NCERT solutions for class 9 Maths Linear Equations in Two Variables Ex 4.4

Q1. Give the geometric representation of $y = 3$ as an equation

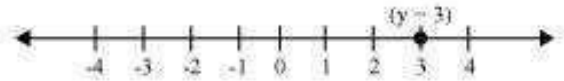
(i) In one variable

(ii) In two variables

Ans: (i) We need to represent the linear equation $y = 3$ geometrically in one variable.

We can conclude that in one variable, the geometric representation of the linear equation $y = 3$ will be same as representing the number 3 on a number line.

Given below is the representation of number 3 on the number line.



(ii) We need to represent the linear equation $y = 3$ geometrically in two variables.

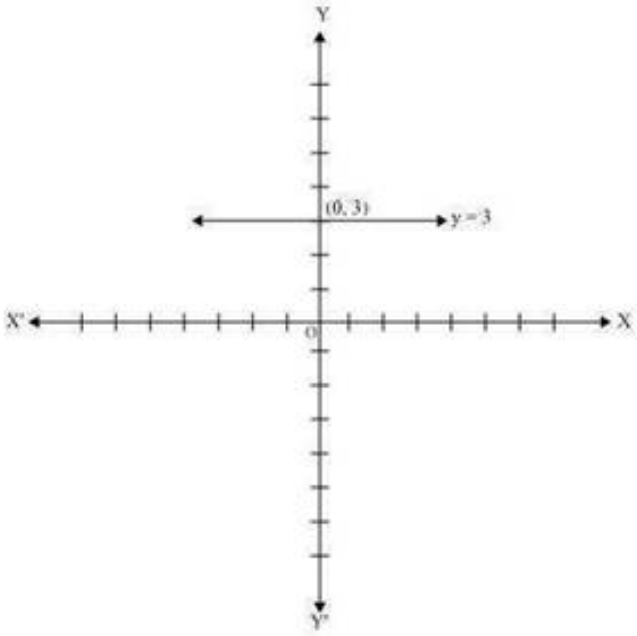
We know that the linear equation $y = 3$ can also be written as $0 \cdot x + y = 3$.

We can conclude that in two variables, the geometric representation of the linear equation $y = 3$ will be same as representing the graph of linear equation $0 \cdot x + y = 3$.

Given below is the representation of the linear equation $0 \cdot x + y = 3$ on a graph.

We can optionally consider the given below table for plotting the linear equation $0 \cdot x + y = 3$ on the graph.

X	1	0
y	3	3



Q2. Give the geometric representations of $2x+9=0$ as an equation

(i) In one variable

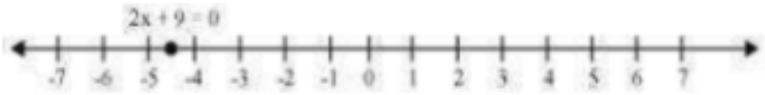
(ii) In two variables

Ans: (i) We need to represent the linear equation $2x+9=0$ geometrically in one variable.

We know that the linear equation $2x+9=0$ can also be written as $x=-\frac{9}{2}$ or $x=-4.5$.

We can conclude that in one variable, the geometric representation of the linear equation $2x+9=0$ will be same as representing the number -4.5 on a number line.

Given below is the representation of number 3 on the number line.



(ii) We need to represent the linear equation $2x+9=0$ geometrically in two variables.

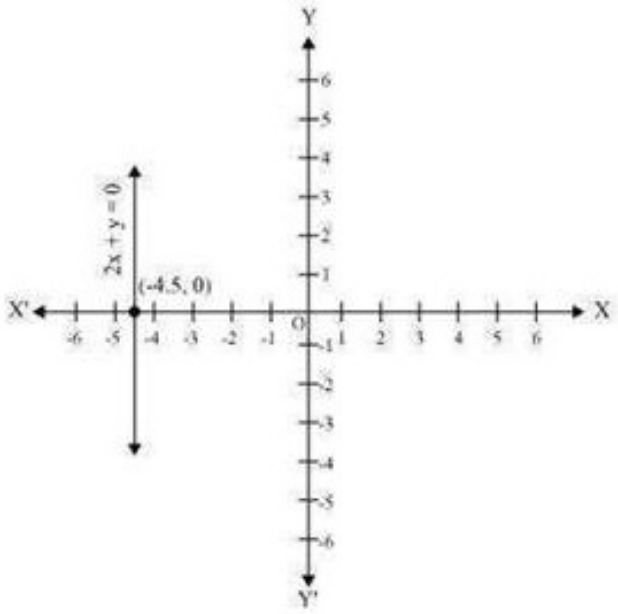
We know that the linear equation $2x+9=0$ can also be written as $2x+0\cdot y=9$.

We can conclude that in two variables, the geometric representation of the linear equation $2x+9=0$ will be same as representing the graph of linear equation $2x+0\cdot y=9$.

Given below is the representation of the linear equation $2x+0\cdot y=9$ on a graph.

We can optionally consider the given below table for plotting the linear equation $2x+0\cdot y=9$ on the graph.

X	1	0
y	4.5	4.5



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