## B BYJU'S

## Grade 09 Mathematics Chapter Notes



# BBYJU'S Classes 

## CHAPTER NOTES

## Linear Equations in dwo Variables

## Grade 09

## Topics to be Covered

1. Linear Equations in Two Variables

2. Solution of a<br>Linear Equation

## 1. Linear Equations in Two Variables

An equation of the form $a x+b y+c=0$, 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.

## Example:

$x-y=2$
Rearranging the equation in the form
$a x+b y+c=0$;

1. $x-1 . y-2=0$ where,
$a=1, b=-1$, and $c=-2$.

## 2. Solution of a Linear Equation

$4 x+3 y=12$
The solution to the above equation can be determined by following the below steps:

Step 1: Substitute $x=0$; we get

$$
\begin{aligned}
& 3 y=12 \\
& y=4 \\
& \text { So }(0,4) \text { is the solution of the given equation. }
\end{aligned}
$$

Step 2: Substitute $y=0$; we get
$4 x=12$
$x=3$
So $(3,0)$ is the solution of the given equation.
Similarly, we can find multiple solutions for the given equation by substituting any value for one variable and finding the value for other variable.

A linear equation in two variables has infinitely many solutions.

## Mind Map



