

Pair of Linear Equations in Two varibles Ex 3.2 Q32

## Answer:

The given equations are:

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

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

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

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

$$\Rightarrow y = -4$$

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

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

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

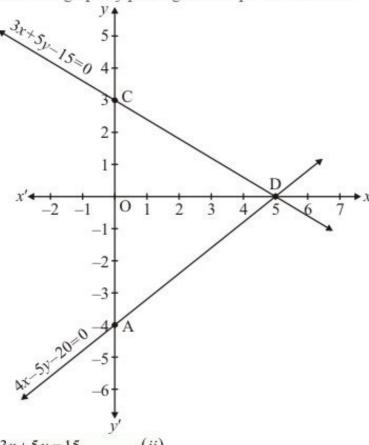
$$\Rightarrow x = 5$$

$$x = 5,$$
  $y = 0$ 

Use the following table to draw the graph.

| X | 0  | 5 |
|---|----|---|
| y | -4 | 0 |

Draw the graph by plotting the two points from table



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

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

$$\Rightarrow$$
 3×0+5y=15

$$\Rightarrow y = 3$$

$$x = 0, y = 3$$

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

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

$$\Rightarrow x = 5$$

$$x = 5, y = 0$$

Use the following table to draw the graph.

| X | 0 | 5 |
|---|---|---|
| v | 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 x = 5 and y = 0

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## Answer:

The given equations are:

$$5x - y = 5 \qquad \dots (i)$$

$$3x - y = 3 \qquad \dots (ii)$$

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

$$\Rightarrow$$
 5×0-y=5

$$\Rightarrow y = -5$$

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

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

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

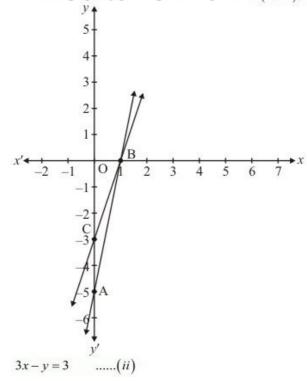
$$\Rightarrow x = 1$$

$$x = 1, y = 0$$

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



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

- ⇒ Required area = Area of PCA
- ⇒ Required area = 1/2 (base×height)
- ⇒Required area = 1/2(2×1)sq.units

Hence the required area is 1 sq.units

