Pair of Linear Equations in Two varibles Ex 3.2 Q3

Answer :

The given equations are

$$3x + y + 1 = 0 \quad \quad ....(i)$$

$$2x - 3y + 8 = 0 \quad \quad ....(ii)$$

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

$$\Rightarrow 3 \times 0 + y = -1$$

$$\Rightarrow y = -1$$

$$x = 0, \quad y = -1$$

Putting $y = 0$ in equation $(i,)$ we get:
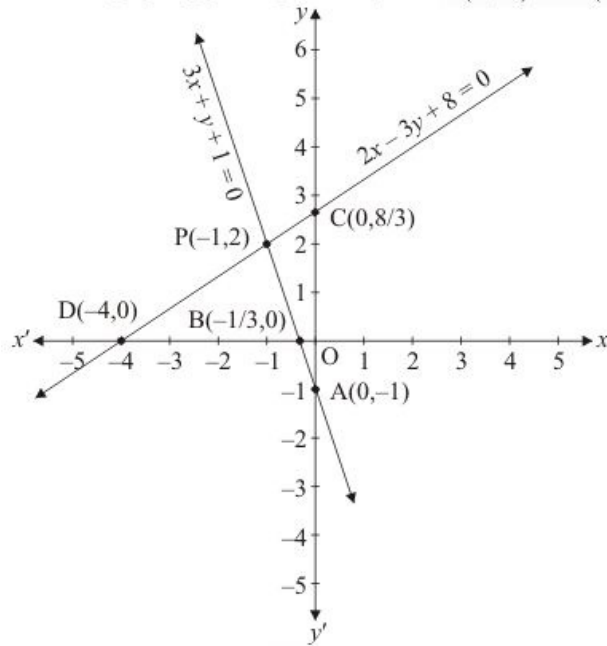
$$\Rightarrow 3x + 0 = -1$$

$$\Rightarrow x = -1/3$$

$$x = -1/3, \quad \quad y = 0$$

Use the following table to draw the graph.

x	0	−1/3
y	−1	0

Draw the graph by plotting the two points $A(0,-1)$ and $B(-1/3,0)$ from table.

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

$2x - 3y = -8$ ......(ii)

Putting $x = 0$ in equation (ii) we ge

$\Rightarrow 2 \times 0 - 3y = -8$

$\Rightarrow y = 8/3$

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

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

$\Rightarrow 2x - 3 \times 0 = -8$

$\Rightarrow x = -4$

$x = -4, \quad y = 0$

Use the following table to draw the graph.

x	0	-4
y	8/3	0

Draw the graph by plotting the two points $C(0,8/3)$ and $D(-4,0)$ from table.

The two lines intersect at points $P(-1,2)$.

Hence $\boxed{x = -1, \quad y = 2}$ is the solution.

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