 passed in History, 65 passed in Sociology and 75 passed in Political Science. 30 students passed in only one subject and 55 students in only two. Five students passed in no subject.

14. How many students passed in all the three subjects?
a) 25 b) 30
c) 35 d) Data Insufficient

Direction: Each of 435 bags contains at least one of the following three items: raisins, almonds, and peanuts. The number of bags that contain only raisins is 10 times the number of bags that contain only peanuts. The number of bags that contain only almonds is 20 times the number of bags that contain only raisins and peanuts. The number of bags that contain only peanuts is one-fifth the number of bags that contain only almonds. 210 bags contain almonds.

15. How many bags contain only one kind of item?
a) 256 b) 260 c) 316
d) 320 e) 350

Direction: Fifty college teachers are surveyed as to thee possession of colour TV, VCR and tape recorder. Of them, 22 own colour TV, 15 own VCR and 14 own tape recorders. Nine of these college teachers own exactly two items out of colour TV, VCR and tape recorder; and, one college teacher owns all three.

16. How many of the 50 teachers own none of the three?
a) 4 b) 9 c) 10 d) 11

17. In a class of 120 students numbered 1 to 120, all even numbered students opt for Physics, whose numbers are divisible by 5 opt for Chemistry and those whose numbers are divisible by 7 opt for Math.
How many opt for none of the three subjects?
a) 19 b) 41 c) 21 d) 26

18. The business consulting division of TCS has overseas operations in 3 locations: Singapore, New York and London. The Company has 22 analysts covering Singapore, 28 covering New York and 24 covering London. 6 analysts cover Singapore and

New York but not London, 4 analysts cover Singapore and London but not New York, and 8 analysts cover New York and London but not Singapore. If TCS has a total of 42 business analysts covering at least one of the three locations: Singapore, New York and London, then the number of analysts covering New York alone is:
a) 14 b) 28 c) 5 d) 7

19. A club has 256 members of whom 144 can play football, 123 can play tennis, and 132 can play cricket. Moreover, 58 members can play both football and tennis, 25 can play both cricket and tennis, while 63 can play both football and cricket. If every member can play at least one game, then the number of members who can play only tennis is?
a) 32 b) 38 c) 43 d) 45

Direction: In a school of 600 people, 350 people do not play Chess. 330 people do not play Ludo and 310 people do not play Carrom. 470 people play Ludo or Carrom. 430 people play Carrom or Chess and 450 people play Chess or Ludo. 30 people do not play any of the three games.

20. How many people play Carrom and Chess?
a) 110 b) 100 c) 130 d) 150
21. How many people play only Carrom?
a) 150 b) 140 c) 100 d) 120
22. How many people play only Ludo and Chess?
a) 60 b) 20 c) 30 d) 40
23. How many people play only Ludo?
a) 150 b) 140 c) 100 d) 120

Direction: In a college, there are 900 people. There are three societies P, Q and R in the college. 520 people are members of exactly one society. 350 people are members of at least two societies. 590 people are members of P or R. 650 people are members of Q or R.

470 people are members of P. 390 people are not members of 300 members of society R.

24. How many people are members of all the 3 societies?
a) 40 b) 30 c) 60 d) 70
25. How many people are members of society Q only?
a) 320 b) 300 c) 260 d) 280
26. How many people are members of societies P and Q only?
a) 40 b) 70 c) 60 d) CBD
27. How many people are members of P or Q but not R?
a) 570 b) 500 c) 630 d) 540

Direction: A survey was conducted among some people. It was found that 330 people watch Amazon Prime, 330 people watch Netflix, 315 people watch ZEE5 and 285 people watch Voot. The number of people who watch each combination of exactly three video streaming websites is 40. The number of people, who watch only Amazon Prime and ZEE5, is 50. 80 people watch only Amazon Prime, 100 people watch only Netflix, 90 people watch only ZEE5 and 70 people watch only Voot. 30 people watch only ZEE5 and Voot, while 10 people watch all the four video streaming websites. Each person watches at least one video streaming website.

28. How many people watch only Amazon Prime and Netflix?
a) 140 b) 50 c) 180 d) 230
29. How many people watch ZEE5 but do not watch Amazon Prime?
a) 240 b) 320 c) 150 d) 175
30. How many people watch exactly two video streaming websites?
a) 200 b) 220 c) 310 d) 180