



Pair of Linear Equations in Two variables Ex 3.2 Q25

Answer :

The given equations are

$$2x + 3y = 12 \quad \dots\dots(i)$$

$$x - y = 1 \quad \dots\dots(ii)$$

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

$$\Rightarrow 2 \times 0 + 3y = 12$$

$$\Rightarrow y = 4$$

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

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

$$\Rightarrow x + 3 \times 0 = 6$$

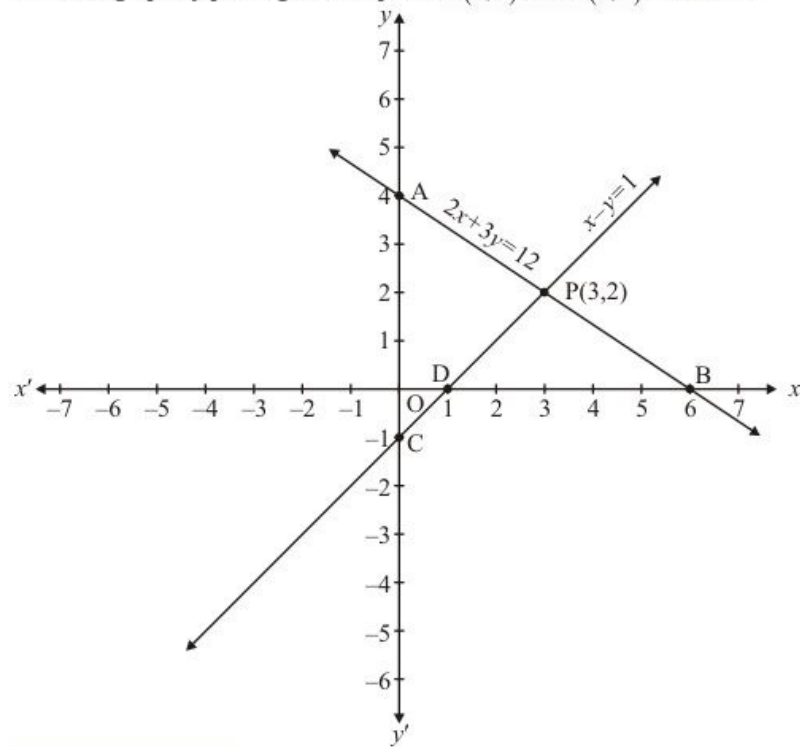
$$\Rightarrow x = 6$$

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

Use the following table to draw the graph.

x	0	6
y	4	0

Draw the graph by plotting the two points $A(0,2)$ and $B(6,0)$ from table.



$$x - y = 1 \quad \dots\dots(ii)$$

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

$$\Rightarrow 0 - y = 1$$

$$\Rightarrow y = -1$$

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

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

$$\Rightarrow x - 0 = 1$$

$$\Rightarrow x = 1$$

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

Use the following table to draw the graph.

x	0	1
y	-1	0

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

Draw the graph by plotting the two points from table.

The intersection point is $P(3, 2)$

Three points of the triangle are $A(0, 4), C(0, -1)$ and $P(3, 2)$.

Hence the value of $x = 3$ and $y = 2$

Pair of Linear Equations in Two variables Ex 3.2 Q26

Answer :

The given equations are

$$x - y + 1 = 0 \quad \dots\dots(i)$$

$$3x + 2y - 12 = 0 \quad \dots\dots(ii)$$

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

$$\Rightarrow 0 - y = -1$$

$$\Rightarrow y = 1$$

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

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

$$\Rightarrow x - 0 = -1$$

$$\Rightarrow x = -1$$

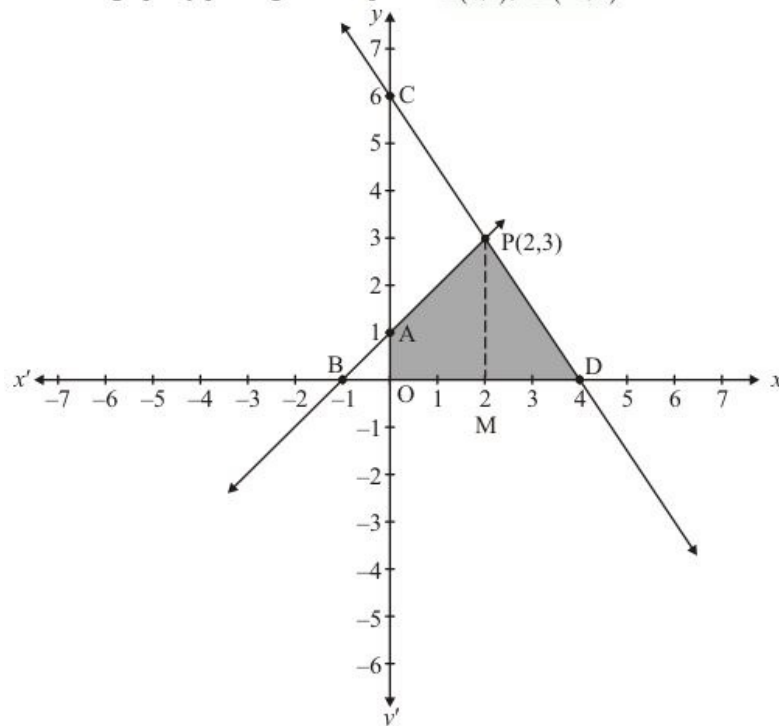
$$x = -1, \quad y = 0$$

Use the following table to draw the graph.

$$\begin{array}{ccc} x & 0 & -1 \end{array}$$

$$\begin{array}{ccc} y & 1 & 0 \end{array}$$

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



$$3x + 2y = 12 \quad \dots\dots(ii)$$

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

$$\Rightarrow 3 \times 0 + 2y = 12$$

$$\Rightarrow y = 6$$

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

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

$$\Rightarrow 3x + 2 \times 0 = 12$$

$$\Rightarrow x = 4$$

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

Use the following table to draw the graph.

x	0	4
y	6	0

Draw the graph by plotting the two points $C(0,6), D(4,0)$ from table.

The two lines intersect at $P(2,3)$.

Now, Required area = Area of shaded region.

$$\Rightarrow \text{Required area} = \text{Area of PBD}$$

$$\Rightarrow \text{Required area} = 1/2 (\text{base} \times \text{height})$$

$$\Rightarrow \text{Required area} = 1/2 (BD \times PM)$$

$$\Rightarrow \text{Required area} = 1/2 (5 \times 3) \text{sq. units}$$

Hence the area = 7.5 sq.units

***** END *****