CASELET

Directions : (Q. 1-5) Study the information carefully to answer the questions that follow In a school, there are 700 students. All of them are divided into five different groups viz., Group A, Group B, Group C, Group D and Group E. The number of girls is 12 less than the number of boys in the school. One-fourth of the total number of students in school are in Group C. 16 per cent of the total number of students in school are in Group A.

Group E have 28 more students than in Group A. The respective ratio between the number of girls and boys in Group A is 1 : 3. Number of students in Group D is 11 more than the number of students in Group A.

There are equal numbers of boys and. girls in Group E. 44 per cent of the number of students in Group B are boys. Two-thirds of the students in Group D are girls.
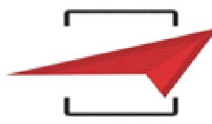
1. **What is the respective ratio between the number of students in Group B & the number of student in Group D?**
   (1) 41 : 50   (2) 50: 43   (3) 43 : 50
   (4) 50: 41   (5) None of these

2. **Total number of girls in Group A and Group D together are how many morelless than the total number of boys in Group B and Group C together?**
   (1) 50   (2) 61   (3) 48
   (4) 71   (5) None of these

3. **What is the respective ratio between the number of girls in Group B and the number of boys in Group E?**
   (1) 7: 6   (2) 6: 5   (3) 5: 6
   (4) 6: 7   (5) None of these

4. **Number of boys in Group C is approximately what percentage of the total number of girls in the schools?**

(1) 28   (2) 21   (3) 35
(4) 72   (5) 76

5. **What is the total number of students in Group A, Group C and Group D together?**
   (1) 409   (2) 420   (3) 410
   (4) 459   (5) None of these

Directions: (Q. 6-10) Study the information carefully to answer the questions that follow In a school, there are 1200 students who have visited five different cities uiz., Delhi, Kolkata, Varanasi, Mumbai and Jodhpur. Forty-five per cent of the total students are boys. Thirty per cent of the total girls visited Mumbai. Two-fifths of the total girls visited Delhi. Number of girls who visited Jodhpur is half of the girls visited Delhi. Two-thirds of the remaining girls visited Kolkata. Total number of students who visited Mumbai is 300. Twenty per cent of the total boys visited Delhi. Forty per cent of the total boys visited Jodhpur. Equal number of boys visited Kolkata and Varanasi.

6. **What is the total number of students who visited Varanasi?**
   (1) 78   (2) 69   (3) 102
   (4) 103   (5) None of these

7. **What is the respective ratio between the number of girls visited Kolkata and number of boys visited Mumbai?**
   (1) 22: 51   (2) 23: 51   (3) 21: 55
   (4) 51: 22   (5) None ofthese

8. **Total number of students who visited Jodhpur is approximately what per cent of number of girls who visited Delhi?**
   (1) 111   (2) 91   (3) 132
   (4) 32   (5) 72

9. **What is the average number of boys who visited Kolkata, Varanasi and Jodhpur together?**
(1) 110 (2) 122 (3) 101
(4) 104 (5) None of these

10. **What is the total number of girls who visited Delhi, Mumbai and Varanasi together?**
(1) 464 (2) 484 (3) 536
(4) 556 (5) None of these

Directions: (Q. 11-15) Study the information carefully to answer the following questions
A School consists of 2500 students. The ratio of boys to girls is 3 : 2 respectively. All the students are involved in five different games uiz., Hockey, Boxing, Tennis, Football and Volleyball. 28 per cent of girls are in Hockey. 16 per cent of the boys are in Tennis. One-fifth of the boys are in Volleyball. The ratio of girls to boys in Tennis is 2 : 3 respectively. 25 per cent of the total numbers of students are in Boxing. Girls in Volleyball are 60 per cent of the boys are in the same game. 22 per cent of the girls are in Football. The remaining girls are in Boxing. 18 per cent of the boys are in Hockey and the remaining in Football.
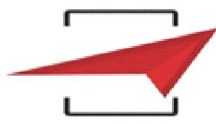
11. **Number of boys in Hockey forms what percent of the number of girls in the same game?(rounded off to two digits after decimal)**
(1) 96.43 (2) 103.70 (3) 80.36
(4) 117.43 (5) 128.91

12. **What is the number of girls in Boxing?**
(1) 180 (2) 220 (3) 160
(4) 200 (5) None of these

13. **Number of boys in Boxing forms what percent of total number of the students in the school?**
(1) 10.8 (2) 9 (3) 12
(4) 16 (5) 18.6

14. **What is the total number of girls in Tennis and Volleyball together?**
(1) 380 (2) 340 (3) 400
(4) 320 (5) None of these

15. **What is the number of boys in Football?**
(1) 300 (2) 270 (3) 240
(4) 225 (5) None of these

Directions: (Q. 16-20) Study the information carefully to answer the questions that follow
In a school, out of 400 children, boys and girls are in the ratio of 9 : 11 respectively. Each child attends either singing class or dance class or both. 40% of the boys attend only singing class. Total 20% children attend both the classes, out of which 25% are boys. 45% of the girls attend only dance class.
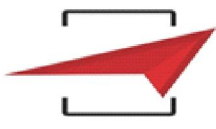
16. **What is the total number of children attending only dance class?**
(1) 213 (2) 189 (3) 133
(4) 187 (5) None of these

17. **What is the total number of girls attending dance class?**
(1) 161 (2) 121 (3) 99
(4) 60 (5) None of these

18. **How many girls attend only singing class?**
(1) 99 (2) 72 (3) 61
(4) 60 (5) None of these

19. **Total how many boys attend singing class?**
(1) 92 (2) 88 (3) 80
(4) 90 (5) None of these

20. **Total number of children attending only singing class is what per cent of the total number of children in the school?**
(1) 46.75 (2) 33.25 . (3) 46.25
(4) 33.75 (5) None of these

Directions: (Q. 21-25) Study the information carefully to answer the questions that follow
A school consisting of a total of 1560 students has boys and girls in the ratio of 7 : 5 respectively. All the students are enrolled in different types of hobby classes, uiz., Singing, Dancing and Painting. One-fifth of the boys are enrolled in only Dancing classes. Twenty

per cent of the girls are enrolled in only Painting classes. Ten percent of the boys are enrolled in only Singing classes. Twenty-four per cent of the girls are enrolled in both Singing and Dancing classes together. The number of girls enrolled in only Singing classes is two hundred per cent of the boys enrolled in the same. One-thirteenth of the boys are enrolled in all the three classes together. The respective ratio of boys enrolled in Dancing and Painting classes together to the girls enrolled in the same is 2 : 1 respectively. Ten per cent of the girls are enrolled in only Dancing classes whereas eight per cent of the girls are enrolled in both Dancing and Painting classes together. The remaining girls are enrolled in all the three classes together. The number of boys enrolled in Singing and Dancing classes together is fifty per cent of the number of girls enrolled in the same. The remaining boys are.enrolled in only Painting classes.

21. **Total number of girls enrolled in Singing is approximately what per cent of the total number of students in the school?**
(1) 37   (2) 19   (3) 32
(4) 14   (5) 26

22. **What is the respective ratio of the number of girls enrolled in only Painting classes to the number of boys enrolled in the same?**
(1) 77: 26   (2) 21: 73   (3) 26: 77
(4) 73: 21   (5) None of these

23. **Number of girls enrolled in only Dancing classes is what per cent ofthe boys enrolled in the same? (rounded off to two digits after decimal)**
(1) 38.67   (2) 35.71   (3) 41.83
(4) 28.62   (5) None of these

24. **What is the total number of boys who are enrolled in Dancing?**
(1) 318   (2) 364   (3) 292
(4) 434   (5) None of these

25. **What is the total number of students enrolled in all the three classes together?**

(1) 135   (2) 164   (3) 187
(4) 142   (5) None of these

Diredions: (Q. 26-30) Study the information carefully and answer the questions that follow A school has a total of 1200 students. The ratio of girls to BOys in the school is 3 : 2. All the students have enrolled in hobby classes viz., Singing, Dancing, Martial Arts &Cooking. One-twelfth of the boys have enrolled in only cooking classes. 25 per cent of the girls have enrolled in Cooking and Singing classes together. Number of boys enrolled in Only Martial Arts classes is 150 per cent of the number of girls enrolled in the same. Number of students enrolled in only Dancing is 26 per cent of the total number of students. 5 per cent of the girls have enrolled in only Martial Arts classes. One-third of the boys enrolled in only Dancing classes. 35 per cent of the girls enrolled in Singing, Dancing and Martial Arts together and the remaining enrolled in only Cooking. 15 per cent of the boys enrolled in Cooking and Singing classes together and the remammg enrolled in Singing, Dancing and Martial Arts classes together.

26. **Number of boys enrolled in Cooking and Singing classes together is what per cent of the girls enrolled in the same?**
(1) 48   (2) 36   (3) 20
(4) 25   (5) None of these

27. **What is the total number of students learning Martial Arts?**
(1) 90   (2) 496   (3) 342
(4) 128   (5) None of these

28. **How many girls are enrolled in only Cooking classes?**
(1) 280   (2) 252   (3) 154
(4) 100 (5) None of these

29. **How many boys learn Singing?**
(1) 226   (2) 184   (3) 72
(4) 96   (5) None of these

30. **What is the respective ratio of girls to boys enrolled in only Dancing classes?**
(1) 8: 7   (2) 14: 17   (3) 19: 20
(4) 12: 7   (5) None of these

ANSWER KEY

1.(4)	2.(5)	3.(2)	4.(1)
5.(3)	6.(5)	7.(1)	8.(3)
9.(1)	10.(2)	11.(1)	12.(3)
13.(5)	14.(2)	15.(4)	16.(4)
17.(5)	18.(3)	19.(1)	20.(2)
21.(5)	22.(3)	23.(2)	24.(4)
25.(1)	26.(5)	27.(1)	28.(5)
29.(1)	30.(3)		

HINTS & SOLUTIONS

(Hint for Q. 1 to 5)

Total number of boys = 356

Total numbr of girls = 344

Groups	Boys	Girls	Total
A	84	28	112
B	66	84	150
C	95	80	175
D	41	82	123
E	70	70	140
Total	356	344	

1. Required ratio = 150 : 123 = 50 : 41

2. No. of girls in A & D together
   = 82 + 28 = 110
   No. of boys in B & C together
   = 66 + 95 = 161
   ∴ Required more number = 161 - 110 = 51

3. Required ratio = 84 : 70 = 6 : 5

4. Required % = $\frac{95}{344} \times 100 = 27.6$

   ≃ 28% (Approx)

5. Required number = 112 + 175 + 123 = 410

Total no. of boys = $1200 \times \frac{45}{100} = 540$

& total no. of girls = 1200 - 540 = 660

Cities	No. of Boys	No. of Girls
Delhi	108	264
Kolkata	57	44
Varanasi	57	22
Mumbai	102	198
Jodhpur	216	132

Hint for Q.(6 to 10)

6. Required number = 57 + 22 = 79

7. Required ratio = 44 : 102 = 22 : 51

8. Required % = $\frac{(216+132)}{264} \times 100$

   = $\frac{34800}{264} = 131.818 \simeq 132\%$ (Approx)

9. Required average

   = $\frac{57+57+216}{3} = \frac{330}{3} = 110$

10. Required number = 264 + 198 + 22 = 484

(Hint for Q. 11 to 15)

Total no. of boys = $\frac{2500 \times 3}{3+2} = 1500$

& total no. of girls = $\frac{2500 \times 2}{3+2} = 1000$

Games	Girls	Boys
Hockey	280	270
Boxing	160	465
Tennis	160	240
Football	220	225
Volleyball	180	300

11. Required % = $\frac{270}{280} \times 100 = 96.43\%$

12. No. of girls in Boxing
    = 1000 - (280 + 160 + 220 + 180)
    = 1000 - 840 = 160

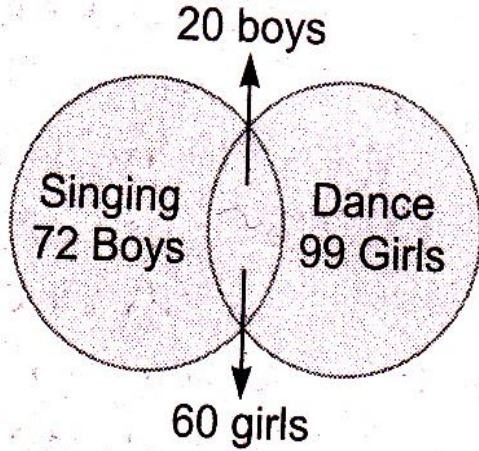13. Required % = $\frac{465}{2500} \times 100 = 18.6\%$

14. Required number of girls
    = 160 + 180 = 340

15. Required no. of boys in Football
    = 1500 - (270 + 465 + 240 + 300)
    = 1500 - 1275 = 225

Hint for Q. (16 to 20)

No. of boys = $\frac{9}{20} \times 400 = 180$

& total no. of girls = 400 - 180 = 220
Boys (only singing) = 40% of 180 = 72
Boys (attend both) = 25% of 80 = 20
Girls (only dance) = 45% of 220 = 99

16. Total number of children attending only dance class
$= (180 - 72 - 20)$ boys + 99 girls
$= 88 + 99 = 187$

17. Total number of girls attending dance class
$= 99 + 60 = 159$

18. Number of girls attend only singing class
$= (220 - 99 - 60) = 61$

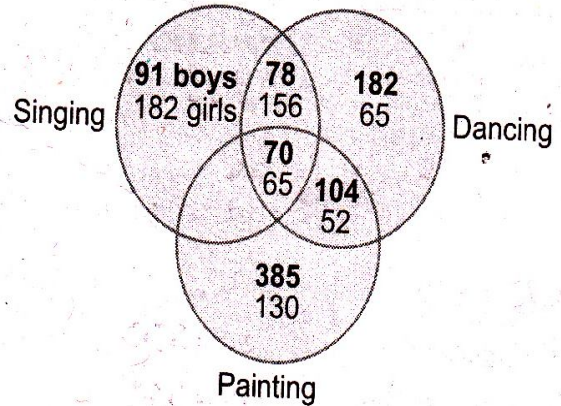**19.** Total numbr of boys attend singing class
$= 72 + 20 = 92$

20. $\because$ Total number of children attending only singing class = 72 boys + 61 girls = 133

$\therefore$ Required % = $\frac{133}{400} \times 100 = 33.25\%$

(Hint for Q.21 to 25)
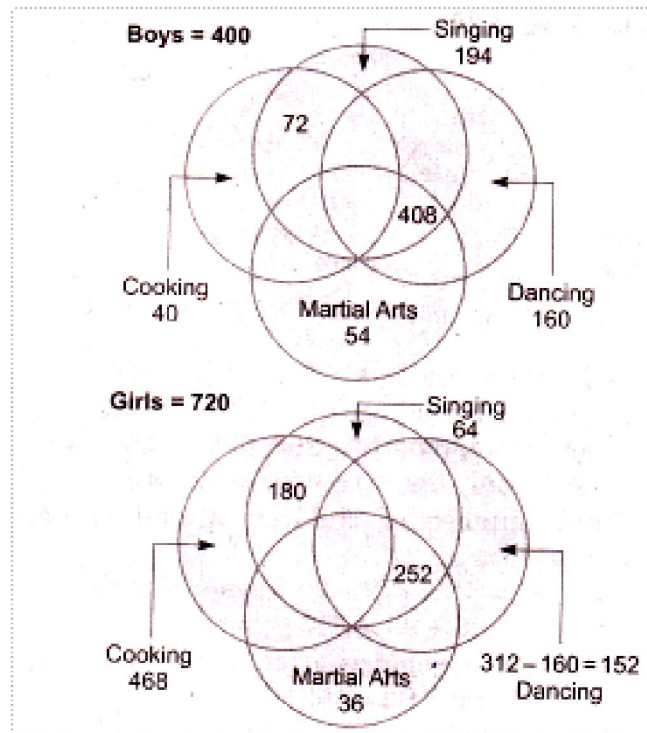**No. of boys = 910 & No. of girls = 650**

No. of boys = 910 and No. of girls = 650

21. Required % = $\frac{(182 + 156 + 65)}{1560} \times 100$

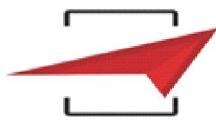$= \frac{4030}{156} = 25.83 \simeq 26\%$ (Approx)

22. Required ratio = 130 : 385 = 26 : 77

23. Required % = $\frac{65 \times 100}{182} = 35.71\%$

24. Required number
$= (78 + 182 + 70 + 104) = 434$

25. Required number = $(70 + 65) = 135$

Total number of students = 1200

No. of girls $= 1200 \times \dfrac{3}{5} = 720$

No. of boys $= 1200 \times \dfrac{2}{5} = 480$

No. of enrolled in only Cooking classes

$= \dfrac{1}{12} \times 480 = 40$

No. of girls enrolled in Cooking & Singing

classes together $= \dfrac{25}{100} \times 720 = 180$

No. of students enrolled in only Dancing

$= 1200 \times \dfrac{26}{100} = 312$

No. of girls enrolled in only Martial Arts classes

$= 720 \times \dfrac{5}{100} = 36$

No. of boys enrolled in only Martial Arts classes

$= 36 \times \dfrac{150}{100} = 54$

No. of boys enrolled in only Dancing classes

$= \dfrac{1}{3} \times 480 = 160$

No. of girls enrolled in Singing , Dancing &

Martial Arts classes $= \dfrac{720 \times 35}{100} = 252$

No. of girls enrolled in only Cooking classes
= 720 - 252 = 468

No. of boys enrolled in Cooking & Singing

classes together $= \dfrac{480 \times 15}{100} = 72$

No. of boys enrolled in Singing , Dancing &
Martial Arts classes together = 480 - 72 = 408

26. Required % $= \dfrac{72 \times 100}{180} = 40\%$

27. Total no. of students learning Martial Arts
$= 36 + 54 = 90$

28. No. of girls enrolled in only Cooking classes
$= 468$

29. No. of boys who learn Singing
$= 480 - (40 + 54 + 160) = 226$

30. Required ratio $= \dfrac{312 - 160}{160} = \dfrac{152}{160} = 19 : 20$