

Sample Paper – 2011
Class – X
Subject – Mathematics (linear equation)

1. Solve the following pair of equations graphically :

$$x + 2y = 5$$

$$2x + 3y = -4$$

Also find the points where the lines meet the x-axis.

2. Solve the following pair of linear equation graphically:

$$3x - 2y - 1 = 0$$

$$2x - 3y + 6 = 0$$

3. Solve the following pair of linear equations graphically:

$$2x + 3y = 8$$

$$x + 4y = 9$$

4. Solve the following pair of linear equation graphically:

$$x - 2y = 4$$

$$x - y = 3$$

5. 4 chairs and 3 tables cost Rs 2100 and 5 chairs and 2 tables cost Rs 1750. Find the cost of 1 chair and 1 table separately.
6. Five years ago, A was thrice as old as B and 10 years hence A shall be twice as old as B. what are the present ages of A and B?
7. In a two digit number, unit's digit is twice the ten's digit. If the digits are reversed, new number is 27 more than the original number. Find the number.
8. A and B are friends and A is elder to B by 2 years. A's father D is twice as old as A and B is twice as old as his sister C. if the ages of D and C differ by 40 years, find the age of A.
9. Ten years ago, father was twelve times as old as his son and ten years hence he will be twice as old as his son will be. Find their present ages.
10. A man has only 20 paise coins and 25 paise coins in his purse. If he has 50 coins in all totaling Rs 11.25, how many coins of each kind does he have?

11. The age of two girls are in the ratio 5:7 Eight years ago their ages were in the ratio 7:13. Find their present ages.
12. The taxi charges in a city comprise of a fixed charge together with the charge for the distance covered. For a journey of 10km, the charges paid are Rs 75 and for a journey of 15km, the charge paid are Rs 110. What will a person have to pay for travelling a distance of 25 km?
13. A man travels 600km partly by train and partly by car. If he covers 400km by train and the rest by car, it takes him 6 hours and 30 minutes. But if he travels 200 km by train and rest by car, he takes half an hour longer. Fine the speed of the train and that of the car.
14. 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.
15. Two years ago a father was five times as old as his son. Two years later, his age will be 8years more than three times the age of the son. Find the present ages of father and son.
16. 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 1600per month, find the monthly incomes of each.
17. 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.