Ratio and Proportion

- **Q 1.** Divide Rs. 1870 into three parts in such a way that half of the first part, one third of the second part and one sixth of the third part are equal.
 - (a). 241, 343,245
 - (b). 400, 800, 670
 - (c). 470, 640, 1160
 - (d). None of these
- Q 2. In a mixture of 40 litres, the ratio of milk and water is 4:1. How much water must be added to this mixture so that the ratio of milk and water becomes 2:3.
 - (a). 20 litres
 - (b). 32 litres
 - (c). 40 litres
 - (d). 30 litres
- Q 3. If three numbers are there in the ratio of 1 : 2 : 3 and half the sum is 18, then the ratio of squares of the numbers is:
 - (a). 6:12:13
 - (b). 1:2:4
 - (c). 36:144:324
 - (d). 3:5:7
- Q4. If 391 bananas were distributed among three monkeys in the ratio 1/2 : 2/3 : 3/4, how many bananas did the first monkey get?
 - (a). 102
 - (b). 108
 - (c). 112
 - (d). 104
- Q 5. A mixture contains milk and water in the ratio 5 : 1 . On adding 5 litres of water, the ratio of milk to water becomes 5 : 2. The quantity of milk in the mixture is:
 - (a). 16 litres
 - (b). 25 litres
 - (c). 32.5 litres
 - (d). 22.75 litres
- Q 6. A beggar had ten paise, twenty paise and one rupee coins in the ratio of 10 : 17 : 7 respectively at the end of the day. If that day he earned a total of Rs. 57, how many twenty paise coins did he have?
 - (a). 114
 - (b). 171
 - (c). 95
 - (d). 85
- **Q 7.** A dishonest milkman mixed 1 litre of water for every 3 litres of milk and thus made up 36 litres of milk. If he now adds 15 litres of milk to the mixture, find the ratio of milk and water in the new mixture.
 - (a). 12:5
 - (b). 14:3
 - (c). 7:2
 - (d). 9:4

- **Q 8.** The income of A and B are in the ratio of 3 : 2 and their expenditures are in the ratio of 5 : 3. If each saves Rs. 1000 then A's income can be:
 - (a). Rs. 3000
 - (b). Rs. 4000
 - (c). Rs. 6000
 - (d). Rs. 9000
- Q 9. The students in three batches at a college are in the ratio of 2 : 3 : 5. If 20 students are increased in each batch, the ratio changes to 4 : 5 : 7. The total number of students in the three batches before the increases were
 - (a). 10
 - (b). 90
 - (c). 100
 - (d). 150
- **Q 10.** After an increment of 7 in both numerator and denominator, a fraction changes to 3/4. Find the original fraction.
 - (a). 5/12
 - (b). 7/9
 - (c). 2/5
 - (d). 3/8
- Q 11. If the ratio of the ages of Maya and Chhaya is 6:5 at present, and fifteen years from now, the ratio will change to 9:8, then find Maya's present age.
 - (a). 24 years
 - (b). 30 years
 - (c). 18 years
 - (d). 33 years
- Q 12. If 4 examiners can examine a certain number of answer books in 8 days by working 5 hours a day, for how many hours a day would 2 examiners have to work in order to examine twice the number of answer books in 20 days?
 - (a). 6
 - (b). 7 ½
 - (c). 8
 - (d). 9
- Q 13. 30 men working 7 hours a day can do a piece of work in 18 days, in how many days will 21 working 8 hours a day do the same work?
 - (a). 24 days
 - (b). 22.5 days
 - (c). 30 days
 - (d). 45 days
- Q 14. If 30 oxen can plough 1/7th of a field in 2 days, how many days 18 oxen will take to do the remaining work?
 - (a). 30 days
 - (b). 20 days
 - (c). 15 days
 - (d). 18 days



- Q 15. A, B, C enter into a partnership. A contributes one third of the whole capital while B contributes as much as A and C together contribute. If the profit at the end of the year is Rs. 84000. How much does each receive?
 - (a). 24000, 20000, 40000
 - (b). 28000, 42000, 14000
 - (c). 28000, 42000, 10000
 - (d). None of these
- Q 16. Three men rent a farm for Rs. 7000 per annum. A puts 110 cows in the farm for three months. B puts 110 for 6 months and C puts 440 cows for 3 months. What percentage of the total expenditure should A pay?
 - (a). 20%
 - (b). 14.28%
 - (c). 16.66%
 - (d). 11.01%
- Q 17. The speeds of three cars are in the ratio 2:3:4. The ratio between the times taken by these cars to travel the same distance is
 - (a). 2:3:4
 - (b). 4:3:2
 - (c). 4:3:6
 - (d). 6:4:3
- Q18. At constant temperature, pressure of a definite mass of gas is inversely proportional to the volume. If the pressure is reduced by 20%, find the respective change in the volume.
 - (a). -16.66%
 - (b). +25%
 - (c). -25%
 - (d). +16.66%
- Q 19. A sum of Rs. 2,500 is distributed among X, Y and Z in two ratio $\frac{1}{2}$: $\frac{3}{4}$: 5/6. What is the difference between the maximum share and the minimum share?
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- (a). Rs. 300
- (b). Rs. 350
- (c). Rs. 400
- (d). Rs. 450
- Q 20. A student appeared in 6 papers. The maximum marks are the same for each paper. His marks in these papers are in the proportion of 5: 6: 7: 8: 9: 10. Overall he scored 60%. In how many number of papers did he score less than 60% of the maximum marks?

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- (a). 2 (b). 3
- (c). 4 (d). 5

such that PQ : QR = 3 : 5. If n is the number of possible values of PQ : PR, then what is n equal to?

There are three points P, Q and R on straight line

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(a). 1 (b). 2

Q 21.

- (c). 3
- (d). 4
- Q 22. An amount of money was distributed among A. B and C in the ratio p : q : r.
 - Consider the following statements :
 - A gets the maximum share if p is greater than (q + r). 1.
 - C gets the minimum share if r is less than (p + q). 2.

Which of the above statements is/are correct?

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- (a). 1 only
- (b). 2 only
- (c). Both 1 and 2
- (d). Neither 1 nor 2
- Q 23. Half of the villagers of a certain village have their own houses. One-fifth of the villagers cultivate paddy. One-third of the villagers are literate. Fourfifth of the villagers are under 25 years of age. Which one of the following statements is certainly correct?

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- (a). All the villagers who have their own houses are literate.
- (b). Some villagers under 25 years of age are literate.
- (c). Only half of the villagers who cultivate paddy are literate.
- (d). No villager under 25 years of age has his own house.
- A person X wants to distribute some pens among Q 24. six children A, B, C, D, E and F. Suppose A gets twice the number of pens received by B, three times that of C, four times that of D, five times that of E and six times that of F. What is the minimum number of pens X should buy so that the number of pens each one gets is an even number?

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- (a). 147
- (b). 150
- (c). 294
- (d). 300.
- Q 25. Consider the Question and two statements given below:

Question: What is the age of Manisha?

- 1. Statement-1 : Manisha is 24 years younger than her mother.
- Statement-2: 5 years later, the ages of 2. Manisha and her mother will be in the ratio 3: 5.

Which one of the following is correct in respect of the Question and the Statements?

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- (a). Statement-1 alone is sufficient to answer the Question
- (b). Statement-2 alone is sufficient to answer the Question
- (c). Both Statement-1 and Statement-2 are sufficient to answer the Question
- (d). Both Statement-1 and Statement-2 are not sufficient to answer the Question
- **Q 26.** There are two containers X and Y. X contains 100 ml of milk and Y contains 100 ml of water. 20 ml of milk from X is transferred to Y. After mixing well, 20 ml of the mixture in Y is transferred back to X. If m denotes the proportion of milk in X and n denotes the proportion of water in Y, then which one of the following is correct?

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- (a). m = n
- (b). m> n
- (c). m<n
- (d). Cannot be determined due to insufficient data

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