

200 Questions PDF for IBPS PO Prelims 2022- Quantitative Aptitude

Directions (1 - 10): In each of these questions a number series is given. In each series only one number is wrong. Find out the wrong number.

Q1. 15, 22, 6, 30, -2, 38, -10

- (a) 15
- (b) 22
- (c) 6
- (d) -2
- (e) 38

Q2. 18, 5, 9, 9.5, 23, 54.5, 164.5

- (a) 54.5
- (b) 18
- (c) 5
- (d) 9
- (e) 164.5

Q3. 102, 158, 218, 282, 350, 422, 500

- (a) 102
- (b) 218
- (c) 350
- (d) 500
- (e) 422

Q4. 72, 52, 42, 30, 20, 12, 6

- (a) 72
- (b) 42
- (c) 30
- (d) 6
- (e) 52

Q5. 125, 164, 284, 484, 764, 1124

- (a) 120
- (b) 125
- (c) 116
- (d) 108
- (e) 136

Q6. 375, 384, 394, 410, 434, 468, 514

- (a) 384
- (b) 514
- (c) 394
- (d) 375
- (e) 434

Q7. 248, 250, 279, 295, 420, 456, 799.

- (a) 279
- (b) 250
- (c) 295
- (d) 456
- (e) 799

Q8. 16, 22, 28, 40, 56, 76, 100

- (a) 22
- (b) 28
- (c) 56
- (d) 16
- (e) 40

Q9. 6, 8, 18, 57, 232, 1165, 6996

- (a) 57
- (b) 8
- (c) 6996
- (d) 1165
- (e) 6

Q10. 15, 14, 26, 75, 296, 1485, 8844

- (a) 15
- (b) 75
- (c) 296
- (d) 26
- (e) 1485

Direction (11-20): What will come in the place of question (?) mark in following the question?

Q11. (? % of 4800) ÷ (4% of 5400) = 56

- (a) 270
- (b) 252
- (c) 216
- (d) 240
- (e) 234

Q12. (131 + 66 + 103)% of 45 - (8)² = 4 × ? - 29

- (a) 35
- (b) 15
- (c) 30
- (d) 25
- (e) 20

Q13. (?)² - 5 = 65% of 5000 - 39 × 54 ÷ 351

- (a) 57
- (b) 37
- (c) 27
- (d) 67
- (e) 47

Q14. ? × 3 = (17)² - (14)³ + (56)²

- (a) 211
- (b) 205
- (c) 192
- (d) 227
- (e) 189

Q15. $(?)^3 = 180 \times 42 \div 105 + 120\% \text{ of } 2500 - 41 \times 8$

- (a) 16
- (b) 12
- (c) 14
- (d) 15
- (e) 13

Q16. $120\% \text{ of } 480 - 85\% \text{ of } 600 = 660\% \text{ of } ?$

- (a) 110
- (b) 15
- (c) 1
- (d) 100
- (e) 10

Q17. $3351 + 697 - 448 - ? = 3007$

- (a) 539
- (b) 593
- (c) 629
- (d) 683
- (e) 573

Q18. $\sqrt[3]{9261} \times \sqrt{2601} = ? + 448$

- (a) 648
- (b) 543
- (c) 632
- (d) 623
- (e) 617

Q19. $7\frac{2}{3} \times 1\frac{4}{23} + ? = 5\frac{1}{6} \times 2\frac{4}{31}$

- (a) 4
- (b) 2
- (c) 3
- (d) 1
- (e) 5

Q20. $? \times 1.3 \times 6.5 = 1.17 \times 195$

- (a) 23
- (b) 27
- (c) 25
- (d) 26
- (e) 22

Directions (21-30): What will come in place of question (?) mark in the following number series?

Q21. 25, 33, 46, 69, 112, ?

- (a) 175
- (b) 180
- (c) 185
- (d) 190
- (e) 195

Q22. ?, 5, 12, 39, 160, 805

- (a) 2
- (b) 4
- (c) 3
- (d) 5
- (e) 8

Q23. 11, 24, 41, 62, ?, 116

- (a) 81
- (b) 86
- (c) 87
- (d) 93
- (e) 103

Q24. 122, 114, 98, 66, ?, -126

- (a) 3
- (b) 5
- (c) 2
- (d) 11
- (e) 17

Q25. 56, 72, 90, 110, ?, 156

- (a) 132
- (b) 90
- (c) 73
- (d) 93
- (e) 87

Q26. 567, 571, ?, 623, 687, 787

- (a) 615
- (b) 599
- (c) 587
- (d) 601
- (e) 593

Q27. 167, 118, 76, 42, ?, -4

- (a) 17
- (b) 14
- (c) 18
- (d) 16
- (e) 25

Q28. ?, 120, 134, 160, 204, 272

- (a) 112
- (b) 104
- (c) 106
- (d) 114
- (e) 100

Q29. 5, ?, 2067, 2411, 2537, 2565

- (a) 1337
- (b) 1327
- (c) 1317
- (d) 1307
- (e) 1347

Q30. 427, ?, 366, 73.2, 292.8, 97.6

- (a) 51
- (b) 41
- (c) 61
- (d) 71
- (e) 31

Directions (31-40): What approximate value will come in place of question mark (?) in the following questions? (You are not expected to calculate the exact value)

Q31. 49.89% of 459.97 – (11.99 × 19.89) + 110.12 = ?²

- (a) 5
- (b) 8
- (c) 10
- (d) 15
- (e) 18

Q32. 22.11² + 199.98 – ? = 29.89% of 400.02

- (a) 608
- (b) 666
- (c) 720
- (d) 492
- (e) 564

Q33. $\sqrt{(32.85 \times 19.98) - (7.22 \times 4.91)} + 65.12\%$ of 1000.045 = ?

- (a) 450
- (b) 525
- (c) 725
- (d) 675
- (e) 600

Q34. 90.09% of $\frac{4}{9}$ of 179.97 + 8.202 = ? × 7.99

- (a) 6
- (b) 10
- (c) 17
- (d) 24
- (e) 42

Q35. $\sqrt[3]{1727.83} + 40.28\%$ of 299.95 = $\frac{?}{4}$

- (a) 528
- (b) 266
- (c) 478
- (d) 612
- (e) 818

Q36. $\sqrt{?} - 11.01^3 + 38.09^2 = 11.89^2$

- (a) 529
- (b) 1369
- (c) 1089
- (d) 961
- (e) 625

Q37. 119.77% of 175.05 – ? = 1123.86 – 33.13²

- (a) 445
- (b) 175
- (c) 225
- (d) 355
- (e) 710

Q38. $\sqrt[3]{1330.84} + ? + \sqrt[5]{242.96} = \sqrt[2]{361.23}$

- (a) 17
- (b) 25
- (c) 13
- (d) 5
- (e) 1

Q39. $\frac{168.98}{12.97}$ of 49.86 = ? – 32.09% of 799.95

- (a) 245
- (b) 906
- (c) 840
- (d) 950
- (e) 1550

Q40. 39.88% of 819.97 + 25.02% of 240.021 – ? = 59.98% of 500.12

- (a) 88
- (b) 72
- (c) 56
- (d) 108
- (e) 144

Directions (41-50): In each of these questions, two equations (I) and (II) are given. Solve the equations and mark the correct option:

- (a) if x > y
- (b) if x ≥ y
- (c) if x < y
- (d) if x ≤ y
- (e) if x = y or no relation can be established between x and y.

Q41. I. $x^2 + x - 12 = 0$
II. $y^2 - 9y + 14 = 0$

Q42. I. $6x^2 + 5x + 1 = 0$
II. $4y^2 - 15y = 4$

Q43. I. $3x^2 + x - 2 = 0$
II. $12y^2 + 7y + 1 = 0$

Q44. I. $x^2 - 11x + 30 = 0$
II. $y^2 - 8y + 15 = 0$

Q45. I. $20x^2 - 17x + 3 = 0$
II. $56y^2 + 2y - 4 = 0$

Q46. I. $x^2 - 3x - 88 = 0$
II. $y^2 + 8y - 48 = 0$

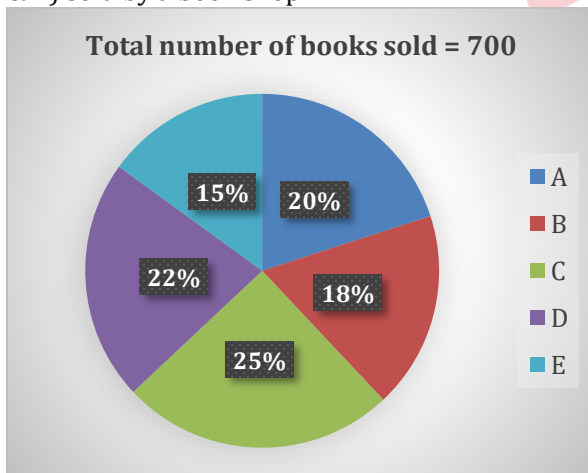
Q47. I. $2x^2 + 21x + 10 = 0$
II. $3y^2 + 13y + 14 = 0$

Q48. I. $2x^2 - 5x - 7 = 0$
II. $2y^2 - 16y + 32 = 0$

Q49. I. $x^2 - 18x + 81 = 0$
II. $y^2 + 6 = 5y$

Q50. I. $2x^2 - 9x + 10 = 0$
II. $3y^2 - 7y + 4 = 0$

Directions (51-55): Read the following pie chart carefully and answer the questions given below. Pie chart shows percentage distribution of five type of books (A, B, C, D & E) sold by a book shop.



Q51. If number of books A purchased by P is 50 more than number of books A purchased by Q, then find the number of books A purchased by Q. (Note: All the books A are purchased by P and Q only)

- (a) 40
- (b) 50
- (c) 60
- (d) 45
- (e) 55

Q52. Find the ratio of number of books A and books B sold together to that of books D and books E sold together.

- (a) 31 : 37
- (b) 35 : 37
- (c) 38 : 39
- (d) 38 : 35
- (e) 38 : 37

Q53. Find the central angle for books C.

- (a) 108°
- (b) 45°
- (c) 240°
- (d) 90°
- (e) 160°

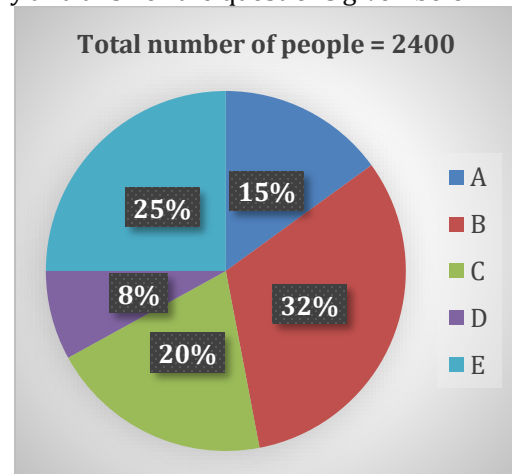
Q54. Find the difference between number of books E and books C sold together and that of books B and books D sold together.

- (a) 12
- (b) 0
- (c) 5
- (d) 6
- (e) 8

Q55. If number of books F sold is 25% more than number of book A sold, then number of books E sold is how much percent more/less than number of books F sold?

- (a) 40%
- (b) 45%
- (c) 25%
- (d) 50%
- (e) 75%

Directions (56-60): The pie chart shows percentage distribution of number of people who are going to watch movie in five different cities. Read the following pie chart carefully and answer the questions given below.



Q56. If number of people who are going to watch movies in city F are 25% more than that in city B, then find the ratio of number of people who are going to watch movies in city D to that of in city F?

- (a) 3 : 5
- (b) 1 : 3
- (c) 1 : 4
- (d) 2 : 5
- (e) 1 : 5

Q57. If number of people who are going to zoo in city A is 50% more than who are going to watch movies in same city, then find the total number of people who are going to zoo & watch movies from city A?

- (a) 924
- (b) 960
- (c) 950
- (d) 900
- (e) 1020

Q58. If ratio of males to females who are going to watch movies in city E and C is 7:5 and 7:8 respectively, then find the difference between number of males who are going to watch movies in city E & C together and that of total females who are going to watch movies in city E and C together?

- (a) 66
- (b) 64
- (c) 62
- (d) 54
- (e) 68

Q59. Find the average number of people going to watch movies in city A, C and E?

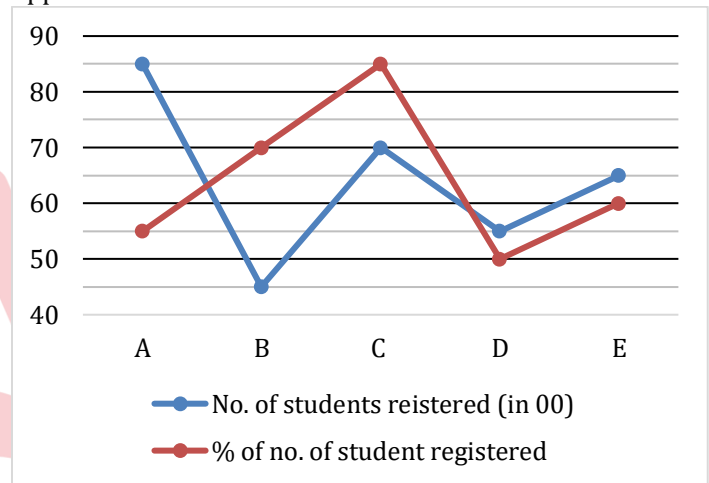
- (a) 480
- (b) 240
- (c) 560
- (d) 640
- (e) 720



Q60. Total number of people who are going to watch movies in city B is what percent more than that of in city E?

- (a) 22%
- (b) 28%
- (c) 26%
- (d) 21%
- (e) 24%

Directions (61-65): Read the following line graph carefully and answer the questions given below. Following the line graph shows total no. of students (in '00') registered in five different exams from city Z and percentage distribution of no. of students appeared in that exam.



Q61. Total no. of students appeared in exam A and D together is approximately what % more/less than no. of student appeared in exam B and E together.

- (a) 2%
- (b) 10%
- (c) 15%
- (d) 5%
- (e) 22%

Q62. Find the ratio of no. of students appeared in exam B to that of C.

- (a) 11: 17
- (b) 9: 19
- (c) 9: 21
- (d) 17: 11
- (e) 9: 17

Q63. Find the average no. of students appeared in the exam C, D, & E together.

- (a) 4400
- (b) 4450
- (c) 4500
- (d) 4200
- (e) 4600

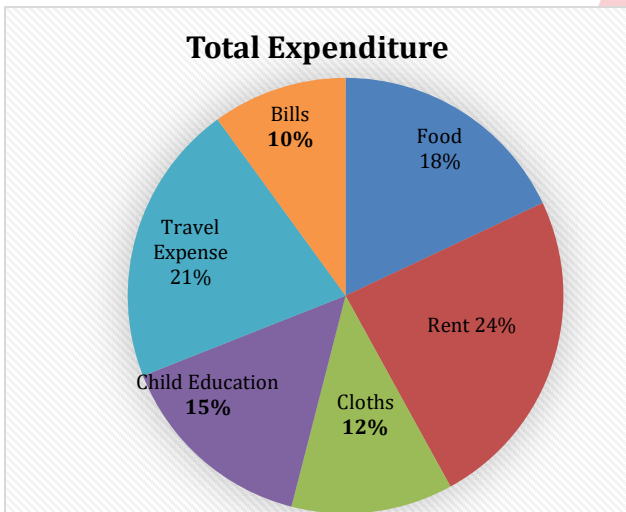
Q64. Ratio of boys to girls who appeared in exam D and B are 6:5 & 4:3 respectively. Find the difference between total no. of boys to total no. of girls in exam D & B.

- (a) 700
- (b) 650
- (c) 450
- (d) 550
- (e) 800

Q65. Find the sum of total no. of students who registered in all the five exam.

- (a) 3500
- (b) 3200
- (c) 2100
- (d) 2700
- (e) 4100

Direction (66-70):- Pie chart given below shows distribution of monthly expenditure of Ayush in six different fields. Study the data carefully and answer the following questions.



Note: -1. Ratio of monthly expenditure of Ayush to that of Arun is 5: 3.

2. Income = Savings + Expenditures

3. Distribution of expenditure is also same for Arun.

Q66. Expenditure of Arun on cloths is Rs 3600 then find difference between his travel expenses and Rent.

- (a) Rs 800
- (b) Rs 1200
- (c) Rs 600
- (d) Rs 720
- (e) Rs 900

Q67. If difference of the bills submitted by Arun and that of Ayush is Rs 2000 then find the annual income of Ayush if his monthly saving is Rs 18000.

- (a) Rs 7,96,000
- (b) Rs 7,66,000
- (c) Rs 8,16,000
- (d) Rs 8,06,000
- (e) Rs 8,18,000

Q68. Find the ratio of Ayush's expenditure on food, rent and cloths together to that of Arun's on child education, travel and bills together.

- (a) 9: 5
- (b) 21: 11
- (c) 25: 12
- (d) 45: 23
- (e) 48: 23

Q69. If annual income of Ayush is Rs 7.2 lac then find the difference between Ayush's monthly expenditure on travel and that of Arun's monthly expenditure on child education and bills together? (given that ratio of income of Ayush and Arun is 5 : 3)

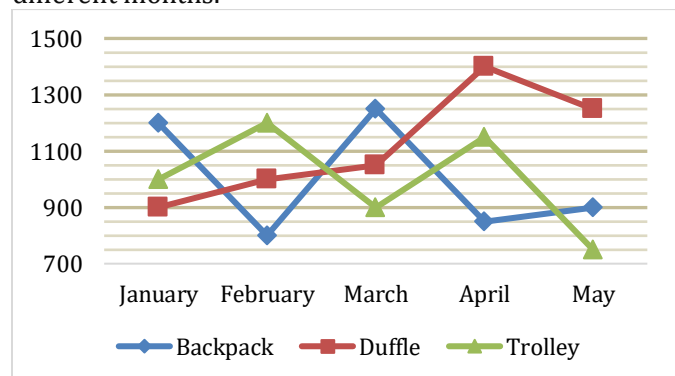
- (a) Rs 3000
- (b) Rs 3300
- (c) Rs 4500
- (d) Rs 3200
- (e) None of these

Q70. If Rahul's expenditure is 50% more than that of Arun's then find Rahul's expenditure on food and bills together is what percent of Ayush's expenditure on rent (consider same expenditure distribution for Rahul)?

- (a) 85%
- (b) 55%
- (c) 105%
- (d) 150%
- (e) 110%

Direction (71-75): Study the given line graph carefully and answer the following questions based on it.

The line graph given below shows the no. of bags (Backpack + Duffle + Trolley) sold by a company in 5 different months.



Q71. Total no. of bags sold in February and March together is what percent of no. of bags sold in May and January together.

- (a) $103\frac{1}{3}\%$
- (b) $111\frac{1}{3}\%$
- (c) $109\frac{2}{3}\%$
- (d) 40%
- (e) 100%

Q72. Find the difference between average no. of backpacks sold in March and April and average no. of Duffle bags sold in February and March.

- (a) 0
- (b) 20
- (c) 10
- (d) 25
- (e) 30

Q73. In June average no. of bags sold are 25% more than the average no. of bags sold in February. If in June, Duffle bags sold are $14\frac{2}{7}\%$ more than Trolley bag sold and 20% less than Backpack sold, then find the total Duffle bag sold in June.

- (a) 1250
- (b) 1650
- (c) 1200
- (d) 1350
- (e) 1450

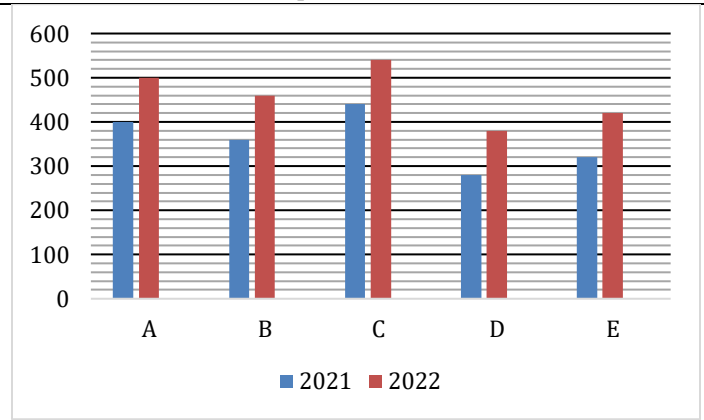
Q74. Trolley bag sold in February is what percentage more/less than the Backpack sold in May.

- (a) 25%
- (b) 40%
- (c) 30%
- (d) $16\frac{2}{3}\%$
- (e) $33\frac{1}{3}\%$

Q75. Price of each backpack, Duffle and Trolley is Rs.50, Rs.40 and Rs.60 respectively. Find the revenue of company in April.

- (a) Rs.127500
- (b) Rs.186500
- (c) Rs.167500
- (d) Rs.212500
- (e) Rs.148500

Directions (76-80): Bar graph given below show total number of students in five different schools (A, B, C, D & E) in two different years (2021, 2022). Read the following bar graph carefully and answer the questions given below



Q76. The ratio of number of boys to girls in school B and that in D in 2021 is 11:7 & 9:5 respectively. Find the difference between total number of boys in B & D together and number of total girls in both schools in 2021?

- (a) 120
- (b) 160
- (c) 180
- (d) 240
- (e) 200

Q77. Find the total number of students in school A in 2022 is what percent (approximately) more or less than total number of students in school C in 2021?

- (a) 14%
- (b) 18%
- (c) 26%
- (d) 22%
- (e) 8%

Q78. If total number of students in school F in 2022 is 66.66% more than total number of students in E in 2022, then find total number of students in school D and F together in 2022?

- (a) 1180
- (b) 1140
- (c) 1120
- (d) 1080
- (e) 1160

Q79. Find the ratio of total number of students in E and that in C together in 2022 to total number of students in B and that in D in 2021?

- (a) 5: 2
- (b) 3: 7
- (c) 3: 5
- (d) 4: 7
- (e) 3: 2

Q80. Average number of students in A, B & C in 2022 is how much more or less than average number of students in D & E in 2021?

- (a) 240
- (b) 200
- (c) 160
- (d) 180
- (e) 280

Directions (81-85): Given below is the table which shows the percentage of boys in two school A and B in five different years. Read the data carefully and answer the questions.

Years	School A	School B
2012	54%	52%
2013	60%	64%
2014	48%	44%
2015	62%	56%
2016	48%	50%

Note: Total students in any school = Total boys + Total girls in each school

Q81. In 2012, ratio of boys in school A to school B is 45 : 52 and total students in both school in 2012 is 1100. Find the total number of girls in both school in same year.

- (a) 568
- (b) 528
- (c) 518
- (d) 418
- (e) 488

Q82. If in 2014, boys in school A and B are 288 and 264 respectively then, find total number of girls in both school in 2014.

- (a) 594
- (b) 640
- (c) 564
- (d) 648
- (e) 630

Q83. If boys in school A in 2014 and girls in school B in 2012 are equal then boys in school B in 2012 are what percent of girls in school A in 2014.

- (a) 85%
- (b) 95%
- (c) 90%
- (d) 80%
- (e) 100%

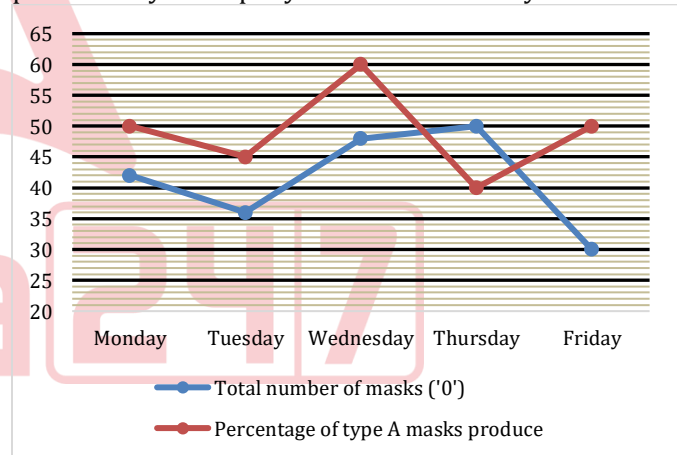
Q84. In 2016, girls in school A are $16\frac{4}{5}\%$ less than girls in school B. Find the ratio of boys in school A to that of school B in 2016.

- (a) 100 : 123
- (b) 98 : 117
- (c) 98 : 125
- (d) 92 : 117
- (e) 96 : 125

Q85. If total students in school A in 2015 and total student in B in 2013 are 700 and 400 respectively, then find the average number of boys in school A in 2015 and boys in school B in 2013.

- (a) 344
- (b) 345
- (c) 348
- (d) 368
- (e) 358

Directions (86-90): Read the following line chart carefully and answer the questions given below. Line chart show total number of masks (type A and type B) produced and percentage of number of type A masks produced by a company in five different days of a week.



Q86. Find the difference between number of type B masks produced on Monday to that on Friday?

- (a) 45
- (b) 50
- (c) 75
- (d) 60
- (e) 55

Q87. Find the ratio of number of type A masks produced on Tuesday to number of type B masks produced on Thursday?

- (a) 27 : 55
- (b) 29 : 50
- (c) 27 : 50
- (d) 21 : 59
- (e) 22 : 57

Q88. Number of type B masks produced on Thursday is what percent more/less than number of type A masks produced on Friday?

- (a) 125%
- (b) 75%
- (c) 50%
- (d) 150%
- (e) 100%

Q89. If number of type C masks produced on Tuesday is 20% more than number of type A masks produced on Monday, then find the average number of all types of masks produced on Tuesday?

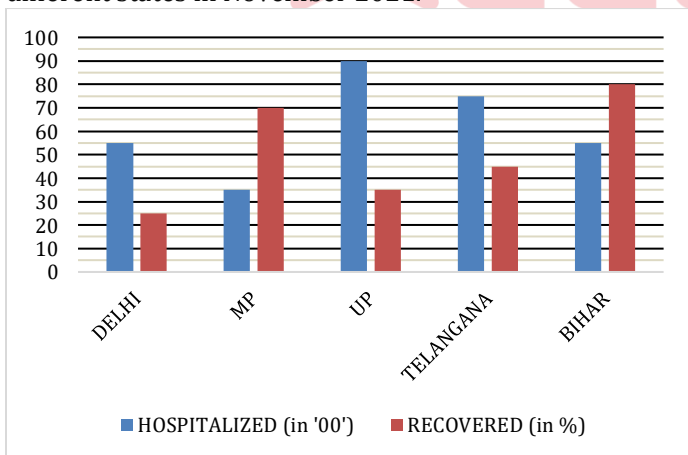
- (a) 204
- (b) 218
- (c) 265
- (d) 194
- (e) 156

Q90. If type B masks produced on Saturday are 40% less than that on Thursday, then type A masks produced on Wednesday is what percent of type B masks produced on Saturday?

- (a) 180%
- (b) 160%
- (c) 155%
- (d) 125%
- (e) 100%

Directions (91-95): Read the bar graph carefully and answer the following question.

The bar graph shows number of patients get hospitalized and percentage of patients recovered from covid19 from different states in November 2021.



Q91. Find the difference between number of non-recovered patient from the state UP and Telangana together to the number of recovered patient in Delhi and MP together.

- (a) 6150
- (b) 4040
- (c) 3030
- (d) 2020
- (e) 1010

Q92. What is the ratio of sum of 40% of non-recovered patient from Bihar and number of hospitalized patient from Delhi to the hospitalized patients from Telangana?

- (a) 125:33
- (b) 99:125
- (c) 23:25
- (d) 34:31
- (e) 123:127

Q93. In Maharashtra, number of hospitalized patients is sum of hospitalized patients in Telangana and Bihar. If the number of recovered patients is only 25% then find the recovered patient in Maharashtra is approximately what percent of hospitalized patients in UP.

- (a) 45%
- (b) 39%
- (c) 36%
- (d) 33%
- (e) 55%

Q94. Find the average number of patients recovered from the state Delhi, UP and Telangana.

- (a) $\frac{7000}{3}$
- (b) $\frac{7910}{3}$
- (c) $\frac{7820}{3}$
- (d) $\frac{7900}{3}$
- (e) $\frac{7550}{3}$

Q95. Due to the celebration of Durga puja in state West Bengal the covid19 rises tremendously. The patients hospitalized in state is three times more than hospitalized patients in UP. Due to the sudden rise of cases 20% people died and only 75% of patient get the beds. Find the number of patients who did not get the beds.

- (a) 1000
- (b) 700
- (c) 4000
- (d) 8200
- (e) 7200

Directions (96-100): Table given below shows total number of earphones (Boat + Ubon) sold and percentage of number of Boat earphones sold by five (A, B, C, D & E) different sellers. Read the following table carefully and answer the questions given below.

Seller	Total number of earphones sold	Percentage of Boat earphones sold
A	250	40%
B	300	55%
C	280	45%
D	340	50%
E	380	60%

Q96. Find the ratio of number of Ubon earphones sold by A & B together to total number of Boat earphones sold by A & B together?

- (a) 57 : 52
- (b) 57 : 53
- (c) 59 : 53
- (d) 57 : 58
- (e) 57 : 59

Q97. If total number of JBL earphones sold by A is 40% more than the total number of Ubon earphones sold by D, then find the difference between total number of Ubon earphones sold by C and total number of JBL earphones sold by A?

- (a) 84
- (b) 74
- (c) 94
- (d) 64
- (e) 88

Q98. Find the difference between average number of Ubon earphones sold by A & D and total number of Boat earphones sold by E?

- (a) 72h
- (b) 98
- (c) 88
- (d) 68
- (e) 78

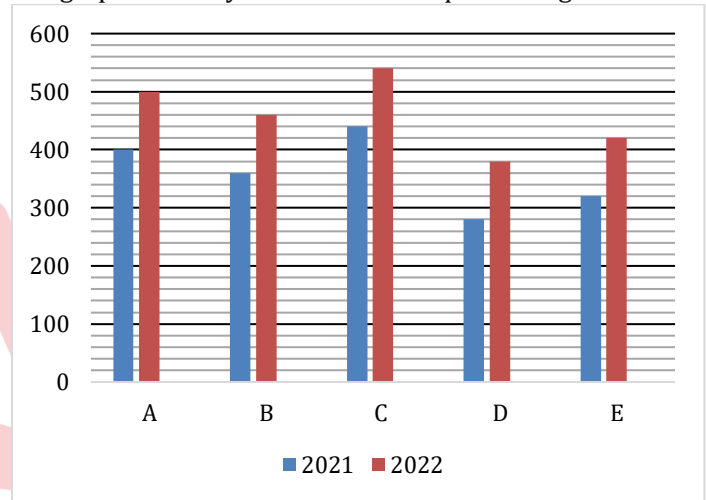
Q99. Find the total number of Boat earphones sold by E is what percent of total number of Ubon earphones sold by A?

- (a) 158%
- (b) 52%
- (c) 88%
- (d) 112%
- (e) 152%

Q100. Find the total number of Ubon earphones sold by B & D together is how much more or less than number of Boat earphones sold by D & E together?

- (a) 71
- (b) 101
- (c) 81
- (d) 93
- (e) 83

Directions (101-105): Bar graph given below show total number of students in five different schools (A, B, C, D & E) in two different years (2021, 2022). Read the following bar graph carefully and answer the questions given below



Q101. The ratio of number of boys to girls in school B and that in D in 2021 is 11:7 & 9:5 respectively. Find the difference between total number of boys in B & D together and number of total girls in both schools in 2021?

- (a) 120
- (b) 160
- (c) 180
- (d) 240
- (e) 200

Q102. Find the total number of students in school A in 2022 is what percent (approximately) more or less than total number of students in school C in 2021?

- (a) 14%
- (b) 18%
- (c) 26%
- (d) 22%
- (e) 8%

Q103. If total number of students in school F in 2022 is 66.66% more than total number of students in E in 2022, then find total number of students in school D and F together in 2022?

- (a) 1180
- (b) 1140
- (c) 1120
- (d) 1080
- (e) 1160

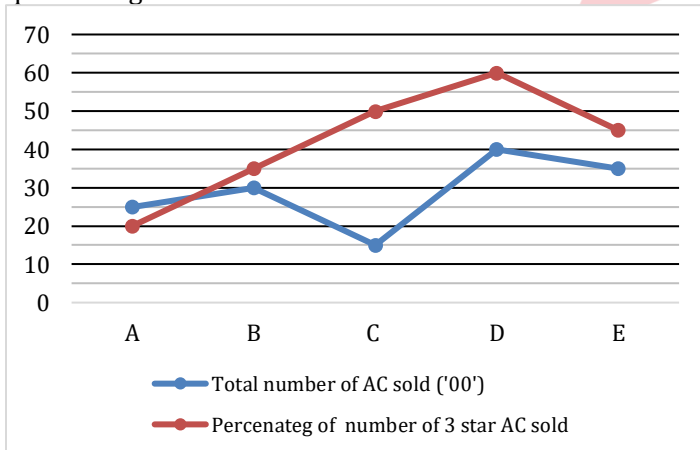
Q104. Find the ratio of total number of students in E and that in C together in 2022 to total number of students in B and that in D in 2021?

- (a) 5:2
- (b) 3:7
- (c) 3:5
- (d) 4:7
- (e) 3:2

Q105. Average number of students in A, B & C in 2022 is how much more or less than average number of students in D & E in 2021?

- (a) 240
- (b) 200
- (c) 160
- (d) 180
- (e) 280

Directions (106-110): Line graph shows total number of AC (3 star + 5 star) sold and percentage of number of 3-star AC sold by five (A, B, C, D & E) different sellers. Read the following line graph carefully and answer the questions given below.



Q106. Find the ratio of total number of 5-star AC sold by D to total 3-star AC sold by E?

- (a) 64 : 69
- (b) 64 : 63
- (c) 65 : 63
- (d) 69 : 63
- (e) 64 : 67

Q107. The ratio of number of 5-star split AC to window AC sold by B and C is 8:7 and 3:2 respectively. Find the difference between number of 5-star split AC sold by B and C together and number of 5-star window AC sold by seller B and C together.

- (a) 280
- (b) 250
- (c) 260
- (d) 270
- (e) 290

Q108. Total number of 5-star AC sold by D is what percent more than total number of 5-star AC sold by C?

- (a) $113\frac{1}{3}\%$
- (b) $122\frac{1}{3}\%$
- (c) $117\frac{1}{3}\%$
- (d) $105\frac{1}{3}\%$
- (e) $145\frac{1}{3}\%$

Q109. Total number of 5-star AC sold by F is 20% more than total number of 3-star AC sold by C. If ratio of number of 5-star AC to 3-star AC sold by F is 15:9, then find the total (5-star + 3-star) AC's sold by F?

- (a) 1240
- (b) 1540
- (c) 1090
- (d) 1440
- (e) 1560

Q110. Total number of 5-star AC sold by B is what percent more or less than total number of AC sold by A?

- (a) 24%
- (b) 28%
- (c) 21%
- (d) 18%
- (e) 22%

Directions (111-115): Read the following data carefully and answer the questions given below. Data shows all the students from two different college, students joined either gym or yoga. No students from any of the given colleges joined both the places.

Number of students joined gym from college N is 80. Ratio of number of students joined gym from college M and joined yoga from college N is 7:5 respectively. Total number of students from college M is 149. Number of students joined yoga from college M is 55% of number of students joined gym from college N.

Q111. Number of students joined gym from college M is what percent more/less than number of students joined yoga from college N?

- (a) 60%
- (b) 55%
- (c) 50%
- (d) 40%
- (e) 30%

Q112. Find the ratio between number of students joined gym from college N to number of students joined yoga from college M.

- (a) 19: 11
- (b) 18: 19
- (c) 22: 15
- (d) 20: 19
- (e) 20: 11

Q113. Ratio of number of boys to girls joined gym from college N and M is 5:3 and 8:7 respectively. Find the difference between number of boys joined gym from college M and N together to that of girls from same colleges.

- (a) 22
- (b) 25
- (c) 18
- (d) 27
- (e) 12

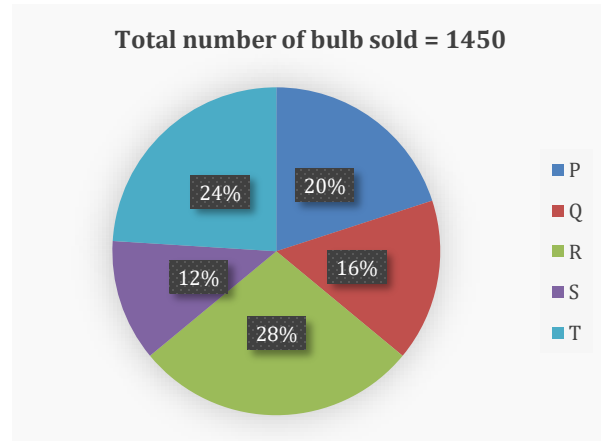
Q114. Find the difference between total number of students joined gym and total number of students joined yoga from both the colleges.

- (a) 62
- (b) 70
- (c) 54
- (d) 58
- (e) 66

Q115. Number of students joined yoga from college P is 25% more than that from college M. Number of students joined yoga from college N is approximately what percentage of that from college P?

- (a) 132%
- (b) 128%
- (c) 125%
- (d) 136%
- (e) 140%

Directions (116-120): Read the following pie chart and table carefully and answer the questions given below. Pie chart shows percentage distribution of number of bulbs sold (LED Bulbs sold + Halogen Bulb sold) and table shows number of LED bulbs and Halogen bulbs sold by five different sellers.



Seller	LED bulb sold: Halogen bulb sold
P	7: 3
Q	3: 5
R	9: 5
S	1: 2
T	5: 7

Q116. Find the ratio of number of LED bulbs sold by T to number of Halogen bulbs sold by R.

- (a) 1: 1
- (b) 1: 4
- (c) 4: 1
- (d) 2: 5
- (e) 4: 5

Q117. Number of LED bulbs sold by Q is what percent number of Halogen bulbs sold by P?

- (a) 90%
- (b) 100%
- (c) 75%
- (d) 50%
- (e) 85%

Q118. Find the difference between number of Halogen bulbs sold by Q and S together and number of LED bulbs sold by P and T together.

- (a) 82
- (b) 94
- (c) 102
- (d) 87
- (e) 108

Q119. Number of bulbs sold by B is 40% more than that by P. If ratio of Halogen bulbs sold by R to that by B 5: 8, then find the number of LED bulbs sold by seller B.

- (a) 154
- (b) 166
- (c) 196
- (d) 174
- (e) 182

Q120. Number of CFL bulbs sold by T is 21/29th of number of LED bulb sold by R. Number CFL bulb sold by T is approximately how much percent more/less than Halogen bulb sold by Q?

- (a) 34%
- (b) 38%
- (c) 26%
- (d) 30%
- (e) 42%

Directions (121-125): In the given questions, two quantities are given, one as 'Quantity I' and another as 'Quantity II'. You have to determine relationship between two quantities and choose the appropriate option

- (a) Quantity I > Quantity II
- (b) Quantity I < Quantity II
- (c) Quantity I ≥ Quantity II
- (d) Quantity I ≤ Quantity II
- (e) Quantity I = Quantity II or no relation

Q121. Quantity I. 24 men working 6 hours in a day and complete a work in 10 days. In how many days' will 15 men can complete the same work working 8 hours in a day.

Quantity II. B and C together can complete 40% of a work in 16 days while C alone can complete the same work in 72 days. In how many days will B alone complete the same work.

Q122. Quantity I. $x; 2x^2 + 11x + 9 = 0$

Quantity II. $y; y^2 - 11y + 30 = 0$

Q123. Quantity I. Selling price of a flower pot is Rs.936 and shopkeeper earned 20% profit. find the cost price of flower pot.

Quantity II. Shopkeeper mark up a pen 25% above its cost price and offers 10% discount. If difference between the cost price and selling price of the pen is 50, then find the marked price of the pen.

Q124. Sum of monthly salaries of A and B is Rs.44000. Monthly salary of B is 20% more than that of A. B saves 20% of his monthly salary whereas A saves 40% of his monthly salary.

Quantity I. Monthly expenditure of B.

Quantity II. Monthly expenditure of A.

Q125. U and V started a business by investing of Rs.4000 and Rs.4500 respectively. After 4-month W joined the business with investing of Rs.5000. At the end of the year V earned Rs.13500.

Quantity I. Find the profit share of U.

Quantity II. Find the profit share of W.

Q126. A man sold a shirt at 28% profit after allowing a discount of 20% on it. Had he sold the shirt at marked price, then he would have earned Rs.192 more profit. Find cost price of shirt (in Rs.)?

- (a) Rs.610
- (b) Rs.600
- (c) Rs.625
- (d) Rs.645
- (e) Rs.650

Q127. Amit invested some amount at S.I. out of Rs.40000 for 2 years and rest amount at C.I. for two years. S.I. is offering 15% p.a. and C. I. is offering 20% p.a. If S.I. earned is Rs.900 more than C.I. earned, then find the amount invested by Amit at S.I.?

- (a) Rs. 28000
- (b) Rs. 26000
- (c) Rs. 15000
- (d) Rs. 22100
- (e) Rs. 25000

Q128. A vessel contains mixture in which 25% is water and rest is acid. If 40 liters more water added in vessel, then quantity of water becomes 40% of mixture, then find the quantity of acid in the vessel?

- (a) 120 l
- (b) 125 l
- (c) 115 l
- (d) 110 l
- (e) 105 l

Q129. A bag contains 5 blue balls, 7 black balls and 4 purple balls. If two balls are drawn from the bag randomly, then find the probability of getting exactly one purple ball?

- (a) $\frac{2}{7}$
- (b) $\frac{4}{5}$
- (c) $\frac{1}{5}$
- (d) $\frac{4}{9}$
- (e) $\frac{2}{5}$

Q130. A boat covers a distance of 'D' km in downstream in 20 hours while in upstream it covers same distance in 80 hours. If the speed of boat in still water is 50 km/h, then find the value of D?

- (a) 1400 km
- (b) 1600 km
- (c) 1660 km
- (d) 1540 km
- (e) 1880 km

Q131. P, Q and R alone can do a work in 20 days, 40 days & 80 days respectively. All three start work simultaneously and after two days R left the work, After another two days Q also left the work. If the remaining work was finished by P alone, then find the percentage of work done by P?

- (a) 62.5%
- (b) 85%
- (c) 87%
- (d) 87.5%
- (e) 90%

Q132. An amount of Rs.12500 was distributed among P, Q and R in such a way that share of P is 110% more than that of R and share of R is $\frac{10}{19}$ th of share of Q. Find the share of Q?

- (a) Rs.5250
- (b) Rs.2500
- (c) Rs.4750
- (d) Rs.3750
- (e) Rs.3250

Q133. The cost price of ten articles is equal to marked price of eight articles. When shopkeeper sells an article at 20% discount then he got Rs.48 less than the amount he earned when he sells an article at 12% discount. Find the cost price of the article?

- (a) Rs.560
- (b) Rs.540
- (c) Rs.420
- (d) Rs.480
- (e) Rs.500

Q134. 40% of first number is equal to 30% of second number. If average of both numbers is 30 more than the first number, then find 75% of the second number?

- (a) 180
- (b) 150
- (c) 240
- (d) 210
- (e) 360

Q135. Vessel - A & B contains mixture of milk & water in the ratio 2 : 3 and 3 : 1 respectively. Both mixtures are mixed in another vessel - C. If quantities of vessel - A & B are same and vessel - C contains 92 liters of milk, then find total quantity of mixture in vessel - A?

- (a) 80 liters
- (b) 120 liters
- (c) 50 liters
- (d) 100 liters
- (e) 60 liters

Q136. The difference between marked price and selling price of an article is Rs.84 and the marked price of the article is 40% more than its cost price. If shopkeeper allowed 30% discount, then find the cost price of the article.

- (a) Rs.250
- (b) Rs.400
- (c) Rs.150
- (d) Rs.200
- (e) Rs.450

Q137. 180 liters of mixture of milk and water is in the ratio of 7:5 respectively. If 15-liter milk and Y liters of water added in the mixture, then the ratio of milk to water becomes 6:5 respectively. Find the value of Y.

- (a) 20
- (b) 5
- (c) 15
- (d) 10
- (e) 25

Q138. P is 25% more efficient than Q and R is 40% less efficient than P. If P and R together can complete a work in 12 days, then find the time taken by P, Q & R together to complete the same work.

- (a) 12 days
- (b) 6 days
- (c) 9 days
- (d) 8 days
- (e) 15 days



Q139. X, Y and Z started a business by investing of Rs.2400, Rs.3000 and Rs.2600 respectively. After four months, X and Y withdrew his investment by 25% and 20% respectively. If at the end of the years Z received profit of Rs.1950, then find the profit share of X.

- (a) Rs. 1250
- (b) Rs. 1500
- (c) Rs. 1850
- (d) Rs. 1900
- (e) Rs. 1000

Q140. Ratio of present ages of A to B is 5: 4 and present age of C is 40% more than that of A. If the average of present ages of A, B & C is 16 years, then find the age of B six years ago.

- (a) 6 years
- (b) 15 years
- (c) 8 years
- (d) 12 years
- (e) 4 years

Q141. Circumference of a circle is 44 cm and radius of a cylinder is $\frac{500}{7}\%$ of the diameter of the circle. If height of the cylinder is 14 cm, then find the volume (in cm^3) of the cylinder?

- (a) 4400 cm^3
- (b) 4290 cm^3
- (c) 4620 cm^3
- (d) 4200 cm^3
- (e) 4070 cm^3

Q142. P & Q started a business by investing Rs.5400 and Rs.4500 respectively. After four months P withdrew Rs.400 from his initial investment. If after one year the profit share of P is Rs.9240, then find the total profit?

- (a) Rs. 17480
- (b) Rs. 17340
- (c) Rs. 17240
- (d) Rs. 17640
- (e) Rs. 17260

Q143. The present age of Y is 28 years and four years hence the ratio of age of X to Y will be 7: 8. If present age of Z is 25% more than the present age of X, then find the age of Z six years ago?

- (a) 26 years
- (b) 22 years
- (c) 20 years
- (d) 24 years
- (e) 28 years

Q144. Pipe P & Q together can fill a tank in 20 minutes, while pipe P, Q and R together can fill the same tank in 25 minutes. If Pipe Q & R together can fill the tank in 50 minutes, then in how many minutes pipe P alone can fill the same tank completely?

- (a) 75 min
- (b) 30 min
- (c) 40 min
- (d) 60 min
- (e) 50 min

Q145. A train crosses a man running in opposite direction in 12 seconds. If speed of man and speed of train is 24 km/hr & 84 km/hr respectively, then find the length of train (in meters)?

- (a) 324
- (b) 360
- (c) 344
- (d) 380
- (e) 310

Q146. A and B alone can complete a work in 15 days and 12 days respectively, while C can destroy the same work in 20 days. If all the three working for alternate days starting with A and ending with C, then find in how many days the total work will be completed?

- (a) 30 days
- (b) 25 days
- (c) $28\frac{2}{5}$ days
- (d) $26\frac{3}{5}$ days
- (e) $25\frac{2}{5}$ days

Q147. S and T started a business by investing in the ratio 8:5 respectively. If after four years 9% of the total profit is donated in charity and profit share of T is Rs.2975, then find the profit share of S?

- (a) Rs. 4740
- (b) Rs. 4750
- (c) Rs. 4780
- (d) Rs. 4790
- (e) Rs. 4760

Q148. A person purchased kerosene at Rs.5, Rs.8 & Rs.10 per liter in three successive years respectively. If he spent Rs.2800 each year on kerosene, then find the average cost (per liter) paid by him in the given three successive years (approx.)?

- (a) Rs. 5
- (b) Rs. 7
- (c) Rs. 9
- (d) Rs. 4
- (e) Rs. 11

Q149. The ratio of length to breadth of a rectangle is 7:5 and perimeter of a square is equal to perimeter of rectangle. If area of square is 324 cm^2 , then find the area of rectangle?

- (a) 305 cm^2
- (b) 315 cm^2
- (c) 325 cm^2
- (d) 375 cm^2
- (e) 335 cm^2

Q150. The income of P is $\frac{2}{5}$ th of the income of Q and income of R is 60% more than income of Q. Income of Q is Rs.35000 and expenditure of P is 20% of expenditure of R. If R saves 25% of his income, then find the saving of P?

- (a) Rs. 5600
- (b) Rs. 5500
- (c) Rs. 5400
- (d) Rs. 5200
- (e) Rs. 5000

Q151. The ratio of cost price to marked price of a table is 2 : 3 and shopkeeper allows two successive discounts of $\frac{100}{9}\%$ and 10% on the marked price of the table. If the difference between profit earned and discount given is Rs. 200, then find the marked price of the table?

- (a) Rs. 2100
- (b) Rs. 3000
- (c) Rs. 2400
- (d) Rs. 3600
- (e) Rs. 3300

Q152. The downstream speed of a boat is 5 km/hr more than its upstream speed and the ratio of the speed of the boat in still water to the speed of the stream is 19: 5. Find the total time taken by boat to travel 42 km downstream and 31.5 km upstream?

- (a) $7 \frac{1}{2}$ hr
- (b) 8 hr
- (c) 9 hr
- (d) $9 \frac{1}{2}$ hr
- (e) 10 hr

Q153. A container contains a mixture of milk and water in which water is 40% less than milk. If 16 liter of the mixture is taken out and replaced with water, then the quantity of milk and water in final mixture becomes equal. Find the initial quantity of mixture in the container?

- (a) 80 L
- (b) 60 L
- (c) 70 L
- (d) 48 L
- (e) 96 L

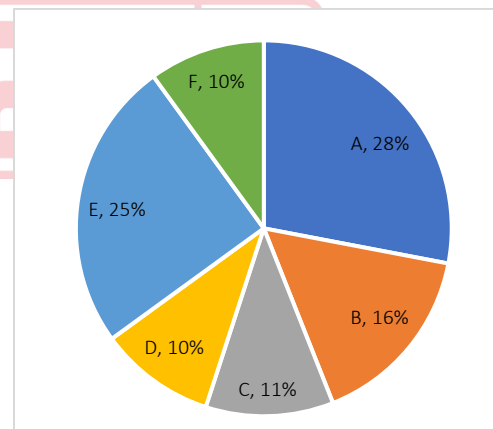
Q154. P and Q invested a total of Rs.32000 in a business. Period of investment of P & Q is 10 months and 8 months respectively. At the end of a year, P and Q received profit in the ratio 3 : 4 respectively. Find amount invested by P?

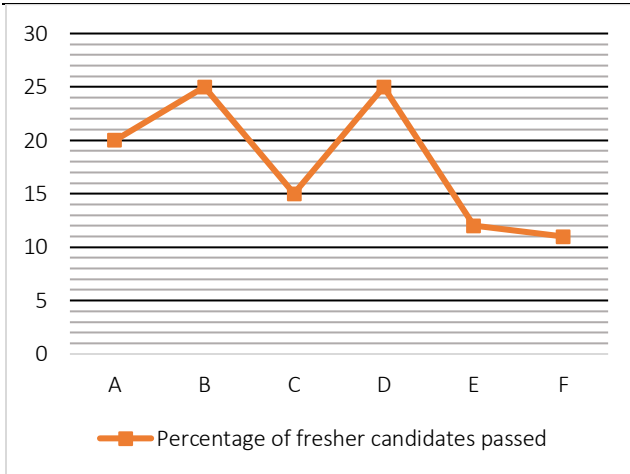
- (a) Rs 20000
- (b) Rs 18000
- (c) Rs 14000
- (d) Rs 12000
- (e) Rs 16000

Q155. If diameter of the circle is equal to the side of the square having perimeter 112 cm, then find the difference between area of the square and that of the circle?

- (a) 180 cm^2
- (b) 178 cm^2
- (c) 168 cm^2
- (d) 154 cm^2
- (e) 152 cm^2

Directions (156-160): The following pie-chart shows the percentage distribution of passed candidate in RBI exam from cities A, B, C, D, E and F out of the total passed candidates from all six cities together in year 2010 and line graph shows the percentage of fresher candidate who passed from each city out of the total candidates passed from that city in year 2010. Read the data carefully and answer the questions.





Q156. If in year 2010, total number of freshers passed from city D was 320, then how many freshers candidates passed the RBI exam from city E?

- (a) 384
- (b) 284
- (c) 364
- (d) 360
- (e) 344

Q157. If in year 2010, total passed candidates from all cities was 1250, then what is the number of the non-fresher candidate from city A who passed the RBI?

- (a) 140
- (b) 210
- (c) 420
- (d) 280
- (e) 320

Q158. If the non-fresher candidates passed from city B in year 2010 were 180, then how many total candidates passed the RBI exam from all cities together?

- (a) 1450
- (b) 1200
- (c) 1500
- (d) 1250
- (e) 1800

Q159. If there is an increase of 10% and 20% in the number of passed candidates in city A and B in year 2011 respectively from year 2010 and total passed candidate from city C in 2010 was 770. Then what would be the difference between number of passed candidates from city A and B in year 2011?

- (a) 712
- (b) 812
- (c) 912
- (d) 880
- (e) 822

Q160. If total passed candidates from city B in year 2010 was 320, then find the ratio of the number of freshers passed from city A to number of non-freshers passed from city C?

- (a) 112 : 187
- (b) 113 : 186
- (c) 115 : 189
- (d) 187 : 112
- (e) None of these

Direction (161-165): Study the information carefully and answer the following questions given below.

There are 5 friends A, B, C, D and E. They work together in different post in the office. They spend the salary only on food and rent.

- (1) The money spend on food by A is same as money spend by B on rent. The ratio of money spend on food and rent by C and E is 3:5 and 2:3 respectively. The money spend on rent by A, C and D are in the ratio of 3:2:1 and the ratio of money spend by B and D on food is 3:7.
- (2) The ratio of salary of A, B, D and E is 11:8:9:10 and the salary of E is Rs 50000 out of Rs 222000

Q161. Find the ratio of salary of C and A together and salary of B and D together.

- (a) 87:85
- (b) 85:73
- (c) 85:87
- (d) 23:31
- (e) 41:1

Q162. The amount spend on rent by C is what percent of amount spend on rent by D.

- (a) 20%
- (b) 200%
- (c) 22%
- (d) 11%
- (e) 5%

Q163. The sum of money spend on food by A, B & C is how much more than sum of money spend on rent by D and E. (in Rs)

- (a) 10000
- (b) 11000
- (c) 12000
- (d) 30000
- (e) 11500

Q164. Find the difference between average salary of B and C together and D and E together. (in Rs)

- (a) 21230
- (b) 23456
- (c) 12345
- (d) 11500
- (e) 55110

Q165. Find the sum of 50% total money spend on rent and 30% of total money spend on food (in Rs)

- (a) 11230
- (b) 33200
- (c) 34000
- (d) 89900
- (e) 89600

Direction (166-170): Read the given data carefully and answer the questions based on it.

Three stores sold two different type of Computer mouse (Wired +Wireless). Number of wired computer mouse sold by X is 240. Ratio of number of wireless computer mouse and that of wired computer mouse sold by X is 5: 3. Total no. of wireless computer mouse sold by all the stores are 960. Total computer mouse sold by store Y are 25% more than that by store X. Number of wireless computer mouse sold by store X is 80% of number of wired computer mouse sold by Y. Average no. of computer mouse sold by all the three stores is 690.

Q166. Wired computer mouse sold by X and Y together is what percentage more or less than wireless computer mouse sold by Y.

- (a) $133\frac{1}{3}\%$
- (b) $152\frac{2}{3}\%$
- (c) $146\frac{2}{3}\%$
- (d) $166\frac{2}{3}\%$
- (e) $111\frac{2}{3}\%$

Q167. Find the ratio of total computer mouse sold by Z to total wired computer mouse sold by all the three stores.

- (a) 21 : 37
- (b) 17: 31
- (c) 19: 29
- (d) 21: 31
- (e) 23: 39

Q168. If no. of wireless computer mouse sold by store A is 40% more than wired computer mouse sold by store X and average no. of computer mouse sold by X and A is 637, then find the no. of wired computer mouse sold by store A.

- (a) 271
- (b) 308
- (c) 278
- (d) 298
- (e) 288

Q169. Price of wired computer mouse is $\frac{2}{3}$ rd of price of wireless computer mouse. If store X earned revenue of Rs.67200 by selling all the computer mouse, then find the price of wireless computer mouse.

- (a) Rs.80
- (b) Rs.120
- (c) Rs.160
- (d) Rs.100
- (e) Rs.125

Q170. If 30% of the total computer mouse sold by store Z are faulty and ratio of faulty wired computer mouse and faulty wireless computer mouse is 5: 4, then find the difference between non-faulty wired computer mouse and non-faulty wireless computer mouse.

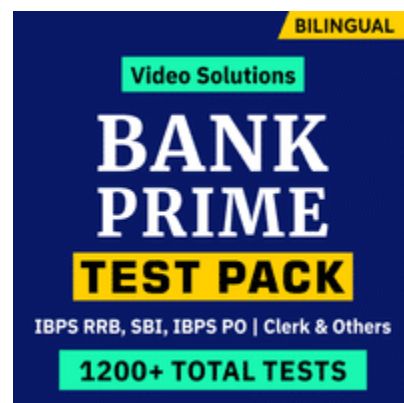
- (a) 76
- (b) 93
- (c) 102
- (d) 81
- (e) 89

Directions (171–175): In the given questions, two quantities are given, one as 'Quantity I' and another as 'Quantity II'. You have to determine relationship between two quantities and choose the appropriate option

- (a) Quantity I > Quantity II
- (b) Quantity I < Quantity II
- (c) Quantity I \geq Quantity II
- (d) Quantity I \leq Quantity II
- (e) Quantity I = Quantity II or no relation

Q171. Quantity I. A car can travel 280 km in 5 hours. Find the speed of car. (in kmph)

Quantity II. A train can cross a pole and bridge having a length of 520 m in 12 secs and 25 secs respectively. Find the speed of the train (in kmph).



Q172. Pipe A and pipe B can fill the tank in 10 min and 15 min respectively. Efficiency of pipe C is 50% more than that of B.

Quantity I. Find the time taken (in min) by pipe C and A when both opened simultaneously to fill double the capacity of the tank.

Quantity II. Find the time taken (in min) by pipe C to fill the tank alone.

Q173. 4 years ago, the ratio of the ages of Neelam and Dolly is 5: 7. Eight years hence the ratio of their ages will be 7:9

Quantity I. Find the age of Dolly 5 years hence.

Quantity I. Find the age of Neelam 17 years hence.

Q174. Quantity I. $x; 12x^2 - x - 1 = 0$

Quantity II. $y; 20y^2 - 41y + 20 = 0$

Q175. The ratio of speed of boat in still water to the speed of stream is 11: 5. A boat goes 24 km in 45 minutes downstream.

Quantity I. Find the time taken (in min) by boat to cover the distance of 160 km downstream?

Quantity II. Find the time taken (in min) by boat to cover the distance of 48 km upstream?

Directions (176–180): The following questions are accompanied by two statements i.e. **statement (I)** and **statement (II)**. You have to determine which statements(s) is/are sufficient/necessary to answer the questions.

(a) Neither statement (I) nor statement (II) by itself is sufficient to answer the question.

(b) Statement (II) alone is sufficient to answer the question but statement (I) alone is not sufficient to answer the question.

(c) Either statement (I) or statement (II) by itself is sufficient to answer the question.

(d) Both the statements taken together are necessary to answer the questions, but neither of the statements alone is sufficient to answer the question.

(e) Statement (I) alone is sufficient to answer the question but statement (II) alone is not sufficient to answer the questions

Q176. Find the area of rectangle.

Statement (I) Area of square is 64 cm^2 .

Statement (II) Side of square is half the length of rectangle. Ratio of breadth to length of rectangle is 3:4 respectively.

Q177. Find the cost price of article.

Statement (I) Shopkeeper marked the article 40% above the cost price and allow 25% discount on marked price. Difference between selling price and marked price of the article is Rs.210.

Statement (II) Ratio of cost price and discount price of the article is 5:8 respectively.

Q178. Find the time taken by D to complete the whole work.

Statement (I) A, B and C can complete the work in 15 days, 18 days and 20 days respectively.

Statement (II) Efficiency of D is 20% more than that of B.

Q179. Find the time taken by boat to cover 195 km in downstream.

Statement (I) Ratio of speed of boat in still water to current is 8:5 respectively.

Statement (II) The boat can travel 180 km in upstream in 6 hours.

Q180. P, A and D invested Rs.94500 in a business in the ratio 7: 9: 5 respectively for a year. What is the profit % earned by them after a year?

Statement (I) D got Rs. 4500 as his share of profit.

Statement (II) The difference in profit earned by P and D is Rs.1800.

Directions (181–185): In the given questions, two quantities are given, one as 'Quantity I' and another as 'Quantity II'. You have to determine relationship between two quantities and choose the appropriate option

(a) Quantity I > Quantity II

(b) Quantity I < Quantity II

(c) Quantity I \geq Quantity II

(d) Quantity I \leq Quantity II

(e) Quantity I = Quantity II or no relation

Q181. A boat goes 12 km downstream in 48 minutes and the speed of the stream is 6 km/h.

Quantity I. Find the time taken (in hours) by boat to cover 84 km upstream.

Quantity II. Find the time taken (in hours) by boat to cover 315 km in still water.

Q182. The vessel has 50 liters of mixture of juice and water in the ratio of 3:2 respectively. 10 liters of mixture is taken out and 14 liters of water is added in the mixture.

Quantity I. Find the final quantity (in liter) of water in the mixture.

Quantity II. Find the final quantity (in liter) of juice in the mixture.

Q183. Quantity I. The simple interest on certain sum of money for 5 years at 15% p.a. is Rs.7500. Find the sum (in Rs.).

Quantity II. Rs.10200

Q184. **Quantity I.** $x; 2x^2 + 5x + 3 = 0$

Quantity II. $y; y^2 + 6y + 9 = 0$

Q185. **Quantity I.** $x; \sqrt{784} - x = 0$

Quantity II. $y; 784 - y^2 = 0$

Directions (186-190):- Each of the following questions is provided with 2 statements i.e. Statement I & Statement II. You have to study them and find which statement (s) is/are necessary to answer the question as per the instruction set given below.

- (a) Only Statement I is sufficient
- (b) Only Statement II is sufficient
- (c) Neither Statement I nor Statement II is sufficient
- (d) Either Statement I or Statement II is sufficient
- (e) Both Statement I & Statement II together is sufficient

Q186. What is speed of car?

Statement I: Car can cover a distance of 100 km in 2 hour.

Statement II: Speed of bike is 20 kmph which is 40% of speed of car.

Q187. What is length of platform?

Statement I: a train covers the platform in 20 sec.

Statement II: the length of train is 50% of length of platform.

Q188. What is ratio of boys to girls in the class?

Statement I: total students in class are 100.

Statement II: boys are 20% more than girls.

Q189. What is present salary of Sanjay?

Statement I: Sanjay saves Rs. 500 which is 10% of his salary.

Statement II: Sanjay spends Rs. 2000 more than he saves.

Q190. What is present population?

Statement I: the population last year was 1000.

Statement II: population increases by 10% every year.

Directions (191–195): The following questions are accompanied by two statements i.e. **statement (I)** and **statement (II)**. You have to determine which statements(s) is/are sufficient/necessary to answer the questions.

- (a) Neither statement (I) nor statement (II) by itself is sufficient to answer the question.

(b) Statement (II) alone is sufficient to answer the question but statement (I) alone is not sufficient to answer the question.

(c) Either statement (I) or statement (II) by itself is sufficient to answer the question.

(d) Both the statements taken together are necessary to answer the questions, but neither of the statements alone is sufficient to answer the question.

(e) Statement (I) alone is sufficient to answer the question but statement (II) alone is not sufficient to answer the questions

Q191. A sum of Rs.1860 is to be divided among M, N & S. Find the profit share of M, N & S respectively.

Statement (I). S gets $\frac{3}{7}$ th of the amount received by N.

Statement (II). M gets amount $66\frac{2}{3}\%$ more than S.

Q192. If \sqrt{z} and \sqrt{h} are integers and $32 < z < h < 90$.

Find the value of $\frac{z+h}{2}$.

Statement (I). $z + h \geq 70$

Statement (II). $9z = 4h$.

Q193. There are five consecutive number which are multiple of two. Find the second largest number.

Statement (I). Difference between largest and second smallest number is 6.

Statement (II). Sum of second largest number and smallest number is 14.

Q194. What was the total C.I. on a sum of Rs.1000 after three years at rate of interest of R%?

Statement (I). The interest after one year was Rs.100 on same sum and same rate of interest.

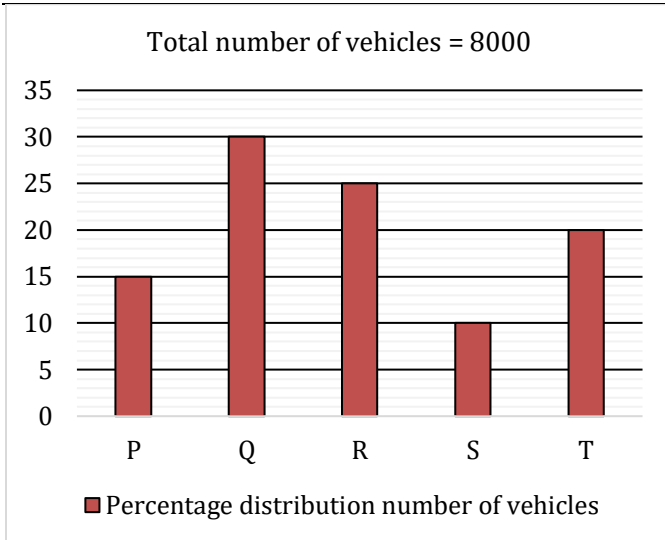
Statement (II). The difference between S.I. and C.I. on same sum and same rate at the end of two years was Rs.10.

Q195 . Find the present age of Pallavi.

Statement (I). Himanshi is twice the age of Priya and sum of their age is 72 years.

Statement (II). Pallavi is 3 years younger to Priya.

Directions (196-200): Read the following bar graph and table carefully and answer the questions given below. Bar graph shows percentage distribution of total number of vehicles (bikes and cars) in five different cities (P, Q, R, S & T) and table shows ratio of number of cars to bikes in these cities.



City	Cars : Bikes
P	1:3
Q	2:3
R	7:3
S	3:5
T	3:2

Q196. Number of bikes in S what percent of number of cars in P?

- (a) $87\frac{1}{2}\%$
- (b) $166\frac{2}{3}\%$
- (c) $122\frac{2}{4}\%$
- (d) $133\frac{1}{3}\%$
- (e) $62\frac{1}{2}\%$

Q197. If number of buses in T is 75% of number of bikes in R, then find the ratio of number of cars in Q to number of buses in T.

- (a) 32 : 15
- (b) 32 : 17
- (c) 34 : 19
- (d) 31 : 16
- (e) 36 : 17

Q198. If number of cars in A is 25% less than number of bikes in Q and ratio of number of bikes in A to cars in P is 7:5 respectively, then find the total number of vehicles (cars + bikes) in A?

- (a) 1250
- (b) 1800
- (c) 2050
- (d) 1500
- (e) 1450

Q199. Find the difference between number of bikes in R and average number of cars in T and S?

- (a) 45
- (b) 20
- (c) 50
- (d) 65
- (e) 30

Q200. If ratio of SUV cars and Sedan cars in P & S is 5:7 and 1:2 respectively, then total SUV cars in P and S together is how many more/less than total Sedan cars in P and S together (Note: Total cars in any city = SUV cars + Sedan cars)?

- (a) 150
- (b) 250
- (c) 180
- (d) 125
- (e) 175

Solutions

S1. Ans.(a)

Sol:
Pattern of series
Wrong number = 15
 $14+8=22$
 $22-16=6$
 $6+24=30$
 $30-32=-2$
 $-2+40=38$
 $38-48=-10$

S2. Ans.(a)

Sol. Pattern of series
Wrong number = 54.5
 $18 \times 0.5 - 4 = 5$
 $5 \times 1 + 4 = 9$
 $9 \times 1.5 - 4 = 9.5$
 $9.5 \times 2 + 4 = 23$
 $23 \times 2.5 - 4 = 53.5$
 $53.5 \times 3 + 4 = 164.5$

S3. Ans.(d)

Sol. Pattern of series
Wrong number = 500
 $102 + 56 = 158$
 $158 + 60 = 218$
 $218 + 64 = 282$
 $282 + 68 = 350$
 $350 + 72 = 422$
 $422 + 76 = 498$

S4. Ans.(e)

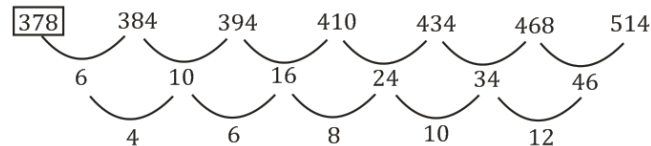
Sol. Pattern of series
Wrong number = 52
 $8 \times 9 = 72$
 $7 \times 8 = 56$
 $6 \times 7 = 42$
 $5 \times 6 = 30$
 $4 \times 5 = 20$
 $3 \times 4 = 12$
 $2 \times 3 = 6$

S5. Ans.(b)

Sol. Pattern of series
Wrong number = 125
 $124 + (40 \times 1) = 164$
 $164 + (40 \times 3) = 284$
 $284 + (40 \times 5) = 484$
 $484 + (40 \times 7) = 764$
 $764 + (40 \times 9) = 1124$

S6. Ans.(d)

Sol. Wrong number = 375.



there will be 378 in place of 375.

S7. Ans.(b)

Sol. Wrong number = 250.
248, 252, 279, 295, 420, 456, 799
 $+2^2$, $+3^3$, $+4^2$, $+5^3$, $+6^2$, $+7^3$

there will be 252 in place of 250.

S8. Ans.(a)

Sol.
Wrong number = 22
Pattern of series -
 $16 + 4 = 20$
 $20 + 8 = 28$
 $28 + 12 = 40$
 $40 + 16 = 56$

$56 + 20 = 76$
 $76 + 24 = 100$

S9. Ans.(e)

Sol.
Wrong number = 6
Pattern of series -
 $7 \times 1 + 1 = 8$
 $8 \times 2 + 2 = 18$
 $18 \times 3 + 3 = 57$
 $57 \times 4 + 4 = 232$
 $232 \times 5 + 5 = 1165$
 $1165 \times 6 + 6 = 6996$

S10. Ans.(e)

Sol.
Wrong number = 1485
Pattern of series -
 $15 \times 1 - 1 = 14$
 $14 \times 2 - 2 = 26$
 $26 \times 3 - 3 = 75$
 $75 \times 4 - 4 = 296$
 $296 \times 5 - 5 = 1475$
 $1475 \times 6 - 6 = 8844$

S11. Ans.(b)

Sol. $\left(\frac{?}{100} \times 4800\right) \div \left(\frac{4}{100} \times 5400\right) = 56$
 $\frac{? \times 48}{4 \times 54} = 56$
 $? = \frac{56 \times 4 \times 54}{48}$
 $? = 252$

S12. Ans.(d)

Sol. $\left(\frac{300}{100} \times 45\right) - 64 + 29 = 4 \times ?$
 $135 - 35 = 4 \times ?$
 $? = \frac{100}{4}$
 $? = 25$

S13. Ans.(a)

Sol. $(?)^2 = \left(\frac{65}{100} \times 5000\right) - \frac{39 \times 54}{351} + 5$
 $(?)^2 = 3250 - 6 + 5$
 $(?)^2 = 3249$
 $? = 57$

S14. Ans.(d)

Sol. $? \times 3 = 289 - 2744 + 3136$
 $? = \frac{681}{3}$
 $? = 227$

S15. Ans.(c)

Sol. $(?)^3 = \frac{180 \times 42}{105} + \frac{120}{100} \times 2500 - 328$

$(?)^3 = 72 + 3000 - 328$

$(?)^3 = 2744$

$? = 14$

S16. Ans.(e)

Sol. 120% of 480 - 85% of 600 = 660% of ?

$576 - 510 = \frac{660}{100} \times ?$

$? = 10$

S17. Ans.(b)

Sol. $3351 + 697 - 448 - ? = 3007$

$3600 - ? = 3007$

$? = 593$

S18. Ans.(d)

Sol. $\sqrt[3]{9261} \times \sqrt{2601} = ? + 448$

$21 \times 51 = ? + 448$

$? = 623$

S19. Ans.(b)

Sol. $7\frac{2}{3} \times 1\frac{4}{23} + ? = 5\frac{1}{6} \times 2\frac{4}{31}$

$\frac{23}{3} \times \frac{27}{23} + ? = \frac{31}{6} \times \frac{66}{31}$

$? = 2$

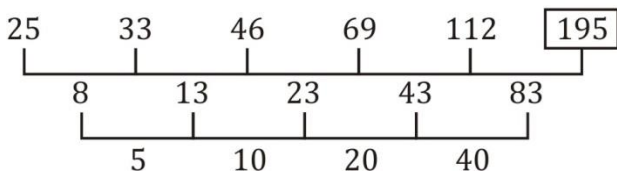
S20. Ans.(b)

Sol. $? \times 1.3 \times 6.5 = 1.17 \times 195$

$? = \frac{1.17 \times 195}{1.3 \times 6.5} = 27$

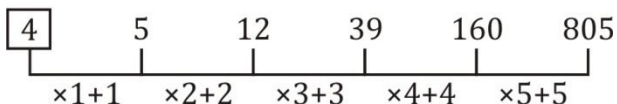
S21. Ans.(e)

Sol.



S22. Ans.(b)

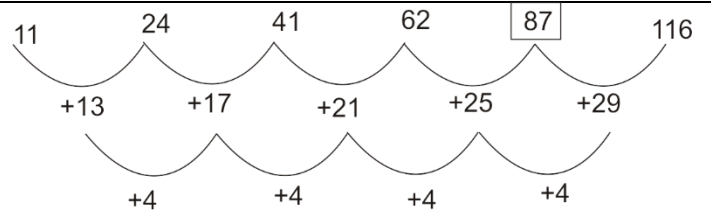
Sol.



S23. Ans.(c)

Sol.

Pattern of series -



S24. Ans.(c)

Sol.

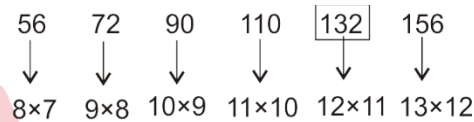
Pattern of series -



S25. Ans.(a)

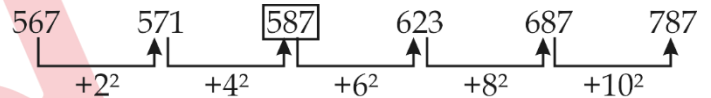
Sol.

Pattern of series -



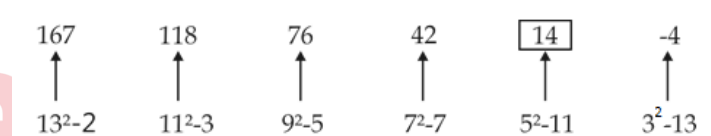
S26. Ans.(c)

Sol.



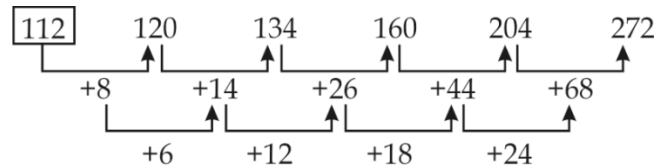
S27. Ans.(b)

Sol.



S28. Ans.(a)

Sol.



S29. Ans.(a)

Sol.

Pattern is -

$+(11^3+1), +(9^3+1), +(7^3+1), +(5^3+1), +(3^3+1),$

So, $5 + (11^3 + 1) = 1337$

S30. Ans.(c)

Sol.

Pattern is -

$\div 7, \times 6, \div 5, \times 4, \div 3, \dots$

So, $427 \div 7 = 61$

S31. Ans.(c)

Sol.

$$49.89\% \text{ of } 459.97 - (11.99 \times 19.89) + 110.12 = ?^2$$

$$50\% \text{ of } 460 - (12 \times 20) + 110 = ?^2$$

$$230 - 240 + 110 = ?^2$$

$$100 = ?^2$$

$$10 = ?$$

S32. Ans.(e)

Sol.

$$22.11^2 + 199.98 - ? = 29.89\% \text{ of } 400.02$$

$$22^2 + 200 - ? = 30\% \text{ of } 400$$

$$484 + 200 - ? = 120$$

$$564 = ?$$

S33. Ans.(d)

Sol.

$$\sqrt{(32.85 \times 19.98) - (7.22 \times 4.91)} + 65.12\% \text{ of } 1000.045 = ?$$

$$\sqrt{(33 \times 20) - (7 \times 5)} + 65\% \text{ of } 1000 = ?$$

$$25 + 650 = ?$$

$$675 = ?$$

S34. Ans.(b)

Sol.

$$90.09\% \text{ of } \frac{4}{9} \text{ of } 179.97 + 8.202 = ? \times 7.99$$

$$90\% \text{ of } \frac{4}{9} \text{ of } 180 + 8 = ? \times 8$$

$$80 = ? \times 8$$

$$10 = ?$$

S35. Ans.(a)

Sol.

$$\sqrt[3]{1727.83} + 40.28\% \text{ of } 299.95 = \frac{?}{4}$$

$$\sqrt[3]{1728} + 40\% \text{ of } 300 = \frac{?}{4}$$

$$12 + 120 = \frac{?}{4}$$

$$528 = ?$$

S36. Ans.(d)

Sol.

$$\sqrt{?} - 1331 + 1444 = 144$$

$$\sqrt{?} = 144 - 113$$

$$? = 961$$

S37. Ans.(b)

Sol.

$$\frac{120}{100} \times 175 - ? = 1124 - 1089$$

$$210 - ? = 35$$

$$? = 175$$

S38. Ans.(d)

Sol.

$$\sqrt[3]{1331} + ? + \sqrt[5]{243} = \sqrt[2]{361}$$

$$11 + ? + 3 = 19$$

$$? = 19 - 14$$

$$? = 5$$

S39. Ans.(b)

Sol.

$$\frac{168.98}{12.97} \text{ of } 49.86 = ? - 32.09\% \text{ of } 799.95$$

$$\frac{169}{13} \text{ of } 50 = ? - 32\% \text{ of } 800$$

$$13 \times 50 = ? - 256$$

$$650 + 256 = ?$$

$$? = 906$$

S40. Ans.(a)

Sol.

$$39.88\% \text{ of } 819.97 + 25.02\% \text{ of } 240.021 - ? = 59.98\% \text{ of } 500.12$$

$$40\% \text{ of } 820 + 25\% \text{ of } 240 - ? = 60\% \text{ of } 500$$

$$328 + 60 - ? = 300$$

$$? = 88$$

S41. Ans.(e)

Sol.

I. $x^2 + x - 12 = 0$

$$x^2 + 4x - 3x - 12 = 0$$

$$(x + 4)(x - 3) = 0$$

$$x = -4, 3$$

II. $y^2 - 9y + 14 = 0$

$$y^2 - 7y - 2y + 14 = 0$$

$$(y - 7)(y - 2) = 0$$

$$y = 2, 7$$

no relation can be established between x & y.

S42. Ans.(c)

Sol.

I. $6x^2 + 5x + 1 = 0$

$$6x^2 + 3x + 2x + 1 = 0$$

$$(3x + 1)(2x + 1) = 0$$

$$x = \frac{-1}{3}, \frac{-1}{2}$$

II. $4y^2 - 15y = 4$

$$4y^2 - 15y - 4 = 0$$

$$4y^2 - 16y + y - 4 = 0$$

$$(4y + 1)(y - 4) = 0$$

$$y = \frac{-1}{4}, 4$$

$$x < y$$

S43. Ans.(e)

Sol.

$$\begin{aligned} \text{I. } 3x^2 + x - 2 &= 0 \\ 3x^2 + 3x - 2x - 2 &= 0 \\ (3x - 2)(x + 1) &= 0 \end{aligned}$$

$$x = -1, \frac{2}{3}$$

$$\begin{aligned} \text{II. } 12y^2 + 7y + 1 &= 0 \\ 12y^2 + 3y + 4y + 1 &= 0 \\ 3y(4y + 1) + 1(4y + 1) &= 0 \\ (3y + 1)(4y + 1) &= 0 \end{aligned}$$

$$y = \frac{-1}{3}, \frac{-1}{4}$$

No relation can be established between x and y

S44. Ans.(b)

Sol.

$$\begin{aligned} \text{I. } x^2 - 11x + 30 &= 0 \\ x^2 - 5x - 6x - 30 &= 0 \\ (x - 6)(x - 5) &= 0 \end{aligned}$$

$$\Rightarrow x = 6, 5$$

$$\begin{aligned} \text{II. } y^2 - 8y + 15 &= 0 \\ y^2 - 3y - 5y + 15 &= 0 \\ y(y - 3) - 5(y - 3) &= 0 \\ (y - 3)(y - 5) &= 0 \end{aligned}$$

$$\Rightarrow y = 3, 5$$

So, $x \geq y$

S45. Ans.(b)

Sol.

$$\begin{aligned} \text{I. } 20x^2 - 17x + 3 &= 0 \\ 20x^2 - 12x - 5x + 3 &= 0 \\ 4x(5x - 3) - 1(5x - 3) &= 0 \\ (5x - 3)(4x - 1) &= 0 \end{aligned}$$

$$\Rightarrow x = \frac{3}{5}, \frac{1}{4}$$

$$\begin{aligned} \text{II. } 56y^2 + 2y - 4 &= 0 \\ 56y^2 + 16y - 14y - 4 &= 0 \\ 4y(14y + 4) - 1(14y + 4) &= 0 \\ (14y + 4)(4y - 1) &= 0 \end{aligned}$$

$$\Rightarrow y = -\frac{4}{14}, \frac{1}{4}$$

$= x \geq y$

S46. Ans.(e)

Sol.

$$\begin{aligned} \text{I. } x^2 - 3x - 88 &= 0 \\ x^2 - 11x + 8x - 88 &= 0 \\ x(x - 11) + 8(x - 11) &= 0 \\ (x + 8)(x - 11) &= 0 \end{aligned}$$

$$x = -8, 11$$

$$\begin{aligned} \text{II. } y^2 + 8y - 48 &= 0 \\ y^2 + 12y - 4y - 48 &= 0 \\ y(y + 12) - 4(y + 12) &= 0 \\ (y - 4)(y + 12) &= 0 \end{aligned}$$

$$y = 4, -12$$

So, no relation can be established between x and y

S47. Ans.(e)

Sol.

$$\begin{aligned} \text{I. } 2x^2 + 21x + 10 &= 0 \\ 2x^2 + 20x + x + 10 &= 0 \\ 2x(x + 10) + (x + 10) &= 0 \\ (2x + 1)(x + 10) &= 0 \end{aligned}$$

$$x = -\frac{1}{2}, -10$$

$$\begin{aligned} \text{II. } 3y^2 + 13y + 14 &= 0 \\ 3y^2 + 6y + 7y + 14 &= 0 \\ 3y(y + 2) + 7(y + 2) &= 0 \\ (3y + 7)(y + 2) &= 0 \end{aligned}$$

$$y = -\frac{7}{3}, -2$$

So, no relation

S48. Ans.(c)

Sol.

$$\begin{aligned} \text{I. } 2x^2 - 5x - 7 &= 0 \\ \Rightarrow 2x^2 - 7x + 2x - 7 &= 0 \\ \Rightarrow x(2x - 7) + 1(2x - 7) &= 0 \\ \Rightarrow (2x - 7)(x + 1) &= 0 \end{aligned}$$

$$\Rightarrow x = 3.5, -1$$

$$\begin{aligned} \text{II. } 2y^2 - 16y + 32 &= 0 \\ \Rightarrow y(y - 4) - 4(y - 4) &= 0 \end{aligned}$$

$$\Rightarrow y = 4$$

$$\Rightarrow y > x$$

S49. Ans.(a)

Sol.

$$\begin{aligned} \text{I. } x^2 - 18x + 81 &= 0 \\ x^2 - 9x - 9x + 81 &= 0 \\ x(x - 9) - 9(x - 9) &= 0 \\ (x - 9)(x - 9) &= 0 \end{aligned}$$

$$x = 9, 9$$

$$\begin{aligned} \text{II. } y^2 + 6 &= 5y \\ y^2 - 5y + 6 &= 0 \\ y^2 - 2y - 3y + 6 &= 0 \\ y(y - 2) - 3(y - 2) &= 0 \end{aligned}$$

$$(y - 3)(y - 2) = 0$$

$$y = 3, 2$$

So, $x > y$

S50. Ans.(a)

Sol.

$$\begin{aligned} \text{I. } 2x^2 - 9x + 10 &= 0 \\ \Rightarrow 2x^2 - 5x - 4x + 10 &= 0 \\ \Rightarrow (2x - 5)(x - 2) &= 0 \\ \Rightarrow x = 2.5, 2 \end{aligned}$$

$$\begin{aligned} \text{II. } 3y^2 - 7y + 4 &= 0 \\ \Rightarrow 3y^2 - 3y - 4y + 4 &= 0 \\ \Rightarrow (3y - 4)(y - 1) &= 0 \end{aligned}$$

$$\Rightarrow y = \frac{4}{3}, 1$$

$x > y$

S51. Ans.(d)

Sol.

Let number of books A purchased by P be x
And number of books A purchased by Q = x-50
ATQ.

$$x + x - 50 = \frac{20}{100} \times 700$$

$$2x = 190$$

$$x = 95$$

Number of books A purchased by Q = 95 - 50 = 45

S52. Ans.(e)

Sol.

Req. ratio = (20 + 18)% : (22 + 15)% = 38 : 37

S53. Ans.(d)

Sol.

$$\text{Req. angle} = \frac{25}{100} \times 360 = 90^\circ$$

S54. Ans.(b)

Sol.

$$\text{Req. difference} = ((15 + 25) - (18 + 22)) \times \frac{700}{100} = 0$$

S55. Ans.(a)

Sol.

$$\text{Number of books F sold} = 20 \times \frac{700}{100} \times \frac{125}{100} = 175$$

$$\text{Number of books E sold} = 15 \times \frac{700}{100} = 105$$

$$\text{Req. \%} = \frac{(175-105)}{175} \times 100 = 40\%$$

S56. Ans.(e)

Sol.

$$\text{Number of people who are going to watch movies in city B} = 2400 \times \frac{32}{100} = 768$$

$$\text{Number of people who are going to watch movies in city F} = 768 \times \frac{125}{100} = 960$$

$$\text{Number of people who are going to watch movies in city D} = 2400 \times \frac{8}{100} = 192$$

$$\text{Required ratio} = 192 : 960 = 1 : 5$$

S57. Ans.(d)

Sol.

$$\text{Number of people who are going to watch movies in city A} = 2400 \times \frac{15}{100} = 360$$

$$\text{Number of people who are going to zoo in city A} = 360 \times \frac{150}{100} = 540$$

$$\text{Total number of people who are going to zoo and watch movies in city A} = 360 + 540 = 900$$

S58. Ans.(e)

Sol.

$$\text{Number of males who are going to watch movies in city E} = 2400 \times \frac{25}{100} \times \frac{7}{12} = 350$$

$$\text{Number of females who are going to watch movies in city E} = 2400 \times \frac{25}{100} \times \frac{5}{12} = 250$$

$$\text{Number of males who are going to watch movies in city C} = 2400 \times \frac{20}{100} \times \frac{7}{15} = 224$$

$$\text{Number of females who are going to watch movies in city C} = 2400 \times \frac{20}{100} \times \frac{8}{15} = 256$$

$$\text{Total number of males} = 350 + 224 = 574$$

$$\text{Total number of females} = 250 + 256 = 506$$

$$\text{Required difference} = 574 - 506 = 68$$

S59. Ans.(a)

Sol.

$$\text{Number of people who are going to watch movies in city A} = 2400 \times \frac{15}{100} = 360$$

$$\text{Number of people who are going to watch movies in city C} = 2400 \times \frac{20}{100} = 480$$

$$\text{Number of people who are going to watch movies in city E} = 2400 \times \frac{25}{100} = 600$$

$$\text{Required average} = \frac{360 + 480 + 600}{3} = 480$$

S60. Ans.(b)

Sol.

$$\text{Required percentage} = \frac{32-25}{25} \times 100 = 28\%$$

S61. Ans.(d)

Sol.

$$\begin{aligned} \text{No. of students appeared in exam A and D} &= 8500 \times \frac{55}{100} + 5500 \times \frac{50}{100} \\ &= 4675 + 2750 = 7425 \end{aligned}$$

$$\text{No. of student appeared in exam B and E together} = 4500 \times \frac{70}{100} + 6500 \times \frac{60}{100} = 3150 + 3900 = 7050$$

$$\text{Req. \%} = \frac{7425-7050}{7050} \times 100 = 5.31\% \approx 5\%$$

S62. Ans.(e)

Sol.

$$\begin{aligned} \text{Req. ratio} &= 4500 \times \frac{70}{100} : 7000 \times \frac{85}{100} \\ &= 3150 : 5950 \\ &= 9 : 17 \end{aligned}$$

S63. Ans.(d)

Sol.

$$\begin{aligned} \text{Req. average} &= \frac{7000 \times \frac{85}{100} + 5500 \times \frac{50}{100} + 6500 \times \frac{60}{100}}{3} \\ &= \frac{5950 + 2750 + 3900}{3} = \frac{12600}{3} = 4200 \end{aligned}$$

S64. Ans.(a)

Sol.

$$\text{No. of student appeared in exam D} = 5500 \times \frac{50}{100} = 2750$$

$$\text{No. of boys appeared in exam D} = 2750 \times \frac{6}{11} = 1500$$

$$\text{No. of girls appeared in exam D} = 2750 - 1500 = 1250$$

$$\text{No. of student appeared in exam B} = 4500 \times \frac{70}{100} = 3150$$

$$\text{No. of boys appeared in exam D} = 3150 \times \frac{4}{7} = 1800$$

$$\text{No. of girls appeared in exam D} = 3150 - 1800 = 1350$$

$$\text{Req. difference} = (1500 + 1800) - (1250 + 1350) \\ = 3300 - 2600 = 700$$

S65. Ans.(b)

Sol.

$$\text{Req. sum} = 8500 + 4500 + 7000 + 5500 + 6500 = 32000$$

S66. Ans.(e)

Sol.

$$\text{Required difference} = 3600 \times \frac{3}{12} = \text{Rs } 900$$

S67. Ans.(c)

Sol. Let monthly expenditure of Ayush and that of Arun be Rs 500x and Rs 300x respectively.

ATQ

$$50x - 30x = 2000$$

$$x = 100$$

$$\text{Monthly income of Ayush} = \text{Rs } 68,000$$

$$\text{Annual income of Ayush} = \text{Rs } 8,16,000$$

S68. Ans.(d)

Sol. Let monthly expenditure of Ayush and that of Arun be Rs 500x and Rs 300x respectively.

$$\text{Required ratio} = \frac{500x \times 0.54}{300x \times 0.46} = 45:23$$

S69. Ans.(e)

Sol.

$$\text{Monthly income of Ayush} = \text{Rs } 60,000$$

$$\text{Monthly income of Arun} = \text{Rs } 36,000$$

$$\text{Required difference} = 60,000 \times 0.21 - 36,000 \times (0.25) = \text{Rs } 3600$$

S70. Ans.(c)

Sol. Let monthly expenditure of Ayush and that of Arun be Rs 500x and Rs 300x respectively.

$$\text{Monthly expenditure of Rahul} = \text{Rs } 450x$$

$$\text{Required \%} = \frac{450x \times 0.28}{500x \times 0.24} \times 100 = 105\%$$

71. Ans.(a)

Sol.

Total no. of bags sold in February and March together

$$= (800 + 1000 + 1200) + (1250 + 1050 + 900) \\ = 6200$$

$$\text{Total no. of bags sold in May and January} \\ = (900 + 1250 + 750) + (1200 + 900 + 1000) \\ = 6000$$

$$\text{So, required percentage} = \frac{6200}{6000} \times 100 = 103\frac{1}{3}\%$$

S72. Ans.(d)

Sol.

$$\text{Average no. of backpack sold in March and April} = \\ \frac{1}{2} \times (1250 + 850) = 1050$$

$$\text{Average no. of Duffle bag sold in February and March} = \\ \frac{1}{2} \times (1000 + 1050) = 1025$$

$$\text{Required difference} = 1050 - 1025 = 25$$

S73. Ans.(c)

Sol.

$$\text{Total no. of bags sold in June} = 3 \times \frac{5}{4} \times \frac{1}{3} \times (800 + 1000 + 1200) \\ = 3750$$

Let Backpack sold in June be 10x

$$\text{Duffle bag sold in June} = 10x \times \frac{80}{100} = 8x$$

$$\text{Trolley bag sold in June} = 8x \times \frac{7}{8} = 7x$$

$$\text{So, Duffle bag sold in June} = \frac{8x}{25x} \times 3750 = 1200$$

S74. Ans.(e)

Sol.

$$\text{Required percentage} = \frac{1200 - 900}{900} \times 100 \\ = 33\frac{1}{3}\%$$

S75. Ans.(c)

Sol.

$$\text{Required amount} = 850 \times 50 + 1400 \times 40 + 1150 \times 60 \\ = 42500 + 56000 + 69000 \\ = \text{Rs. } 167500$$

S76. Ans.(b)

Sol.

$$\text{Number of boys in school B in 2021} = 360 \times \frac{11}{18} = 220$$

$$\text{Number of girls in school B in 2021} = 360 \times \frac{7}{18} = 140$$

$$\text{Number of boys in school D in 2021} = 280 \times \frac{9}{14} = 180$$

$$\text{Number of girls in school D in 2021} = 280 \times \frac{5}{14} = 100$$

$$\text{Required difference} = (220 + 180) - (140 + 100) = 400 - 240 = 160$$

S77. Ans.(a)

Sol.

$$\text{Required percentage} = \frac{500-440}{440} \times 100 = \frac{60}{440} \times 100 = 13.63 \approx 14\%$$

S78. Ans.(d)

Sol.

$$\begin{aligned} \text{Total number of students in school F in 2022} &= 420 \times \left(1 + \frac{2}{3}\right) = 700 \\ \text{Required sum} &= 700 + 380 = 1080 \end{aligned}$$

S79. Ans.(e)

Sol.

$$\begin{aligned} \text{Total number of students in E and C together in 2022} &= (540 + 420) = 960 \\ \text{Total number of students in B and D in 2021} &= (360 + 280) = 640 \\ \text{Req. ratio} &= 960 : 640 = 3 : 2 \end{aligned}$$

S80. Ans.(b)

Sol.

$$\begin{aligned} \text{Average number of students in A, B \& C in 2022} &= \frac{500+460+540}{3} = 500 \\ \text{Average number of students in 2021 in school D \& E} &= \frac{280+320}{2} = 300 \\ \text{Req. difference} &= 500 - 300 = 200 \end{aligned}$$

S81. Ans.(c)

Sol.

$$\begin{aligned} \text{Let total boys in school A} &= 45x \\ \text{and total boys in school B} &= 52x \\ \text{So, girls in school A} &= \frac{45x}{54} \times 46 \\ &= \frac{5x}{6} \times 46 \\ &= \frac{115x}{3} \\ \text{And girls in school A} &= \frac{52x}{52} \times 48 = 48x \\ \text{So,} \\ 45x + 52x + \frac{115}{3}x + 48x &= 1100 \\ 135x + 156x + 115x + 144x &= 3300 \\ x &= 6 \\ \text{Required total number of girls} \\ &= \frac{115}{3} \times 6 + 48 \times 6 \\ &= 230 + 288 \\ &= 518 \end{aligned}$$

S82. Ans.(d)

Sol.

$$\text{Girls in school A in 2014} = \frac{288}{48} \times 52 = 312$$

$$\begin{aligned} \text{Girls in school B in 2014} &= \frac{264}{44} \times 56 = 336 \\ \text{Required sum} &= 312 + 336 = 648 \end{aligned}$$

S83. Ans.(e)

Sol.

$$\begin{aligned} \text{Let total boys in school A in 2014} &= 4800x \\ \text{So total girls in school B in 2012} &= 4800x \\ \text{Therefore, total boys in school B in 2012} &= 5200x \\ \text{Girls in school A in 2014} &= \frac{4800}{48}x \times 5200 = 5200x \\ \text{Required \%} &= \frac{5200x}{5200x} \times 100 = 100\% \end{aligned}$$

S84. Ans.(e)

Sol.

$$\begin{aligned} \text{Let girls in school B in 2016} &= 50x \\ \text{So, girls in school A in 2016} &= 50x \times \left(100\% - 16\frac{4}{5}\%\right) \\ &= 50x \left(\frac{500-84}{5 \times 100}\right) \\ &= \frac{208}{5}x \\ \text{Boys in school A in 2016} &= \frac{208x}{5 \times 52} \times 48 \\ &= \frac{192}{5}x \\ \text{Boys in school B in 2016} &= 50x \\ \text{Required ratio} &= \frac{192}{5 \times 50} = \frac{96}{125} \end{aligned}$$

S85. Ans.(b)

Sol.

$$\begin{aligned} \text{Boys in school A in 2015} &= 700 \times \frac{62}{100} = 434 \\ \text{Boys in school B in 2013} &= 400 \times \frac{64}{100} = 256 \\ \text{Required average} &= \frac{434+256}{2} = 345 \end{aligned}$$

S86. Ans.(d)

Sol.

$$\begin{aligned} \text{Number of type B masks produced on Monday} &= 420 \times \frac{50}{100} = 210 \\ \text{Number of type B masks produced on Friday} &= 300 \times \frac{50}{100} = 150 \\ \text{Req. difference} &= 210 - 150 = 60 \end{aligned}$$

S87. Ans.(c)

Sol.

$$\begin{aligned} \text{Req. ratio} &= 360 \times \frac{45}{100} : 500 \times \frac{60}{100} \\ &= 27 : 50 \end{aligned}$$

S88. Ans.(e)

Sol.

$$\begin{aligned} \text{Number of type B masks produced on Thursday} &= 500 \times \frac{60}{100} = 300 \end{aligned}$$

Number of type A masks produced on Friday =
 $300 \times \frac{50}{100} = 150$
 Req. ratio = $\frac{300-150}{150} \times 100 = 100\%$

S89. Ans.(a)

Sol.

Number of type C masks produced on Tuesday =
 $420 \times \frac{50}{100} \times \frac{120}{100} = 252$
 Req. average = $\frac{252+360}{3} = 204$

S90. Ans.(b)

Sol.

Type B masks produced on Saturday = $500 \times \frac{60}{100} \times \frac{60}{100} = 180$
 Type A masks produced on Wednesday = $480 \times \frac{60}{100} = 288$
 Req. % = $\frac{288}{180} \times 100 = 160\%$

S91. Ans.(a)

Sol.

Number of non-recovered patient from the state UP and Telangana
 = $9000 \times \frac{100-35}{100} + 7500 \times \frac{100-45}{100} = 5850 + 4125 = 9975$
 Number of recovered patient in Delhi and MP
 = $5500 \times \frac{25}{100} + 3500 \times \frac{70}{100} = 1375 + 2450 = 3825$
 Required difference = $9975 - 3825 = 6150$

S92. Ans.(b)

Sol.

Non-recovered patients from Bihar = $5500 \times \frac{(100-80)}{100} = 1100$
 Number of hospitalized patient from Delhi = 5500
 Number of hospitalized patients from Telangana = 7500
 Required ratio = $\frac{40}{100} \times 1100 + 5500 : 7500 = 440 + 5500 : 7500 = 99 : 125$

S93. Ans.(c)

sol.

Number of hospitalized patients in Maharashtra = $7500 + 5500 = 13000$
 Number of recovered patients in Maharashtra = $\frac{25}{100} \times 13000 = 3250$
 Required percentage = $\frac{3250}{9000} \times 100 = 36.11\% \approx 36\%$

S94. Ans.(d)

Sol.

Patients recovered from the state Delhi = $\frac{25}{100} \times 5500 = 1375$
 Patients recovered from the state UP = $\frac{35}{100} \times 9000 = 3150$
 Patients recovered from the state Telangana = $\frac{45}{100} \times 7500 = 3375$
 Req. average = $\frac{1375+3150+3375}{3} = \frac{7900}{3}$

S95. Ans.(e)

Sol.

Patient hospitalized in west Bengal = $(3+1) \times 9000 = 36000$
 Patients died = $36000 \times \frac{20}{100} = 7200$
 Patients did not get the beds = $(36000 - 7200) \times \frac{25}{100} = 7200$

Sol. (96-100)

For seller A

Total number of earphones sold = 250
 Number of Boat earphones sold = $250 \times \frac{40}{100} = 100$
 Number of Ubon earphones sold = $250 - 100 = 150$
 Similarly,

Seller	Total number of earphones sold	Number of Boat earphones sold	Number of Ubon earphones sold
A	250	100	150
B	300	165	135
C	280	126	154
D	340	170	170
E	380	228	152

S96. Ans.(b)

Sol.

Required ratio = $(135 + 150) : (100 + 165) = 57 : 53$

S97. Ans.(a)

Sol.

Total number of JBL earphones sold by A = $170 \times \frac{140}{100} = 238$
 Required difference = $238 - 154 = 84$

S98. Ans.(d)

Sol.

Average number of Ubon earphones sold by A & B = $\frac{(150+170)}{2} = 160$
 Required difference = $228 - 160 = 68$

S99. Ans.(e)

Sol.

$$\text{Required percentage} = \frac{228}{150} \times 100 = 152\%$$

S100. Ans.(d)

Sol.

Total number of Ubon earphones sold by B & D together =
135 + 170 = 305

Total number of Boat earphones sold by D & E together =
170 + 228 = 398

$$\text{Required difference} = 398 - 305 = 93$$

S101. Ans.(b)

Sol.

$$\text{Number of boys in school B in 2021} = 360 \times \frac{11}{18} = 220$$

$$\text{Number of girls in school B in 2021} = 360 \times \frac{7}{18} = 140$$

$$\text{Number of boys in school D in 2021} = 280 \times \frac{9}{14} = 180$$

$$\text{Number of girls in school D in 2021} = 280 \times \frac{5}{14} = 100$$

$$\text{Required difference} = (220 + 180) - (140 + 100) = 400 - 240 = 160$$

S102. Ans.(a)

Sol.

$$\text{Required percentage} = \frac{500-440}{440} \times 100 = \frac{60}{440} \times 100 = 13.63$$

$$\approx 14\%$$

S103. Ans.(d)

Sol.

$$\text{Total number of students in in school F in 2022} = 420 \times \left(1 + \frac{2}{3}\right) = 700$$

$$\text{Required sum} = 700 + 380 = 1080$$

S104. Ans.(e)

Sol.

Total number of students in E and C together in 2022 =
(540 + 420) = 960

Total number of students in B and D in 2021 = (360 +
280) = 640

$$\text{Req. ratio} = 960 : 640 = 3 : 2$$

S105. Ans.(b)

Sol.

$$\text{Average number of students in A, B & C in 2022} = \frac{500+460+540}{3} = 500$$

$$\text{Average number of students in 2021 in school D & E} = \frac{280+320}{2} = 300$$

$$\text{Req. difference} = 500 - 300 = 200$$

S106. Ans.(b)

Sol.

$$\text{Number of 5-star AC sold by D} = 4000 \times \frac{100-60}{100} = 1600$$

$$\text{Number of 3-star AC sold by E} = 3500 \times \frac{45}{100} = 1575$$

$$\text{Req. ratio} = 1600 : 1575 = 64 : 63$$

S107. Ans.(a)

Sol.

$$\text{Number of 5-star AC sold by B} = 3000 \times \frac{100-35}{100} = 1950$$

$$\text{Number of 5-star AC sold by C} = 1500 \times \frac{100-50}{100} = 750$$

$$\text{Number of 5-star split AC sold by B} = 1950 \times \frac{8}{15} = 1040$$

$$\text{Number of 5-star window AC sold by B} = 1950 \times \frac{7}{15} = 910$$

$$\text{Number of 5-star split AC sold by C} = 750 \times \frac{3}{5} = 450$$

$$\text{Number of 5-star window AC sold by C} = 750 \times \frac{2}{5} = 300$$

$$\text{Number of 5-star split AC sold by B and C together} = 1040+450=1490$$

$$\text{Number of 5-star window AC sold by B and C together} = 910+300=1210$$

$$\text{Required difference} = 1490 - 1210 = 280$$

S108. Ans.(a)

Sol.

$$\text{Total number of 5-star AC sold by C} = 1500 \times \frac{50}{100} = 750$$

$$\text{Total number of 5-star AC sold by D} = 4000 \times \frac{40}{100} = 1600$$

$$\text{Required percentage} = \frac{1600-750}{750} \times 100 = 113\frac{1}{3}\%$$

S109. Ans.(d)

Sol.

$$\text{Total number of 5-star AC sold by F} = 1500 \times \frac{50}{100} \times \frac{120}{100} = 900$$

$$\text{Number of 3-star AC sold by F} = 900 \times \frac{9}{15} = 540$$

$$\text{Total (5-star + 3-star) AC's sold by F} = 900 + 540 = 1440$$

S110. Ans.(e)

Sol.

$$\text{Total number of 5-star AC sold by B} = 3000 \times \frac{(100-35)}{100} = 1950$$

total number of AC sold by A = 2500

$$\text{Required percentage} = \frac{2500-1950}{2500} \times 100 = 22\%$$

Sol. (111-115)

Number of students joined gym from college N = 80

Number of students joined yoga from college M =

$$80 \times \frac{55}{100} = 44$$

Total number of students from college M = 149

Number of students joined gym from college M = $149 - 44 = 105$
 Number of students joined yoga from college N = $105 \times \frac{5}{7} = 75$

College	Joined gym	Joined yoga	Total
M	105	44	149
N	80	75	155
Total	185	119	304

S111. Ans.(d)

Sol.

$$\text{Req. percentage} = \frac{105-75}{75} \times 100 = 40\%$$

S112. Ans.(e)

Sol.

$$\text{Req. ratio} = 80 : 44 = 20 : 11$$

S113. Ans.(d)

Sol.

$$\text{Number of boys joined gym from college N} = 80 \times \frac{5}{8} = 50$$

$$\text{Number of girls joined gym from college N} = 80 \times \frac{3}{8} = 30$$

$$\text{Number of boys joined gym from college M} = 105 \times \frac{8}{15} = 56$$

$$\text{Number of girls joined gym from college M} = 105 \times \frac{7}{15} = 49$$

$$\text{Req. difference} = (50 + 56) - (30 + 49) = 106 - 79 = 27$$

S114. Ans.(e)

Sol.

Total number of students who joined gym = 185

Total number of students who joined yoga = 119

$$\text{Req. difference} = 185 - 119 = 66$$

S115. Ans.(d)

Sol.

$$\text{Number of students joined yoga from college P} = 44 \times \frac{125}{100} = 55$$

$$\text{Req. \%} = \frac{75}{55} \times 100 = 136.36\% \approx 136\%$$

Sol. (116-120)

For seller P

$$\text{Total number of bulbs} = 1450 \times \frac{20}{100} = 290$$

$$\text{Number of LED bulbs sold} = \frac{7}{10} \times 290 = 203$$

$$\text{Number of Halogen bulbs sold} = 290 - 203 = 87$$

Similarly,

Seller	Total number of bulbs sold	LED bulbs sold	Halogen bulbs sold
P	290	203	87
Q	232	87	145
R	406	261	145
S	174	58	116
T	348	145	203

S116. Ans.(a)

Sol.

$$\text{Req. ratio} = 145 : 145 = 1 : 1$$

S117. Ans.(b)

Sol.

$$\text{Req. \%} = \frac{87}{87} \times 100 = 100\%$$

S118. Ans.(d)

Sol.

$$\text{Req. difference} = (203 + 145) - (145 + 116) = 87$$

S119. Ans.(d)

Sol.

$$\text{Number of bulbs sold by B} = 290 \times \frac{140}{100} = 406$$

$$\text{Number of Halogen bulbs sold by B} = 145 \times \frac{8}{5} = 232$$

$$\text{Number of LED bulbs sold by seller B} = 406 - 232 = 174$$

S120. Ans.(d)

Sol.

$$\text{Number of CFL bulbs sold by T} = 261 \times \frac{21}{29} = 189$$

$$\text{Req. percentage} = \frac{189-145}{145} \times 100 = 30.34\% \approx 30\%$$

S121. Ans.(b)

Sol.

Quantity I.

ATQ.

$$24 \times 6 \times 10 = 15 \times 8 \times \text{Day}$$

$$12 = \text{day}$$

Quantity II.

$$\text{Time taken by B and C together to complete whole work} = \frac{16 \times 100}{40} = 40 \text{ days}$$

$$\text{Let total work} = (\text{L.C.M. of 40 and 72}) = 360 \text{ units}$$

$$\text{Efficiency of B and C} = \frac{360}{40} = 9 \text{ unit/day}$$

$$\text{Efficiency of C} = \frac{360}{72} = 5 \text{ unit/day}$$

$$\text{Efficiency of B} = 9 - 5 = 4 \text{ unit/day}$$

$$\text{Req. days} = \frac{360}{4} = 90 \text{ days}$$

So, Quantity I < Quantity II

S122. Ans.(b)

Sol.

Quantity I. $2x^2 + 11x + 9 = 0$

$$2x^2 + 2x + 9x + 9 = 0$$

$$2x(x + 1) + 9(x + 1) = 0$$

$$x = -1, -\frac{9}{2}$$

Quantity II. $y^2 - 11y + 30 = 0$

$$y^2 - 6y - 5y + 30 = 0$$

$$y(y - 6) - 5(y - 6) = 0$$

$$y = +5, +6$$

So, Quantity I < Quantity II

S123. Ans.(a)

Sol.

Quantity I.

Cost price of flower pot = $\frac{936}{120} \times 100 = Rs. 780$

Quantity II.

Let cost price be Rs.100x

Marked price = Rs.125x

Selling price = $125x \times \frac{90}{100} = Rs. 112.5x$

ATQ,

$$112.5x - 100x = 50$$

$$12.5x = 50$$

$$x = 4$$

Marked price = Rs.500

So, Quantity I > Quantity II

S124. Ans.(a)

Sol.

Let monthly salary of A = Rs.100x

Monthly salary of B = Rs.120x

ATQ,

$$120x + 100x = 44000$$

$$220x = 44000$$

$$x = 200$$

Salary of A = Rs.20000

Salary of B = Rs. (44000 - 20000) = Rs. 24000

Quantity I.

Monthly expenditure of B = $\frac{100-20}{100} \times 24000 = Rs. 19200$

Quantity II.

Monthly expenditure of A = $\frac{100-40}{100} \times 20000 = Rs. 12000$

So, Quantity I > Quantity II

S125. Ans.(a)

Sol.

Profit sharing ratio of U, V and W =

$$= 4000 \times 12 : 4500 \times 12 : 5000 \times 8$$

$$= 24 : 27 : 20$$

Quantity I. = $\frac{13500}{27} \times 24 = Rs. 12000$

Quantity II. = $\frac{13500}{27} \times 20 = Rs. 10000$

So, Quantity I > Quantity II

S126. Ans.(b)

Sol.

Let the cost price be Rs.100x

Selling price = $100x \times \frac{128}{100} = Rs. 128x$

Marked price = $\frac{128x}{80} \times 100 = Rs. 160x$

ATQ,

$$160x - 128x = 192$$

$$32x = 192$$

$$x = 6$$

Cost price = $100x = Rs.600$

S127. Ans.(e)

Sol.

Amount invested in C.I. = Rs. x

Amount invested in S.I. = Rs. (40000 - x)

ATQ,

$$\frac{15 \times 2}{100} \times (40000 - x) - x \left(\left(1 + \frac{20}{100} \right)^2 - 1 \right) = 900$$

$$(1200000 - 30x) - 44x = 90000$$

$$74x = 1110000$$

$$x = 15000$$

Amount invested in S.I. = Rs. (40000 - 15000) = Rs.25000

S128. Ans.(a)

Sol.

Let total mixture in vessel be Q liters.

Initial quantity of water in vessel = 0.25Q

And, quantity of acid in vessel = 0.75Q

ATQ

$$\frac{0.25Q + 40 - 40}{0.75Q} = \frac{40}{60}$$

$$15Q + 2400 = 30Q$$

$$15Q = 2400$$

$$Q = 160 \text{ l}$$

Quantity of acid in the vessel = $160 \times \frac{75}{100} = 120 \text{ l}$

S129. Ans.(e)

Sol.

Req. probability = $\frac{4c_1 \times 12c_1}{16c_2} = \frac{4 \times 12}{8 \times 15} = \frac{2}{5}$

S130. Ans.(b)

Sol.

Let speed of stream be 'y' kmph.

ATQ,

$$D = 20 \times (50 + y) \dots \dots \dots (I)$$

And also,

$$D = 80 \times (50 - y) \dots \dots \dots (II)$$

From (I) and (II),

$$20 \times (50 + y) = 80 \times (50 - y)$$

$$50 + y = 200 - 4y$$

$$y = \frac{150}{5} = 30$$

So, required distance, $D = 80 \times (50 - 30) = 1600 \text{ km}$

S131. Ans.(d)

Sol.

Total work = 80 units (LCM of days taken by A, B & C)

$$\text{Efficiency of P} = \frac{80}{20} = 4 \text{ units/day}$$

$$\text{Efficiency of Q} = \frac{80}{40} = 2 \text{ units/day}$$

$$\text{Efficiency of R} = \frac{80}{80} = 1 \text{ unit/day}$$

Work done by R in 2 days = $1 \times 2 = 2$ units

Work done by Q in 4 days = $2 \times 4 = 8$ units

Work done by P = $80 - (2+8) = 70$ units

$$\text{Percentage of work done by P} = \frac{70}{80} \times 100 = 87.5\%$$

S132. Ans.(c)

Sol.

Ratio of share of P to R = 21: 10

Ratio of share of R to Q = 10: 19

So, ratio of share of P, Q and R = 21: 19: 10

$$\text{Required amount} = \frac{19}{50} \times 12500 = \text{Rs. } 4750$$

S133. Ans.(d)

Sol.

Let cost price of an article be Rs. $100x$.

$$\text{So, marked price of an article} = \frac{100x \times 10}{8} = \text{Rs. } 125x$$

ATQ,

$$125x \times \frac{88}{100} - 125x \times \frac{80}{100} = 48$$

$$125x \times \frac{8}{100} = 48$$

$$x = \frac{24}{5}$$

Required amount = $100x = \text{Rs. } 480$

S134. Ans.(a)

Sol.

Let first number and second number be 'x' and 'y' respectively

ATQ,

$$40 \times \frac{x}{100} = 30 \times \frac{y}{100}$$

$$4x = 3y \dots \dots \dots (i)$$

Also,

$$\frac{x+y}{2} = x + 30$$

$$y - x = 60 \dots \dots \dots (ii)$$

From (i) and (ii)

$$y = 240$$

75% of second number = 180

S135. Ans.(a)

Sol.

Let total quantity of each of vessel - A & B be $20x$ liters.

ATQ,

$$\left(20x \times \frac{2}{5}\right) + \left(20x \times \frac{3}{4}\right) = 92$$

$$8x + 15x = 92$$

$$x = 4$$

So, required quantity = $20x = 80$ liters

S136. Ans.(d)

Sol.

Let the cost price of the article be Rs. $100x$

Marked price = Rs. $140x$

$$\text{Selling price} = 140x \times \frac{70}{100} = \text{Rs. } 98x$$

ATQ,

$$140x - 98x = 84$$

$$x = 2$$

Cost price of the article = Rs. 200

S137. Ans.(e)

Sol.

ATQ,

$$180 \times \frac{7}{12} + 15 = \frac{6}{5}$$

$$180 \times \frac{5}{12} + Y = \frac{6}{5}$$

$$\frac{120}{75 + Y} = \frac{6}{5}$$

$$100 - 75 = Y$$

$$25 = Y$$

S138. Ans.(d)

Sol.

Let efficiency of Q be $4x$ units/day

$$\text{Efficiency of P} = 4x \times \frac{125}{100} = 5x \text{ units/day}$$

$$\text{Efficiency of R} = \frac{3}{5} \times 5x = 3x \text{ units/day}$$

$$\text{Total work} = 12 \times (5x + 3x) = 96x \text{ units}$$

$$\text{Req. days} = \frac{96x}{12x} = 8 \text{ days}$$

S139. Ans.(b)

Sol.

Profit sharing ratio of X, Y & Z =

$$= 2400 \times 4 + 2400 \times \frac{75}{100} \times 8 : 3000 \times 4 + 3000 \times \frac{80}{100} \times 8 : 2600 \times 12$$

$$= 10 : 13 : 13$$

$$\text{Profit share of X} = 1950 \times \frac{10}{13} = \text{Rs. } 1500$$

S140. Ans.(a)

Sol.

Let present ages of A and B be $5x$ and $4x$ respectively.

Present age of C = $5x \times \frac{140}{100} = 7x$

ATQ,

$$7x + 5x + 4x = 16 \times 3$$

$$16x = 48$$

$$x = 3$$

Age of B six years ago = $3 \times 4 - 6 = 6 \text{ years}$

S141. Ans.(a)

Sol.

Let radius of circle be 'r' cm

$$2 \times \frac{22}{7} \times r = 44$$

$$r = 7 \text{ cm}$$

Radius of the cylinder = $7 \times 2 \times \frac{500}{700} = 10 \text{ cm}$

Height of cylinder = 14 cm

Required volume = $\frac{22}{7} \times 10 \times 10 \times 14 = 4400 \text{ cm}^3$

S142. Ans.(b)

Sol.

Profit sharing ratio of P and Q

$$= [5400 \times 4 + (5400 - 400) \times 8] : 4500 \times 12$$

$$= 154 : 135$$

Total profit = $\frac{9240}{154} \times (154 + 135) = \text{Rs. } 17340$

S143. Ans.(d)

Sol.

Age of Y after four years = $28 + 4 = 32 \text{ years}$

Age of X after four years = $32 \times \frac{7}{8} = 28 \text{ years}$

Present age of Z = $(28 - 4) \times \frac{125}{100} = 30 \text{ years}$

Age of Z six year ago = $30 - 6 = 24 \text{ years}$

S144. Ans.(e)

Sol.

Let total capacity of the tank (L.C.M. of 20, 25 & 50) = 100 units

Efficiency of pipe P and Q = $\frac{100}{20} = 5 \text{ units/min}$

Efficiency of pipe P, Q and R = $\frac{100}{25} = 4 \text{ units/min}$

Efficiency of pipe Q and R = $\frac{100}{50} = 2 \text{ units/min}$

Efficiency of pipe P = $4 - 2 = 2 \text{ units/min}$

Required time = $\frac{100}{2} = 50 \text{ min}$

S145. Ans.(b)

Sol.

Let the length of train be 'l' meters

ATQ,

$$\frac{l}{(24 + 84) \times \frac{5}{18}} = 12$$

$$l = 30 \times 12 = 360 \text{ m}$$

S146. Ans.(c)

Sol.

Let the Total work = 60 units (LCM of 15, 12 & 20)

Efficiency of A = $\frac{60}{15} = 4 \text{ units/day}$

Efficiency of B = $\frac{60}{12} = 5 \text{ units/day}$

Efficiency of C = $\frac{60}{20} = -3 \text{ units/day}$ (C destroy the work, so we consider its efficiency negative)

When all three working for alternate days starting with A and ending with C

A,	B,	C
----	----	---

+4	+5	-3 = 6 units work in three days
----	----	---------------------------------

So, 54 units of work in = $3 \times 9 = 27 \text{ days}$

Remaining work complete by A & B in $\frac{4}{4} + \frac{6-4}{5} = 1\frac{2}{5} \text{ days}$

So, total required time = $27 + 1\frac{2}{5} = 28\frac{2}{5} \text{ days}$

S147. Ans.(e)

Sol.

Let amount investing by S and T be 8x and 5x respectively.

Profit sharing ratio of S to that of T

$$= 8 : 5$$

Profit share of S = $2975 \times \frac{8}{5} = \text{Rs. } 4760$

S148. Ans.(b)

Sol.

Quantity of kerosene purchased in 1st year = $\frac{2800}{5} = 560 \text{ liters}$

Quantity of kerosene purchased in 2nd year = $\frac{2800}{8} = 350 \text{ liters}$

Quantity of kerosene purchased in 3rd year = $\frac{2800}{10} = 280 \text{ liters}$

Total quantity kerosene purchased in given all year = $560 + 350 + 280 = 1190 \text{ liters}$

Total amount spent on kerosene in given all year = $2800 \times 3 = \text{Rs. } 8400$

Req. average = $\frac{8400}{1190} = 7.05 \approx \text{Rs. } 7$

S149. Ans.(b)

Sol.

Side of square = $\sqrt{324} = 18 \text{ cm}$

Perimeter of square = $4 \times 18 = 72 \text{ cm}$

Let length and breadth of rectangle be 7x and 5x respectively.

ATQ,

$$2(7x + 5x) = 72$$

$$12x = 36$$

$$x = 3$$

Area of rectangle = $(7 \times 3) \times (5 \times 3) = 21 \times 15 = 315 \text{ cm}^2$

S150. Ans.(a)

Sol.

Let income of Q = 5x

Income of P = $5x \times \frac{2}{5} = 2x$

Income of R = $5x \times \frac{160}{100} = 8x$

Given, income of Q = Rs.35000

Income of R = $35000 \times \frac{8x}{5x} = \text{Rs. } 56000$

Expenditure of R = $56000 \times \frac{75}{100} = \text{Rs. } 42000$

Expenditure of P = $42000 \times \frac{20}{100} = \text{Rs. } 8400$

Saving of P = $35000 \times \frac{2x}{5x} - 8400 = \text{Rs. } 5600$

S151. Ans.(b)

Sol. Let the cost price of table be Rs. 100x

So, marked price of table = $100x \times \frac{3}{2} = 150x$ Rs.

Selling price of table = $150x \times \frac{8}{9} \times \frac{9}{10} = \text{Rs. } 120x$ Rs.

Profit = $120x - 100x = \text{Rs. } 20x$

Discount given = $150x - 120x = \text{Rs. } 30x$

ATQ,

$10x = 200$

$x = 20$

Marked price of table = Rs 3000

S152. Ans.(b)

Sol.

Let the speed of boat in still water be x km/hr and that of stream be y km/hr.

ATQ

$(x + y) - (x - y) = 5$

$\Rightarrow y = 2.5$ km/hr

$x = 2.5 \times \frac{19}{5} = 9.5$ km/hr

Required time = $\frac{42}{(9.5+2.5)} + \frac{31.5}{(9.5-2.5)} = 8$ hr

S153. Ans.(a)

Sol.

Let initial quantity of Milk = 5x

So, quantity of water = $5x \times \frac{60}{100} = 3x$

So,

$\frac{5x - \frac{5}{8} \times 16}{8x} = \frac{1}{2}$

$5x - 10 = 4x$

$x = 10$

Initial quantity of mixture = $(5 + 3) \times 10 = 80$ liters

S154. Ans.(d)

Sol. Let amount invested by P be Rs.p

So, amount invested by Q = Rs. (32000 - p)

So, profit sharing ratio of P to Q = $(p \times 10) : ((32000 - p) \times 8)$

= $5p : (128000 - 4p)$

ATQ,

$\frac{5p}{128000-4p} = \frac{3}{4}$

$p = \text{Rs } 12000$

S155. Ans.(c)

Sol.

Diameter of the circle = $\frac{112}{4} = 28$ cm

Area of the square = 784 cm²

Area of the circle = $\pi r^2 = 616$ cm²

Required difference = 168 cm²

S156. Ans.(a)

Sol.

Let total number of candidates passed in exams for city D be x.

$\therefore 25\%$ of $x = 320$

$x = \frac{320 \times 100}{25} = 1280$

\therefore Total passed candidates from city D is 1280

Let total number of candidates passed from all cities be y.

10% of $y = 1280$

$y = 12800$

Total passed from city E

$= \frac{25}{100} \times 12800 = 3200$

\therefore Total fresher candidates passed from city E =

$\frac{12}{100} \times 3200 = 384$

S157. Ans.(d)

Sol.

Non-fresher candidate who passed the exam from city A

$= 1250 \times \frac{28}{100} \times \frac{80}{100}$

= 280

S158. Ans.(c)

Sol. Total passed candidates from city B = $\frac{180 \times 100}{75} = 240$

\therefore total candidates passed from all cities = $\frac{240 \times 100}{16} = 1500$

S159. Ans.(b)

Sol.

Total number of candidates passed in 2010 = $\frac{770 \times 100}{11} = 7000$

Total number of candidates passed from city A in 2010 =

$\frac{28}{100} \times 7000 = 1960$

Total number of candidates passed in 2011 from city A =

$\frac{110}{100} \times 1960 = 2156$

Total number of candidates passed from city B in 2010 = $\frac{16}{100} \times 7000 = 1120$
 Total number of candidates passed from city B in 2011 = $\frac{120}{100} \times 1120 = 1344$
 So, required difference = $2156 - 1344 = 812$

S160. Ans.(a)

Sol.

Total candidates passed in 2010 = $\frac{320 \times 100}{16} = 2000$
 Total candidates passed from city C = $\frac{11}{100} \times 2000 = 220$
 Total Non-fresher candidates passed from C = $\frac{85}{100} \times 220 = 187$
 Total candidates passed from city A = $\frac{28}{100} \times 2000 = 560$
 Total fresher candidates passed from A = $\frac{20}{100} \times 560 = 112$
 So, required ratio = $\frac{112}{187}$

Sol. (161-165):

There are 5 friends A, B, C, D and E.
 The ratio of salary of A, B, D and E are 11x, 8x, 9x & 10x respectively.
 Salary of E = $10x = 50000$
 $x = 5000$
 So, salary of A, B & D are Rs.55000, Rs.40000 & Rs.45000 respectively
 Salary of D = $222000 - (55000 + 40000 + 45000 + 50000) = \text{Rs.}32000$
 Let money spend on food and rent by C is 3y and 5y respectively.
 $8y = 32000$
 $y = 4000$
 Money spend on food and rent by C Rs 12000, Rs. 20000 respectively
 Let money spend on food and rent by E is 2m & 3m respectively.
 $5m = 50000$
 $m = 10000$
 Money spend on food and rent by E Rs.20000 and Rs 30000 respectively.
 A, C and D spend on rent are in the ratio of 3:2:1
 Money spend on rent by C = Rs 20000
 So,
 Money spend on rent by A = Rs 30000
 Money spend on rent by D = Rs 10000
 So, money spend by D on food = Rs.(45000-10000) = Rs 35000
 So the ratio of money spend on food by B and D = 3:7
 Money spend on food by B = 15000
 Money spend on rent by B = 40000 - 15000 = Rs 25000

Money spend on food by A = 55000 - 30000 = Rs 25000

Friends	FOOD (in Rs.)	RENT(in Rs.)	TOTAL SALARY(in Rs.)
A	25000	30000	55000
B	15000	25000	40000
C	12000	20000	32000
D	35000	10000	45000
E	20000	30000	50000

S161. Ans.(a)

Sol.

Salary of C and A = $32000 + 55000 = \text{Rs.}87000$
 Salary of B and D = $40000 + 45000 = \text{Rs.}85000$
 Required ratio = 87:85

S162. Ans.(b)

Sol.

Amount spend on rent by C = Rs.20000
 Amount spend on rent by D = Rs.10000
 required percentage = $\frac{20000}{10000} \times 100 = 200\%$

S163. Ans.(c)

Sol.

The sum of money spend on food by A, B & C = Rs 52000
 Sum of money spend on rent by D and E = Rs 40000
 Required difference = Rs 12000

S164. Ans.(d)

Sol.

Average salary of B and C together = $\frac{72000}{2} = 36000$
 Average salary of D and E together = $\frac{95000}{2} = 47500$
 Required difference = $47500 - 36000 = \text{Rs } 11500$

S165. Ans.(e)

Sol.

Required sum = $\frac{50}{100} \times 115000 + \frac{30}{100} \times 107000 = \text{Rs.}89600$

Sol. (166-170):

Number of wired mouse sold by X = 240
 Number of wireless mouse sold by X = $240 \times \frac{5}{3} = 400$
 Total mouse sold by X = 640
 Total mouse sold by store Y = $\frac{5}{4} \times 640 = 800$
 Total mouse sold by all three stores = $3 \times 690 = 2070$
 So, total mouse sold by store Z = $2070 - 640 - 800 = 630$

Number of wired mouse sold by store Y = $400 \times \frac{100}{80} = 500$
 Number of wireless mouse sold by store Y = $800 - 500 = 300$
 Number of wireless mouse sold by store Z = $960 - 400 - 300 = 260$
 Number of wired mouse sold by store Z = $630 - 260 = 370$
 Total wired mouse sold by all three stores = $240 + 500 + 370 = 1110$

S166. Ans.(c)

Sol.

$$\text{Required percentage} = \frac{240+500-300}{300} \times 100 = \frac{440}{3} = 146\frac{2}{3}\%$$

S167. Ans.(a)

Sol.

$$\text{Required ratio} = 630 : 1110 = 21 : 37$$

S168. Ans.(d)

Sol.

No. of wireless computer mouse sold by store A = $240 \times \frac{140}{100} = 336$
 Total computer mouse sold by store A = $637 \times 2 - 640 = 634$
 So, wired computer mouse sold by store A = $634 - 336 = 298$

S169. Ans.(b)

Sol.

Let price of wireless computer mouse be $3x$.
 Price of wired computer mouse = $2x$
 So,
 $2x \times 240 + 3x \times 400 = 67200$
 $480x + 1200x = 67200$
 $x = \frac{67200}{1680} = 40$
 So, price of wireless computer mouse = Rs.120

S170. Ans.(e)

Sol.

Total faulty computer mouse sold by store Z = $\frac{30}{100} \times 630 = 189$
 Faulty wired computer mouse = $\frac{5}{9} \times 189 = 105$
 Faulty wireless computer mouse = $189 - 105 = 84$
 So, required difference = $(370 - 105) - (260 - 84) = 265 - 176 = 89$

S171. Ans.(b)

Sol.

Quantity I.

$$\text{Speed of car} = \frac{280}{5} = 56 \text{ km/h}$$

Quantity II.

Let length of the train be x meter

$$\text{Speed of train} = \frac{x}{12}$$

$$\text{Also speed of train} = \frac{x+570}{25}$$

$$\frac{x}{12} = \frac{x+570}{25}$$

$$25x = 12x + 6240$$

$$x = 480$$

$$\text{Speed of the train} = \frac{480}{12} \times \frac{18}{5} = 144 \text{ km/h}$$

So, Quantity I < Quantity II

S172. Ans.(e)

Sol.

Let capacity of tank = 30 lit.

Efficiency of pipe A and pipe B is 3 lit./min and 2 lit./min respectively.

$$\text{Efficiency of pipe C} = 2 \times \frac{150}{100} = 3 \text{ lit./min}$$

Quantity I.

$$\text{Req. time} = \frac{60}{3+3} = 10 \text{ min}$$

Quantity II.

$$\text{Req. time} = \frac{30}{3} = 10 \text{ min.}$$

So, **Quantity I = Quantity II**

S173. Ans.(e)

Sol.

Let the ages of Neelam and Dolly 4 year ago be $5x$ & $7x$.

ATQ.

$$\frac{5x + 4 + 8}{7x + 4 + 8} = \frac{7}{9}$$

$$9(5x + 12) = 7(7x + 12)$$

$$45x + 108 = 49x + 84$$

$$4x = 24$$

$$x = 6$$

$$x = 6$$

Quantity I.

$$\text{Req. age} = 7x + 4 + 5 = 51 \text{ years}$$

Quantity II.

$$\text{Req. age} = 5x + 4 + 17 = 51 \text{ years}$$

So, **Quantity I = Quantity II**

S174. Ans.(b)

Sol.

$$\text{Quantity I. } 12x^2 - x - 1 = 0$$

$$12x^2 - 4x + 3x - 1 = 0$$

$$4x(3x - 1) + 1(3x - 1) = 0$$

$$(4x + 1)(3x - 1) = 0$$

$$x = -\frac{1}{4}, \frac{1}{3}$$

Quantity II. $20y^2 - 41y + 20 = 0$

$$20y^2 - 25y - 16y + 20 = 0$$

$$5y(4y - 5) - 4(4y - 5) = 0$$

$$(4y - 5)(5y - 4) = 0$$

$$y = \frac{5}{4}, \frac{4}{5}$$

So, Quantity I < Quantity II

S175. Ans.(a)

Sol.

Let speed of boat in still water and the speed of stream is $11x$ and $5x$ respectively.

$$\frac{24}{16x} = \frac{45}{60}$$

$$x = 2$$

Speed of boat in still water = $11x = 22$ km/h

speed of current = $5x = 10$ km/h

Quantity I.

$$\text{Req. time} = \frac{160}{22+10} = 5 \text{ hours}$$

Quantity II.

$$\text{Req. time} = \frac{48}{22-10} = 4 \text{ hours}$$

So, Quantity I > Quantity II

S176. Ans.(d)

Sol.

Let side of square, length and breadth of rectangle be a , l and b cm respectively.

Statement (I)

$$\text{Side of square} = a^2 = 64$$

$$a = 8 \text{ cm}$$

Statement (II)

$$a = \frac{1}{2} \times l$$

$$\text{And, } \frac{l}{b} = \frac{4}{3}$$

From statement I and II together

Length of rectangle = 16 cm

Breadth of rectangle = $16 \times \frac{3}{4} = 12$ cm

Area of rectangle = $16 \times 12 = 192$ cm²

So, both the statements taken together are necessary to Ans.wer the questions.

S177. Ans.(e)

Sol.

Statement (I)

let cost price be Rs. $100x$

marked price = Rs. $140x$

$$\text{selling price} = 140x \times \frac{75}{100} = \text{Rs. } 105x$$

ATQ,

$$140x - 105x = 210$$

$$35x = 210$$

$$x = 6$$

Cost price = Rs. 600

Statement (II)

Ratio of cost price and discount price of an article is $5:8$ respectively.

So, statement (I) alone is sufficient to Ans.wer the question

S178. Ans.(d)

Sol.

Statement (I)

let total work (L.C.M. of $15, 18$ & 20) = 180 units

$$\text{Efficiency of A} = \frac{180}{15} = 12 \text{ units/day}$$

$$\text{Efficiency of B} = \frac{180}{18} = 10 \text{ units/day}$$

$$\text{Efficiency of C} = \frac{180}{20} = 9 \text{ units/day}$$

Statement (II)

$$\text{Efficiency of D} = 10 \times \frac{120}{100} = 12 \text{ units/day}$$

$$\text{Req. time} = \frac{180}{12} = 15 \text{ days}$$

So, both the statements taken together are necessary to Ans.wer the questions.

S179. Ans.(d)

Sol.

Let speed of boat in still water and speed of current be x and y respectively.

Statement (I)

Let speed of boat in still water and speed of current be $8x$ and $5x$ respectively.

Statement (II)

$$x - y = 30$$

From statement I and II together

ATQ,

$$\frac{180}{8x - 5x} = 6$$

$$x = 10$$

$$\text{Req. time} = \frac{195}{(8+5) \times 10} = 1.5 \text{ hours}$$

So, both the statements taken together are necessary to Ans.wer the questions

S180. Ans.(c)

Sol.

Let profit share of P, A and D be $7x$, $9x$ and $5x$ respectively.

Statement I.

$$\text{Total profit} = 4500 \times \frac{21x}{5x} = \text{Rs. } 18900$$

$$\text{Profit \%} = \frac{18900}{94500} \times 100 = 20\%$$

Statement II.

$$7x - 5x = 1800$$

$$2x = 1800$$

$$x = 900$$

Total profit = $7x + 9x + 5x = 21x$

= $21 \times 900 = \text{Rs.}18900$

So profit% = $\frac{18900}{94500} \times 100 = 20\%$

So, either statement (I) or statement (II) by itself is sufficient to Answer the question.

S181. Ans.(b)

Sol.

Let the speed of boat in still water = X km/h

Speed of the stream = 6 km/h

Speed of downstream = $(X + 6)$ Km/h

ATQ.

$$\frac{12}{(X + 6)} = \frac{48}{60}$$

$$15 = X + 6$$

$$X = 9 \text{ km/h}$$

Quantity I.

Req. time = $\frac{84}{9-6} = 28 \text{ hours}$

Quantity II.

Req. time = $\frac{315}{9} = 35 \text{ hours}$

So, Quantity I < Quantity II

S182. Ans.(a)

Sol.

Quantity of juice in the mixture = $\frac{50}{5} \times 3 = 30 \text{ liters}$

Quantity of water in the mixture = $\frac{50}{5} \times 2 = 20 \text{ liters}$

If 10 liters of mixture is taken out and 14 liters of water is added

Quantity I. Quantity of water in the mixture = $20 -$

$$\left(\frac{10}{5} \times 2\right) + 14 = 30 \text{ liters}$$

Quantity II. Quantity of juice in the mixture = $30 -$

$$\left(\frac{10}{5} \times 3\right) = 24 \text{ liters}$$

So, Quantity I > Quantity II

S183. Ans.(b)

Sol.

Quantity I.

$$S.I. = \frac{P \times R \times T}{100}$$

$$7500 = \frac{P \times 15 \times 5}{100}$$

$$P = \text{Rs.}10000$$

Quantity II. Rs.10200

So, Quantity I < Quantity II

S184. Ans.(a)

Sol.

Quantity I. $2x^2 + 5x + 3 = 0$

$$2x^2 + 2x + 3x + 3 = 0$$

$$2x(x+1) + 3(x+1) = 0$$

$$(x+1)(2x+3) = 0$$

$$x = -1, -\frac{3}{2}$$

Quantity II. $y^2 + 6y + 9 = 0$

$$y^2 + 3y + 3y + 9 = 0$$

$$y(y+3) + 3(y+3) = 0$$

$$(y+3)(y+3) = 0$$

$$y = -3, -3$$

So, Quantity I > Quantity II

S185. Ans.(c)

Sol.

Quantity I. $\sqrt{784} - x = 0$

$$x = 28$$

Quantity II. $784 - y^2 = 0$

$$y = 28, -28$$

So, Quantity I \geq Quantity II

S186. Ans.(d)

Sol.

Statement I: speed = $\frac{100}{2} = 50 \text{ kmph}$

Statement II: speed of car = $20 \times \frac{100}{40} = 50 \text{ kmph}$

Clearly, either statement is sufficient

S187. Ans.(c)

Sol. let length of train & platform be l & x m respectively.

Speed of train be S m/s

Statement I: $\frac{l+x}{S} = 20$; no value of x can be determined

Statement II: $l = 50\%$ of x ; no value of x can be determined

Since, we have 3 unknown factors which can not be determined even if using both statement.

So, neither statement I nor statement II is sufficient.

S188. Ans.(b)

Sol.

Statement II: let girls be x

Boys = $\frac{120}{100} \times x = 1.2x$

Required ratio = $\frac{1.2x}{x} = 6:5$

Clearly, Statement II is alone sufficient.

S189. Ans.(a)

Sol.

Statement I: salary = $500 \times \frac{100}{10} = \text{Rs.}5000$

Statement II: expenditure = 2000 + savings; salary cannot be determined

Only, Statement I is sufficient

S190. Ans.(e)

Sol.

From Statement I & II

Present population = $\frac{110}{100} \times 1000 = 1100$

So, both statements are required to Ans.wer

S191. Ans.(d)

Sol.

Statement (I). $S = \frac{3}{7}N$

$$\frac{S}{N} = \frac{3}{7} = \frac{3x}{7x}$$

Statement (II). $M = 3x \times \frac{5}{3} = 5x$

Combing both statement

Profit share of S, N & M = 3x, 7x & 5x

We easily calculate profit of S, N & M

So, both the statements taken together are necessary to Ans.wer the questions

S192. Ans.(b)

Sol.

\sqrt{z} and \sqrt{h} are integers value of z and h should be perfect square so between 32 and 90 possible value of z and h can be 36, 49, 64 & 81.

Now $z < h$ so the value of (z, h) = (36,49), (36,64), (36,81), (49,64), (49,81), (64,81).

Statement (I) $z + h \geq 70$

(z, h) = (36,49) & (36,64)

Exact value of z and h can't determined

Statement (II) $9z = 4h$

$$\frac{z}{h} = \frac{4}{9}$$

So, $z = 36, h = 81$ can satisfy the condition.

$$\text{Req. value} = \frac{z+h}{2} = \frac{(36+81)}{2} = 58.5$$

So, statement (II) alone is sufficient to Ans.wer the question.

S193. Ans.(b)

Sol.

Let five consecutive numbers are $2x, 2x+2, 2x+4, 2x+6$ & $2x+8$ respectively.

Statement (I). $2x + 8 - 2x - 2 = 6$

$$6 = 6$$

Can't determined the value of x

Statement (II). $2x + 6 + 2x = 14$

$$4x = 8$$

$$x = 2$$

Second largest number = 10

So, statement (II) alone is sufficient to Ans.wer the question.

S194. Ans.(c)

Sol.

Statement (I). $R = \frac{100 \times 100}{1000}$

$$R = 10\%$$

P=Rs.1000 , time = 3 years

C.I. can determined

Statement (II).

$$S.I. = \frac{1000 \times R \times 2}{100} = 20R$$

$$C.I. = 1000 \left[\left(1 + \frac{R}{100} \right)^2 - 1 \right]$$

ATQ.

$$\frac{1000[200R + R^2]}{10000} - 20R$$

$$200R + R^2 - 200R = 100$$

$$R = 10\%$$

C.I. can be determined

So, either statements (I) or statement (II) alone is sufficient to Ans.wer the questions.

S195. Ans.(d)

Sol.

Statement (I). let age of Priya be x years

Age of HimAns.hi = 2x years

ATQ.

$$x + 2x = 72$$

$$3x = 72$$

$$x = 24$$

Priya's age = 24 years

Statement (II).

Pallavi age = 24 - 3 = 21 years

So, both the statements taken together are necessary to Ans.wer the questions.

Sol. (196-200)

In city P

$$\text{Total number of vehicles} = 8000 \times \frac{15}{100} = 1200$$

$$\text{Number of bikes in P} = 1200 \times \frac{3}{4} = 900$$

$$\text{Number of cars in P} = 1200 \times \frac{1}{4} = 300$$

Similarly

City	Total vehicles	Total cars	Total bikes
P	1200	300	900
Q	2400	960	1440
R	2000	1400	600
S	800	300	500
T	1600	960	640

S196. Ans.(b)

Sol.

$$\text{Req. \%} = \frac{500}{300} \times 100 = 166\frac{2}{3}\%$$

S197. Ans.(a)**Sol.**

$$\text{Number of buses in T} = 600 \times \frac{75}{100} = 450$$

$$\text{Req. ratio} = 960 : 450 = 32 : 15$$

S198. Ans.(d)**Sol.**

$$\text{Number of cars in A} = 1440 \times \frac{75}{100} = 1080$$

$$\text{Number of bikes in A} = 300 \times \frac{7}{5} = 420$$

$$\text{Total number of vehicles in A} = 1080 + 420 = 1500$$

S199. Ans.(e)**Sol.**

$$\text{Req. difference} = \frac{300+960}{2} - 600$$

$$630 - 600 = 30$$

S200. Ans.(a)**Sol.**

$$\text{SUV cars in P} = 300 \times \frac{5}{12} = 125$$

$$\text{Sedan cars in P} = 300 - 125 = 175$$

$$\text{SUV cars in S} = 300 \times \frac{1}{3} = 100$$

$$\text{Sedan cars in S} = 300 - 100 = 200$$

$$\text{Req. difference} = (175 + 200) - (125 + 100)$$

$$375 - 225 = 150$$

