Pair of Linear Equations in Two varibles Ex 3.2 Q16

Answer :

The given equations are

$x-2y=6 \quad .....(i)$

$3x-6y=0 \quad .....(ii)$

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

$\Rightarrow 0-2y=6$

$\Rightarrow y=-3$

$\Rightarrow x=0, \quad y=-3$

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

$\Rightarrow x-2\times 0=6$

$\Rightarrow x=6$

$\Rightarrow x=6, \quad y=0$

Use the following table to draw the graph.

x	0	6
y	-3	0

The graph of (i) can be obtained by plotting the two points $A(0,-3), B(6,0)$.

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

$3x-6y=0 \quad .....(ii)$

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

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

$\Rightarrow y=0$

$\Rightarrow x=0, \quad y=0$

Putting $y=1$ in equation (ii), we get:

$\Rightarrow 3x-6\times 1=0$

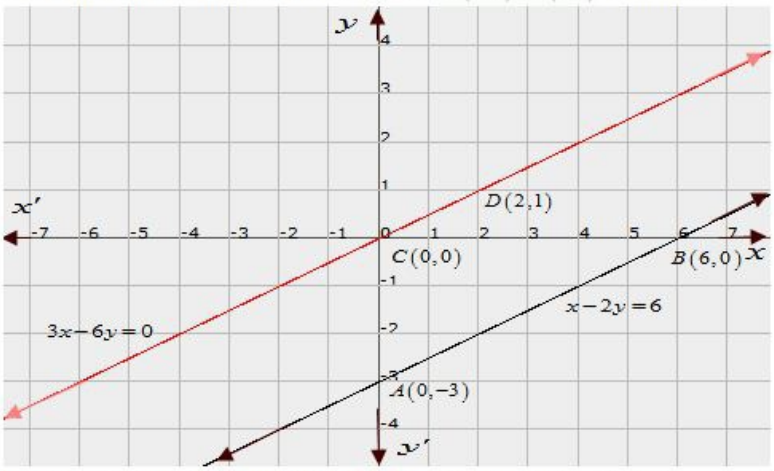
$\Rightarrow x=2$

$\Rightarrow x=2, \quad y=1$

Use the following table to draw the graph.

x	0	2
y	0	1

Draw the graph by plotting the two points $C(0,0), D(2,1)$ from table.



Here the two lines are parallel and so there is no point in common

Hence the given system of equations has no solution.

Pair of Linear Equations in Two varibles Ex 3.2 Q17

Answer :

The given equations are

$2y - x = 9 \quad .....(i)$

$6y - 3x = 21 \quad .....(ii)$

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

$\Rightarrow 2y - 0 = 9$

$\Rightarrow y = 9/2$

$\Rightarrow x = 0, \quad y = 9/2$

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

$\Rightarrow 2 \times -x = 9$

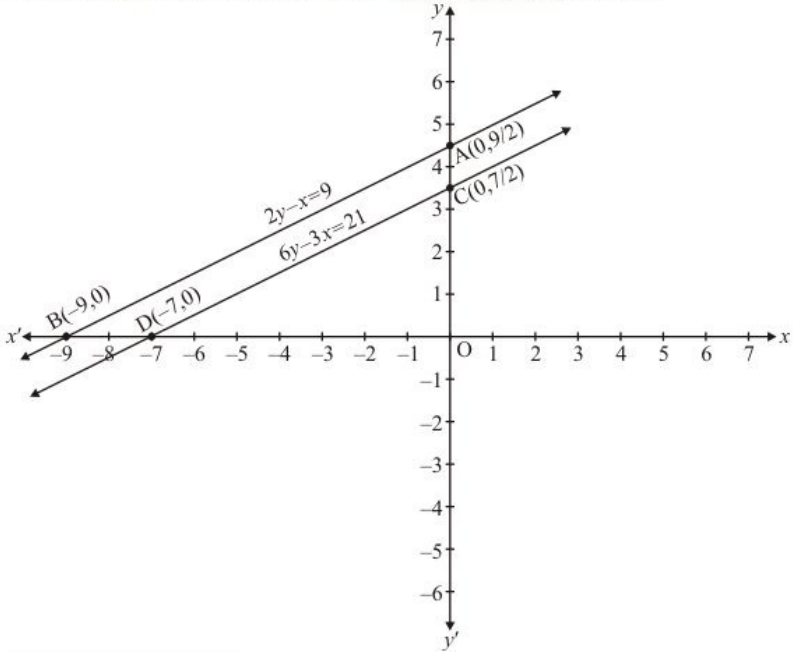
$\Rightarrow x = -9$

$\Rightarrow x = -9, \quad y = 0$

Use the following table to draw the graph.

x	0	-9
y	$9/2$	0

Draw the graph by plotting the two points $A(0,9/2), B(-9,0)$ from table.



$6y-3x=21 \quad .....(ii)$

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

$\Rightarrow 6y-3\times 0=21$

$\Rightarrow y=7/2$

$\Rightarrow x=0, \quad y=7/2$

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

$\Rightarrow 6\times 0-3x=21$

$\Rightarrow x=-7$

$\therefore x=-7, \quad y=0$

Use the following table to draw the graph.

x	0	-7
y	$7/2$	0

Draw the graph by plotting the two points $C(0,7/2), D(-7,0)$ from table.

Here two lines are parallel and so don't have common points

Hence the given system of equations has no solution.

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