Class7 Chapter Ratio and Proportion Test paper-1

A. Complete the following statements

1. The comparison of two quantities of the same kind by means of division is termed as _____.

2. The two quantities to be compared are called the ___ _____of the ratio.

3. The first term of the ratio is called the _____and the second term is called the _____.

4. In a ratio, only two quantities of the _____unit can be compared.

5.If the terms of the ratio have common factors, we can reduce it to its lowest terms by cancelling the ____.

6. When both the terms of a ratio are multiplied or divided by the same number (other than zero) the ratio remains____ _The obtained ratios are called _____

7. In a ratio the order of the terms is very important, (Say True or False)

8. Ratios are mere numbers. Hence units are not needed, (Say True or False)

9. Equality of two ratios is called a ____. If a,b,c and d are in proportion, then $a : b :: c : d$

10. In a proportion, the product of extremes = _____

[Hint: (1) Ratio (2) terms (3) antecedent, consequent (4) same (5) common terms (6) unchanged, equivalent ratios (7) True (8) True (9) proportion (10) product of means]

B. Solve these questions:

1. A ribbon is cut into 3 pieces in the ratio 3: 2: 7. If the total 'length of the ribbon is 24 m, find the length of each piece.

2. The ratio of boys to girls in a class is 4 : 5. if the., number of boys is 20, find the number of girls.

3. (a) If A : B = 4 6, B C = 18 Find the ratio of A : B . C. (b) If A: B = 5: 8 and B : C = 16 : 25 find A : C

4. A bronze statue is made of copper, tin and lead metals. It has $\frac{1}{10}$ of tin , $\frac{1}{4}$ of lead and the rest copper. Find the part of copper in the bronze statue.

5. (a) Divide 880 between A,B and in ratio $\frac{1}{5} : \frac{1}{6}$ (b) Find A : B if 15% of A = 20% of B

6. What number must be added to each 9 : 16 to make 2 : 3 ?

7. What number must be subtracted to each 17 : 33 to make 7 : 15 ?

8. Two numbers are in ratio 5 : 6 . if 8 is subtracted from each ratio became 4: 5. Find the number?

9. (a) If $X:Y = 3 : 2$ find $(2x + 3y):(3x + 5y)$ (b) if $(3a + 5b):(3a - 5b) = 5:1$ find a : b ?

10. (a) if $\frac{A}{3} = \frac{13}{4} = \frac{C}{5}$ then find A:B:C (b) $\frac{1}{x} : \frac{1}{y} : \frac{1}{z} = 2:3:5$ find $x:y:z$

11. Find (a) Third proportional to 8 and 12 (b) The mean proportional to (i) 0.4 and 0.9 (ii) 3 and 27

12. Two numbers are in ratio 3:4, If LCM is 180 find the numbers?

13. A bag contains Rs. 75 in a rupee, 50p and 25p coins in 5:8:4. Find the numbers of each coin.

14.(a) Find $x \; if \; 36 , 54 , x$ are in continued proportion. (b) Find fourth proportional to $2.8 , \; 1.4 , 3,5$

15. What must be subtracted from each $10, 12 , 19, 24$ to get numbers which are in proportional?

18. (a) If third proportional to 7 and x is 28 find value of x (b) 2A = 3B = 4Cthen find A:B:C

17. At a certain time a tree 6 m high casts a shadow of length am .At the same time a pole cast a shadow of length 20m . Find the height of pole?