Chapter- 4

Linear Equation in Two Variables

WORKSHEET

1 Mark

(1) The linear equation 2x – 5y =7 has
(a) a unique solution
(b) two solution
(c) infinitely many solutions
(d) no solution

(2) The equation 2x + 5y =7 has a unique solution, if x, y are
(a) natural numbers (b) positive real numbers
(c) real numbers (d) rational numbers

(3) The equation x =7, in two variables, can be written as
(a) 1.x + 1. Y =7 (b) 1.x + 0.y = 7
(c) 0.x +1.y=7 (d) 0.x +0.y =7

(4) If (2,0) is a solution of the linear equation 2x + 3y =k, then the value of k is
(a) 4 (b)6 (c) 5 (d) 2

(5) Any solution of the linear equation 2x + 0y +9 =0 in two variables is of the form.
(a) $\left(-\frac{9}{2}, m\right)$ (b) $\left(n, -\frac{9}{2}\right)$
(b) $\left(0, -\frac{9}{2}\right)$ (d) (–9,0)

2 Marks

(6) Verify that x =10 is the solution of the linear equation: $\frac{1}{3}(x-1) - \frac{1}{4}(x-2)=1$

(7) Solve the linear equation : $2x - 1 = \frac{x+1}{2}$

(8) Solve the equation for x: $\frac{2x-1}{2x-3} = \frac{3x+1}{3x-1}$

(9) Solve for x : $\frac{2x-3}{5} + \frac{x+3}{4} = \frac{2x+3}{4}$

(10) Solve for x: $\frac{4}{x+1} + \frac{5}{x+3} = \frac{9}{x+2}$, where $x \neq -1, -2, -3$.

3 Marks

(11) Write each of the following as an equation in two variables:

(i) x = –5 (ii) y =1

(12) Write each of the following equation in the form ax + by + c=0 and indicate the values of a, b and c in each case :

(i) $\sqrt{2}x$ –7y=3 (ii) πx + 5y =9 (iii) $\frac{x}{2} - \frac{y}{3} = 7$

(13) The cost of a notebook is twice the cost of a pen. Write a linear equation in two variables to represent this statement.

(14) In five day cricket test match between India and Pakistan played, in Lahore two Indian batsman together scored 247 runs. Express this information in the form of an equation.

(15) For the first kilometer, the auto fare is ₹12 and the subsequent distance is ₹ 7per km. Taking the distance covered as x km and the total fare as Rs.y, write a linear equation for this information.

4 Marks

(16) Draw the graph of the linear equation whose solutions are represented by the points having the sum of the coordinate as 10 units.

(17) The following values of x and y are thought to satisfy a linear equation:

x	1	2
y	1	3

Draw the graph, using the values of x, y, as given in the above table. At what point the graph of the linear equation.

(i) cuts the x-axis. (ii) cuts the y-axis.

(18) The following observed values of x and y are thought to satisfy a linear equation. Write the linear equation.

x	6	–6
y	–2	6

Draw the graph using the values of x, y as given in the above table. At what points the graph of the linear equation.

(i) cuts the x-axis (ii) cuts the y-axis.

(19) Show that the points A (1, 2), B (–1, –16) and C (0, –7) lie on the graph of the linear equation $y = 9x – 7$.

(20) Yamini and Fatima, two students of class IX of a school, together contributed ₹ 100 towards the Prime Minister's Relief Fund to help the earthquake victims. Write a linear equation which this data satisfies. (You may take their contribution as ₹x and ₹y). Draw the graph of the same.