Pair of Linear Equations in Two varibles Ex 3.2 Q12

Answer :

The given equations are

$x-2y=5 \quad .....(i)$

$3x-6y=15 \quad .....(ii)$

Putting $x=0$ in equation (i), we get:

$\Rightarrow 0-2y=5$

$\Rightarrow y=-5/2$

$x=0, \quad y=-5/2$

Putting $y=0$ in equations (i) we get:

$\Rightarrow x-2\times 0=5$

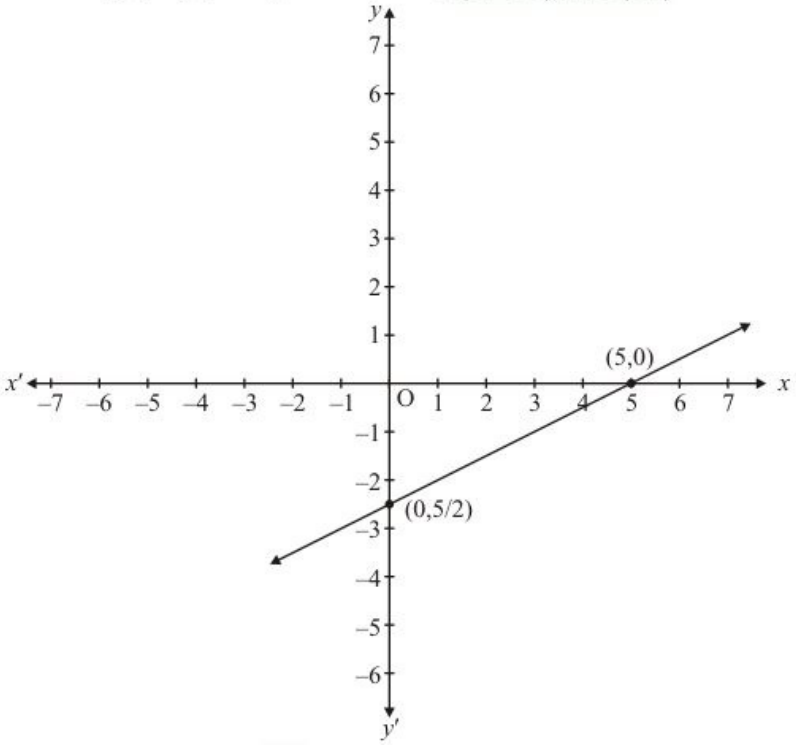
$\Rightarrow x=5$

$x=5, \quad y=0$

Use the following table to draw the graph.

x	0	5
y	$-5/2$	0

Draw the graph by plotting the two points $A(0,-5/2)$ and $B(5,0)$ from table



Graph of the equation....(ii):

$3x-6y=15$ .....(ii)

Putting $x=0$ in equations (ii) we get:

$\Rightarrow 3\times 0-6y=15$

$\Rightarrow y=-5/2$

$x=0, \quad y=-5/2$

Putting $y=0$ in equation (ii), we get:

$\Rightarrow 3x-6\times 0=15$

$\Rightarrow x=5$

$x=5, \quad y=0$

Use the following table to draw the graph.

x	0	5
y	$-5/2$	0

Draw the graph by plotting the two points $C(0,-5/2)$ and $D(5,0)$ from table.

Thus the graph of the two equations coincide

Consequently, every solution of one equation is a solution of the other.

Hence the equations have infinitely many solutions.

Pair of Linear Equations in Two varibles Ex 3.2 Q13

Answer :

The given equations are

$3x + y = 8 \quad .....(i)$

$6x + 2y = 16 \quad .....(ii)$

Putting $x = 0$ in equation (i), we get:

$\Rightarrow 3 \times 0 + y = 8$

$\Rightarrow y = 8$

$x = 0, \quad y = 8$

Putting $y = 0$ in equations (i) we get:

$\Rightarrow 3x + 0 = 8$

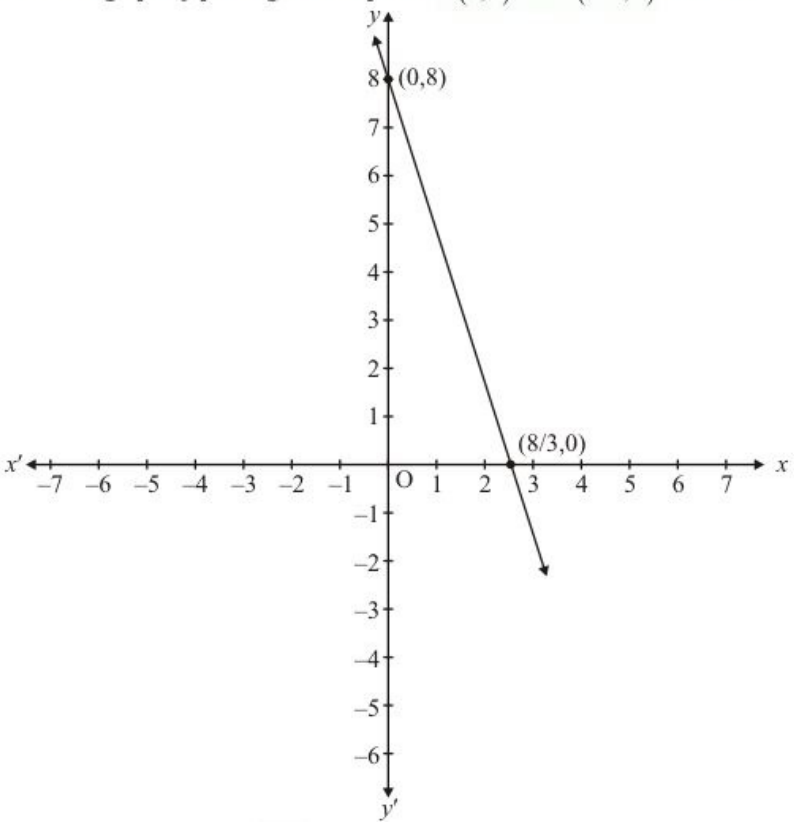
$\Rightarrow x = 8/3$

$x = 8/3, \quad y = 0$

Use the following table to draw the graph.

x	0	$8/3$
y	8	0

Draw the graph by plotting the two points $A(0,8)$ *and* $B(8/3,0)$ from table.



Graph of the equation....(ii):

$6x+2y=16$ .....(ii)

Putting $x=0$ in equations (ii) we get:

$\Rightarrow 6\times 0+2y=16$

$\Rightarrow y=8$

$x=0, \quad y=8$

Putting $y=0$ in equation (ii), we get:

$\Rightarrow 6x+2\times 0=16$

$\Rightarrow x=8/3$

$x=8/3, \quad y=0$

Use the following table to draw the graph.

x	0	$8/3$
y	8	0

Draw the graph by plotting the two points $C(0,8), D(8/3,0)$ from table.

Thus the graph of the two equations coincide

Consequently, every solution of one equation is a solution of the other.

Hence the equations have infinitely many solutions.

********** END **********