Pair of Linear Equations in Two varibles Ex 3.2 Q32

Answer :

The given equations are:

$4x-5y-20=0 \quad .....(i)$

$3x+5y-15=0 \quad .....(ii)$

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

$\Rightarrow 4\times 0-5y=20$

$\Rightarrow y=-4$

$x=0, \quad y-4$

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

$\Rightarrow 4x-5\times 0=20$

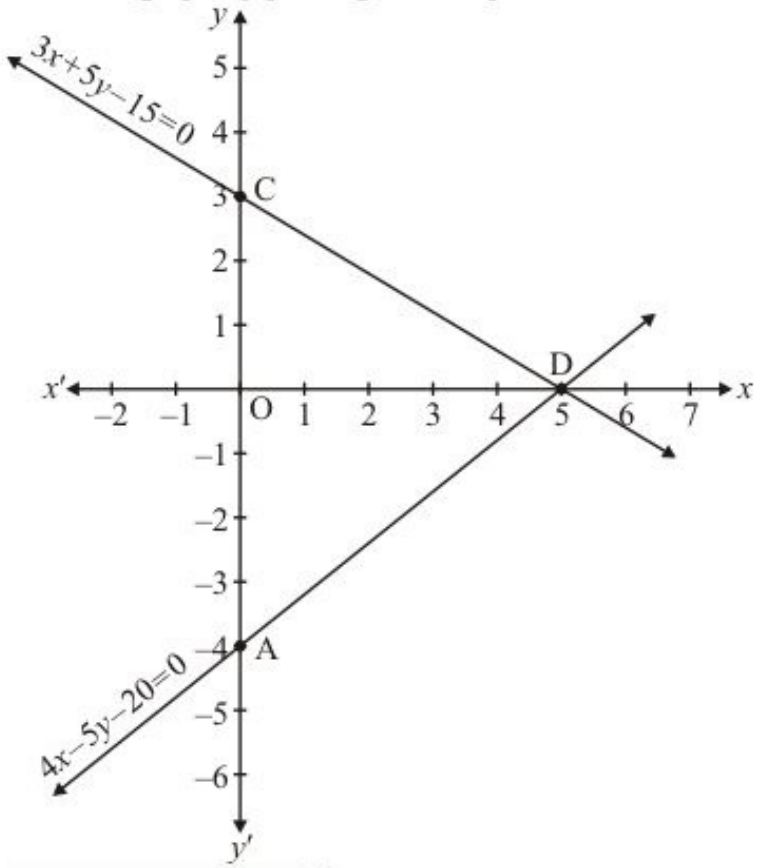
$\Rightarrow x=5$

$x=5, \quad y=0$

Use the following table to draw the graph.

x	0	5
y	–4	0

Draw the graph by plotting the two points from table



$3x+5y=15 \quad .....(ii)$

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

$\Rightarrow 3\times 0+5y=15$

$\Rightarrow y=3$

$x=0, \quad y=3$

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

$\Rightarrow 3x+5\times 0=15$

$\Rightarrow x=5$

$x=5, \quad y=0$

Use the following table to draw the graph.

x	0	5
y	3	0

Draw the graph by plotting the two points from table.

The three vertices of the triangle are $A(0,-4), B(5,0) and C(0,3)$.

Hence the solution of the equation is $\boxed{x=5}$ and $\boxed{y=0}$

Pair of Linear Equations in Two varibles Ex 3.2 Q33

Answer :

The given equations are:

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

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

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

$\Rightarrow 5 \times 0 - y = 5$

$\Rightarrow y = -5$

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

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

$\Rightarrow 5x - 0 = 5$

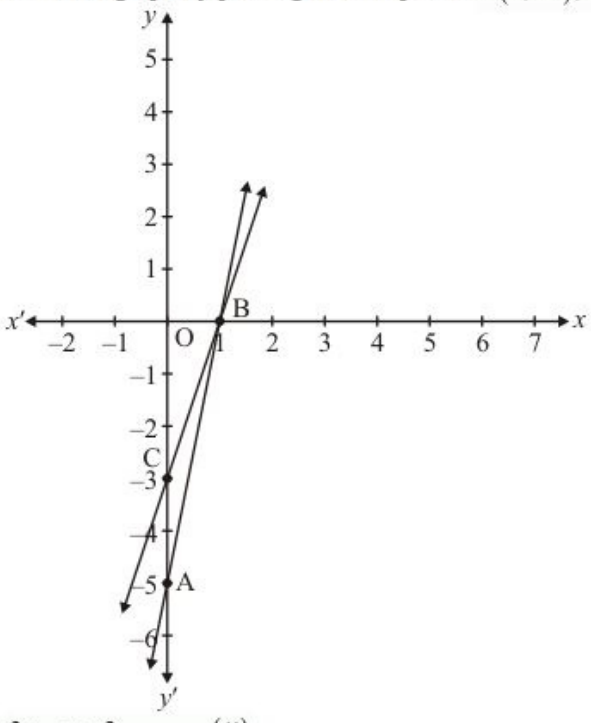
$\Rightarrow x = 1$

$x = 1, \quad y = 0$

Use the following table to draw the graph.

x	0	1
y	-5	0

Draw the graph by plotting the two points $A(0,-5), B(1,0)$ from table



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

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

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

$\Rightarrow y=-3$

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

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

$\Rightarrow 3x-0=3$

$\Rightarrow x=1$

$x=1, \quad y=0$

Use the following table to draw the graph.

x	0	1
y	-3	0

Draw the graph by plotting the two points $C(0,-3), D(1,0)$ from table.

Hence the vertices of the required triangle are $B(1,0), C(0,-3)$ and $A(0,-5)$.

Now,

$\Rightarrow$ Required area = Area of PCA

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

$\Rightarrow$ Required area = $1/2(2\times 1)$ sq. units

Hence the required area is $\boxed{1 \text{ sq.units}}$

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