Word problems for class 10

1. A man travels 600 km partly by train and partly by car. If he covers 400 km by train and the rest by car, it takes him 6 hours and 30 minutes. But if he travels 200 km by train and the rest by car, he takes half an hour longer. Find the speed of the train and that of the car. (1000 km/h ,80 km/h)

2. A two digit number is 4 times the sum of its digits. If 18 is added to the number; the digits are reversed. Find the number (24)

3. The sum of a two digit number and the number obtained by reversing the order of its digits is 99. If the digits differ by 3, find the number. (36 or 63)

4. The sum of a two digit number and the number formed by interchanging the digits is 110. If 10 is subtracted from the first number, the new number is 4 more than 5 times the sum of the digits in the first number. Find the first number . (64)

5. Two years ago a father was five times as old as his son. Two years later, his age will be 8 years more than three times the age of the son. Find the present ages of father and son. (C.B.S.E. 2004) (42 , 10 years)

6. The sum of the digits of a two digit number is 15. The number obtained by interchanging the digits exceeds the given number by 9. Find the number. . (C.B.S.E. 2004) (78)

7. The monthly incomes of A and B are in the ratio of 9: 7 and their monthly expenditures are in the ratio of 4: 3. If each saves Rs 1600 per month, find the monthly incomes of each. (C.B.S.E. 2004 C) (11400 ,11200)

8. A number consisting of two digits is equal to 7 times the sum of its digits. When 27 is subtracted from the number, the digits interchange their places. Find the number. (C.B.S.E. 2005) (63)

9. Abdul travels 300 km by train and 200 km by taxi and it takes him 5 hours 30 minutes to complete this journey. But if he travels 260 km by train and 240 km by taxi, it takes him 6 minutes longer than before to complete the journey. Find the speed of the train and that of taxi. (C.B.S.E. 2006) (100 km/h ,80 km/h)

10. A man sold a chair and a table together for Rs 1520 thereby making a profit of 25% on the chair and 10% on the table. By selling them together for Rs 1535, he would have made a profit of 10% on the chair and 25% on the table. Find the cost price of each.(C.B.S.E. 1996) (600 , 700)

11. The area of a rectangle gets reduced by 80 sq units if its length is reduced by 5 units and the breadth is increased by 2 units. If we increase the length by 10 units and decrease the breadth by 5 units, the area is increased by 50 sq units. Find the length and breadth of the rectangle. (C.B.S.E. 1998 C) (40 , 30)

12. Places A and B are 80 km apart from each other on a highway. A car starts from A and another from B at the same time. If they move in the same direction, they meet in 8 hours and if they move in opposite directions they meet in 1 hour 20 minutes. Find the speeds of the cars.(C.B.S.E. 2002) (35km/h , 25 km/h)

13. Father's age is three times the sum of ages of two children. After 5 years his age will be twice the sum of age of two children. Find the age of the father. (C.B.S.E. 2003)(45)

14. The sum of the numerator and denominator of a fraction is 8. If 3 is added to both the numerator and denominator the fraction becomes3/4 . Find the fraction.(C.B.S.E. 2003)
(¾)

15. A person invested some amount at 12% simple interest and some other amount at 10%, simple interest. He received yearly interest of Rs 130. But if he had interchanged the amounts invested, he would have received Rs 4 more as interest. How much amount did he invest at different rates? (500 , 700)

16. Students of a class are made to stand in rows. If 4 students are extra in a row, there would be 2 rows less. If 4 students are less in a row, there would be 4 more rows. Find the number of st. in the class. (96)

17.The ages of two girls are in the ratio 5 : 7. Eight years ago their ages were in the ratio 7: 13. Find their present ages. (15 and 21 years)

18. A number consists of two digits. When it is divided by the sum of the digits, the quotient is 6 with no remainder. When the number is diminished by 9, the digits are reversed. Find the number. (54)

19. A part of monthly hostel charges is fixed and the remaining depends on the number of days one has taken food in the mess. When a student A takes food for 20 days, he has to pay Rs 1000 as hostel charges whereas a student B, who takes food for 26 days pays Rs 1180 as hostel charges. Find the fixed charge and the cost of food per day.
(400 , 30)

20. The taxi charges in a city comprise of a fixed charge together with the charge for the distance covered. For a journey of 10 km, the charges paid are Rs 75 and for a journey of 15 km, the charges paid are Rs 110. What will a person have to pay for travelling a distance of 25 km. (180)

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