

Chapter 04

LINEAR EQUATIONS IN TWO VARIABLES

Equation of lines parallel to y-axis:

In Two Variables:

- ♦ A linear equation $y - a = 0$ is treated as an equation in two variables 'x' and 'y'. i.e., $0.x + 1.y = a$.
- ♦ It has infinitely many solutions.
- ♦ This can be represented geometrically, by the graph of $y = a$ is straight line parallel to the x-axis passing through the point $(0, a)$ in cartesian plane.

Example:

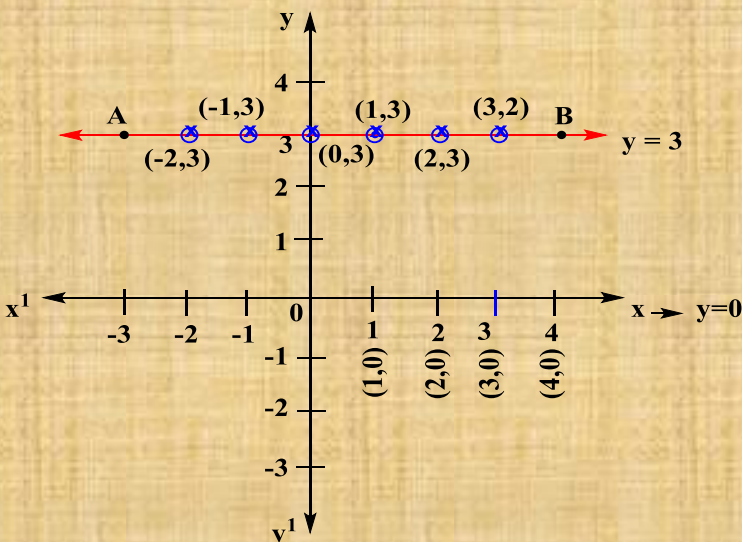
Represent $y - 3 = 0$ in two variables.

Solution:

In two variables $y - 3 = 0$ is $0.x + 1.y = 3$.

In this equation put 'x' is equal to any real number and $y = 3$ which is satisfied.

So the coordinates are: $(-2, 3)$, $(-1, 3)$, $(0, 3)$, $(1, 3)$, $(2, 3)$, $(3, 3)$,.



Note- 1:

- ◆ The graph AB is a straight line parallel to x-axis at a distance of 3 units to the above of it.

Note- 2:

- ◆ An equation $y = mx$ represents a line passing through the origin.

