Chapter-Pair of Linear Equations in Two Variables
Question bank

Q1.

On reversing the digits of a two digit number, number obtained is 9 less than three times the original number. If difference of these two numbers is 45, find the original number.

Q2.

4. Find the values of p and q for which the following pair of linear equations has infinitely many solutions:

(p+q)x + 3y = p-q

6x + (p-q)y = 3p+q

Q3.

5. The sum of the digits of a two-digit number is 9. If 27 is added to the number, the digits are reversed. Find the number.

Q4.

8. Two numbers are in the ratio 5:3. If 9 is subtracted from the larger number and 3 is added to the smaller number, the ratio becomes 2:1. Find the numbers.

Q5.

9. A motorboat goes 25 km upstream and 39 km downstream in 6 hours. In 6½ hours, it can go 27 km upstream and 42 km downstream. Find the speed of the motorboat in still water and the speed of the stream.

Q6.

Solve the following pair of linear equations for x and y:

141x + 93y = 189;

93x + 141y = 45 (2013)

Q7.

On reversing the digits of a two digit number, number obtained is 9 less than three times the original number. If difference of these two numbers is 45, find the original number. (

Q8.

The owner of a taxi company decides to run all the taxis on CNG fuel instead of petrol/diesel. The taxi charges in city comprises of fixed charges together with the charge for the distance covered. For a journey of 12 km, the charge paid is 789 and for journey of 20 km, the charge paid is ₹145.

What will a person have to pay for travelling a distance of 30 km?

Q9.

Find the value of a and p for which the following pair of linear equations has infinite number of solutions:

2x + 3y = 7;

αx + (α + β)y = 28 (2013)

Q10.

A boat takes 4 hours to go 44 km downstream and it can go 20 km upstream in the same time. Find the speed of the stream and that of the boat in still water. (2015)