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PERIOD 4

MATHEMATICS

CHAPTER NUMBER :~ 4
CHAPTER NAME :-LINEAR EQUATION IN TWO VARIABLES

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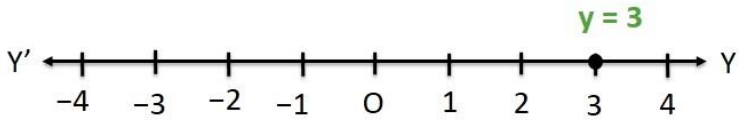
LEARNING OUTCOME:-

1.Students will be able to recapitulate Linear Equation In Two Variables.

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

(i) in one variable

In one variable, there is only y axis.(No x-axis)



Here y = 3 is a point

Hence, we can say that

in one variable y = 3 is a point

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

(ii) in two variables

In two variables, we have x and y axis

Hence, writing equation y = 3 in terms of x & y

$y = 3$

$0 + y = 3$

$0x + y = 3$ ...(1)

Putting x = 0 in (1)

$0(0) + y = 3$

$0 + y = 3$

$y = 3$

So, point is (0,3)

Putting x = 1 in (1)

$0(1) + y = 3$

$0 + y = 3$

$y = 3$

So, point is (1,3)

x	0	1
y	3	3

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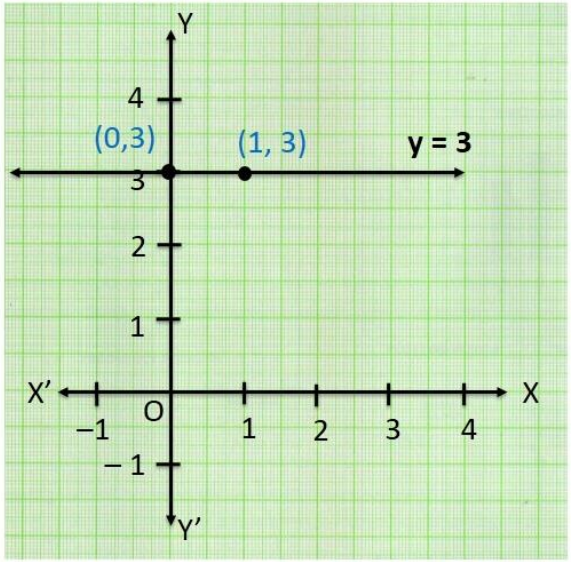
Plotting points on graph

x	0	1
y	3	3



Hence we can say that,

In two variables, y = 3 is line which is parallel to x axis

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

(i) in one variable

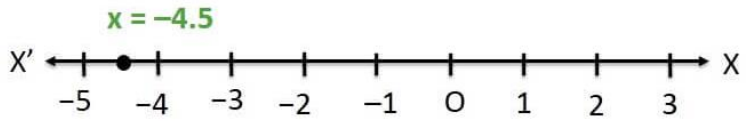
In one variable, there is only x axis.(No y-axis)

Solving $2x + 9 = 0$

$2x = -9$

$x = -\frac{9}{2}$

$x = -4.5$



Here, $2x + 9 = 0$ is a point

Hence, we can say that

in one variable $2x + 9 = 0$ is a point

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

(ii) in two variables

In two variables, we have x and y axis

Hence, writing equation $2x + 9 = 0$ in terms of x & y

$$2x + 9 = 0$$

$$0 + 2x + 9 = 0$$

$$0y + 2x + 9 = 0 \quad \ldots(1)$$

Putting y = 0 in (1)

$$0(0) + 2x + 9 = 0$$

$$0 + 2x + 9 = 0$$

$$2x = -9$$

$$x = \frac{-9}{2} = -4.5$$

So, point is (–4.5, 0)

Putting y = 1 in (1)

$$0(1) + 2x + 9 = 0$$

$$0 + 2x + 9 = 0$$

$$2x = -9$$

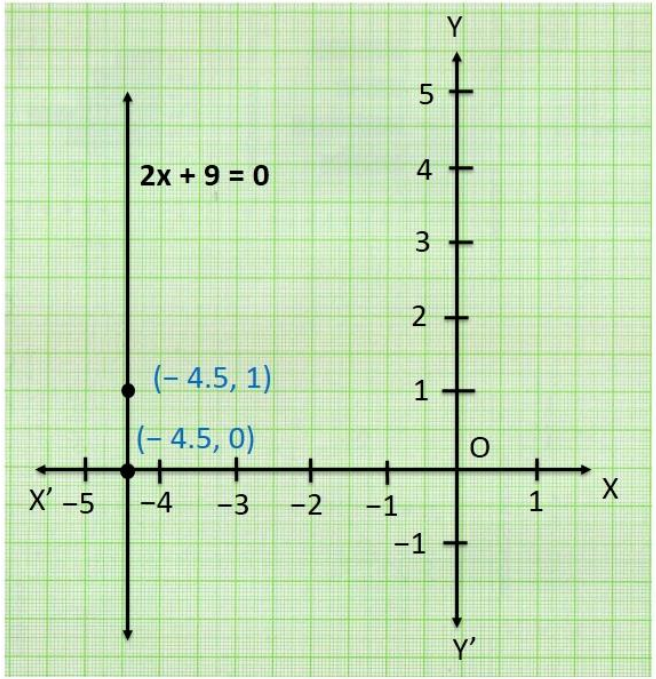
$$x = \frac{-9}{2} = -4.5$$

So, point is (–4.5, 1)

x	–4.5	–4.5
y	0	1

Plotting points on graph

x	–4.5	–4.5
y	0	1

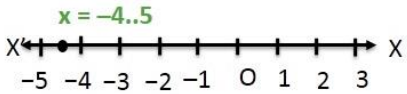


Hence we can say that,

In two variables, 2x + 9 = 0 is line which is parallel to y axis

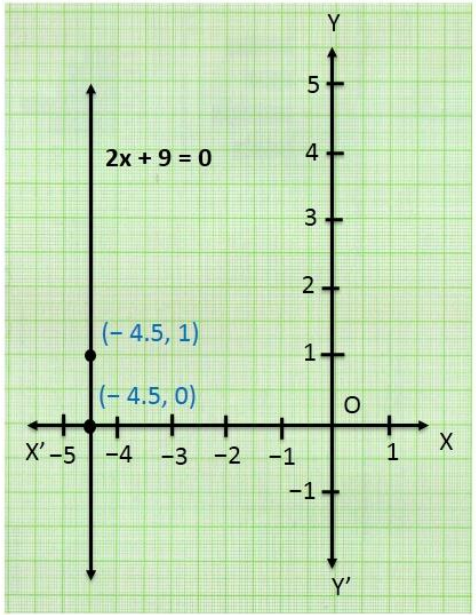
Comparison

One variable



2x+ 9 = 0 is a point

Two variable



2x + 9 = 0 is a line which is parallel to y-axis

HOMEWORK ASSIGNMENT

Exercise 4.4

AHA

1.For the first kilometer ,the auto fare is rs 12 and the subsequent distance is rs 7 per km.Taking distance covered as x km and the total fare as rs y write a linear equation .

THANKING YOU

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