Problems

1. If $\dfrac{1}{6}:\dfrac{1}{x}=\dfrac{1}{x}:\dfrac{1}{125}$, Then the value of x is:
   (a) 15   (b) 20   (c) 25   (d) 35

2. If x: y = 5: 2, then (8x + 9y): (8x + 2y) is
   (a) 22: 29   (b) 26: 61   (c) 29: 22   (d) 61: 26

3. Two, numbers are in the ratio 3: 5. If 9 is subtracted from each, the new numbers are in the ratio 12: 23. The smaller number is:
   (a) 27   (b) 33   (c) 49   (d) 55

4. The ratio of three numbers is 3: 4: 7 and their product is 18144. The numbers are:
   (a) 9,12,21   (b) 15, 20, 25   (c) 18,24,42   (d) None of these

5. Two numbers are respectively 20% and 50% more than a third number. The ratio of the two numbers is
   (a) 2: 5   (b) 3: 5   (c) 4: 5   (d) 6: 7

6. The ratio of the number of boys and girls in a college is 7: 8. If the percentage increase in the number of boys and girls be 20% and 10% respectively, what will be the new ratio?
   (a) 8: 9   (b) 17: 18   (c) 21: 22   (d) Cannot be determined

7. The prices of a scooter and a TV are in the ratio.7: 5. If the scooter costs Rs. 8000 more than a TV set, then the price of a T.V set is:
   (a) Rs. 20,000   (b) Rs. 24,000   (c) Rs, 28,000   (d) Rs. 32,000

8. An amount, of RS.735 was divided between A, Band C. If each of them had received RS.25 less, their shares would have been in the ratio of 1: 3: 2, the money received by C was:
   (a) Rs. 195   (b) Rs. 200   (c) Rs. 225   (d) Rs. 245

9. An amount, of Rs. 2430 is divided among A, Band C such that if their shares be reduced by Rs. 5, Rs. 10 and Rs.15 respectively, the remainders shall be in the ratio of 3: 4: 5. Then, B's share was:
   (a) Rs. 605   (b) Rs. 790   (c) Rs. 800   (d) Rs. 810

10. The speeds of three cars are in the ratio 5: 4: 6. The ratio between the time taken by them to travel the same distance is:
    (a) 5: 4: 6   (b) 6: 4: 5   (c) 10: 12: 15   (d) 12: 15: 10

11. Sum of Rs. 53 is divided among A, B, C in such a way that A gets Rs. 7 more than what B gets and B gets Rs. 8 more than what C gets. The ratio of their shares is:
    (a)16: 9: 18   (b) 25: 18: 10   (c) 18: 25: 10   (d) 15: 8: 30

12. What is the ratio whose terms differ by 40 and the measure of which is $\dfrac{2}{7}$?
    (a) 16: 56   (b) 14: 56   (c) 15: 56   (d) 16: 72

13. A invested RS.76,000 in a business. After few months, B joined him Rs. 57,000. At the end of the year, the total profit was divided between them in the 2: 1. After how many months did B join?
    (a) 4   (b) 8   (c) 9   (d) None of these

14. Simran started a software business by investing Rs.50,000. After six months, Nanda joined her with a capital of Rs.80,000. After 3 years, they earned a profit of Rs.24,500. What was Simran's share in the profit?
    (a) RS.9423   (b) Rs.10,500   (c) Rs.12,500   (d) RS.14,000

15. A, B and C enter into partnership A invests some money at the beginning, B invests double the amount after 6 months and C invests thrice the amount after 8 months. If the annual profit be Rs. 27,000 C's share is:
    (a) Rs. 8625   (b) Rs. 9000   (c) Rs. 10800   (d) Rs. 11250

16. In a business, A and C invested amounts in the ratio 2: 1, whereas the ratio between amounts invested by A and B was 3: 2. If Rs. 1,57,300 was their profit, how much amount did B receive?
    (a) Rs.24,200   (b) Rs.36,300   (c) Rs 48,400   (d) Rs.72,600

17. A, B, C started a business with their investments in the ratio 1: 3: 5. After 4 months, A invested the same amount as before and B as well as C withdrew half of their investments. The ratio of their profits at the end of the year is:
    (a) 4: 3: 5   (b) 5: 6: 10   (c) 6: 5: 10   (d) 10: 5: 6

18. A and B entered into partnership with capitals in the ratio 4: 5. After 3 months, A withdrew $\frac{1}{4}$ of his capital and B withdrew $\frac{1}{5}$ of his capital. The gain at the end of 10 months was Rs. 760. A's share in this profit is:
    (a) RS.330   (b) Rs. 360   (c) Rs. 380   (d) Rs. 430

19. A starts business with Rs. 3500 and after 5 months, B joins with A as his partner. After a year, the profit is divided in the ratio 2: 3. What is B's contribution in the capital?
    (a) Rs. 7500   (b) Rs. 8000   (c) Rs. 8500   (d) Rs. 9000

20. How many kg. of wheat costing Rs. 8 per kg must be mixed with 36 kg of rice costing Rs. 5.40 per kg so that 20% gain may be obtained by selling the mixture at Rs. 7.20 per kg?
    (a) 10.08 kg   (b) 8.6 kg   (c) 9.2 kg   (d) 10.8 kg.

21. In what ratio must water be mixed with milk costing Rs. 12 per litre to obtain a mixture worth of Rs. 8 per litre?
    (a) 1: 2   (b) 2: 1   (c) 2: 3   (d) 3: 2

22. In what ratio must a grocer mix two varieties of tea worth Rs. 60 a kg and Rs. 65 a kg so that by selling the mixture at Rs. 68.20 a kg he may gain 10%?
    (a) 3: 2   (b) 3: 4   (c) 3: 5   (d) 4: 5

23. Two trains of equal length are running on parallel lines in the same direction at 46 km/hr and 36 km/hr. The faster train passes the slower train in 36 seconds. The length of each train is:
    (a) 50 m   (b) 72 m   (c) 80 m   (d) 82 m

24. A train X speeding with 120 kmph crosses another train Y, running in the same direction in 2 minutes. If the lengths of the trains X and Y be 100 m and 200 m respectively, what is the speed of train Y?
    (a) 111 km/hr   (b) 123 km/hr   (c) 127 km/hr   (d) 129 km/hr

25. A train overtakes two persons walking along a railway track. The first one walks at 4.5 km/hr. The other one walks at 5.4 km/ hr. The train needs 8.4 and 8.5 seconds respectively to overtake them. What is then speed of the train if both the persons are walking in the same direction as the train?
    (a) 66 km/hr   (b) 72 km/hr   (c) 78 km/hr   (d) 81 km/hr

26. Two trains running in opposite directions cross a man standing on the platform in 27 seconds and 17 seconds respectively and they cross each other in 23 seconds. The ratio of their speeds is:
    (a) 1: 3   (b) 3: 2   (c) 3: 4   (d) None of these

27. A can do a piece of work in 9 days and B in 18 days. They began the work together but 3 days before the completion of work, A leaves. The time taken to complete the work is:
    (a) 7 days   (b) 5 days   (c) 8 days   (d) 11 days

28. If 4 workers can dig 20 m long ditch in 6 days, find out the part dug by 2 workers in a day (in metre)?
    (a) $1\frac{2}{3}$ (b) $3\frac{2}{4}$ (c) $3\frac{2}{3}$ (d) $1\frac{3}{2}$

29. A and B together can complete a work in12 days. A alone can complete it in 20 days. If B now does the work for half a day daily. Then in how many days A and B together will complete the work?
    (a) 15 days   (b) 20 days   (c) 45 days   (d) 30 days

30. A, B and C can complete a work, working alone in 10, 15 and 20 days respectively. If all of them work together to complete the work. What fraction of the work would have done by B?
    (a) $\frac{4}{13}$ (b) $\frac{1}{2}$ (c) $\frac{1}{3}$ (d) $\frac{6}{13}$

31. A is thrice as efficient as B, and B is twice as efficient as C. If A, Band C work together, how long will they take to complete a job which B completes in 10 days?
    (a) $\frac{20}{9}$ days   (b) $\frac{11}{9}$ days   (c) 3 days   (d) None of these

32. A can do a piece of work in 7 days of 9 hr each, and B can do it in 6 days of 7 hr each. How long will they take to do it working together $\dfrac{42}{5}$ hr a day?

    (a) 3 days   (b) 4 days   (c) 4.5 days   (d) None

33. A can do a piece of work in 24 days. If B is 60% more efficient then the number of days required by B to do the twice as large as the earlier work is

    (a) 24   (b) 36   (c)15   (d) 30

34. A works twice as fast as B. If B can complete a work in 12 days independently, then the number of days in which A and B can together finish the work is:

    (a) 4 days   (b) 6 days   (c) 8 days   (d) 18 days

35. A leak in the bottom of a tank can empty it in 6 hr. A pipe fills the tank at 4 L/min. When the tank is full, the inlet is opened, but due to the leak the tank is emptied in 8 hr. What is the capacity of the tank?

    (a) 5,260 L   (b) 5,760 L   (c) 5,846 L   (d) 6,970 L

36. Because of a leak, a tank which usually is filled in 3 hrs, now takes 3.5 hrs to be filled. The leak alone will empty the filled tank in

    (a) 18 hrs   (b) 21 hrs   (c) 15 hrs   (d)   Cannot   be determine

37. A railway passenger counts the telegraph posts on the line as he passes them while travelling; If the poles are 50 m apart and the train is going at the speed of 48 km/hr. How many posts will be passed by the train per minute?

    (a) 15   (b) 16   (c) 18   (d) 20

38. A man is travelling by car at the rate of 40 km/hr. After every 80 km, he rests for 20 min. How long will it take to cover a distance of 240 km?

    (a) 6 hr 40 min   (b) 6 hr   (c) 6 hr 20 min   (d) 7 hr

39. In a camp of 100 students, there is ration which lasts for 8 days. After the first 2 days, 50 more students join them. How long will the ration last now? (Assume all the students have equal eating capacity)

    (a) 4 days   (b) 6 days   (c) 8 days   (d) None

ANSWER KEY

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
c	c	b	c	c	c	c	d	d	d	b	a	a	b	b	c	b	a	d	d	a	a	a	a	d

26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
b	c	a	a	a	a	a	d	a	b	b	b	a	a	a