

Chapter – 4

Linear Equations in Two Variables

1. Linear Equations
2. Solution of a Linear Equation
3. Graph of a Linear Equation in Two Variables
4. Equations of Lines Parallel to x-axis and y-axis

- An equation of the form $ax + by + c = 0$ where a , b and c are real numbers such that a and b are not both zero is called a linear equation in two variables.
- A pair of values of x and y which satisfy the equation $ax + by + c = 0$ is called a solution of the equation.
- **Graph:** The graph of every linear equation in two variables is a straight line. Every point on the graph of a linear equation in two variables is a solution of the linear equation. Conversely, every solution of the linear equation is a point on the graph of the linear equation.
- A linear equation in two variables has infinitely many solutions.
- The graph of every linear equation in two variables is a straight line.
- $y = 0$ is the equation of x-axis and $x = 0$ is equation of y-axis.
- The graph of $x = a$ is a straight line parallel to the y-axis.
- The graph of $y = a$ is a straight line parallel to the x-axis.
- An equation of the type $y = mx$ represent a line passing through the origin.