



Pair of Linear Equations in Two variables Ex 3.2 Q18

Answer :

The given equations are

$$3x - 4y - 1 = 0 \quad \dots\dots(i)$$

$$2x - \frac{8}{3}y + 5 = 0$$

$$6x - 8y + 15 = 0 \quad \dots\dots(ii)$$

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

$$\Rightarrow 3 \times 0 - 4y = 1$$

$$\Rightarrow y = -1/4$$

$$\Rightarrow x = 0, \quad y = -1/4$$

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

$$\Rightarrow 3x - 4 \times 0 = 1$$

$$\Rightarrow x = 1/3$$

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

Use the following table to draw the graph.

x	0	$1/3$
y	$-1/4$	0

The graph of (i) can be obtained by plotting the two points $A(0, -1/4), B(1/3, 0)$.

$$6x - 8y = -15 \quad \dots\dots(ii)$$

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

$$\Rightarrow 6 \times 0 - 8y = -15$$

$$\Rightarrow y = 15/8$$

$$\Rightarrow x = 0, \quad y = 15/8$$

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

$$\Rightarrow 6x - 8 \times 0 = -15$$

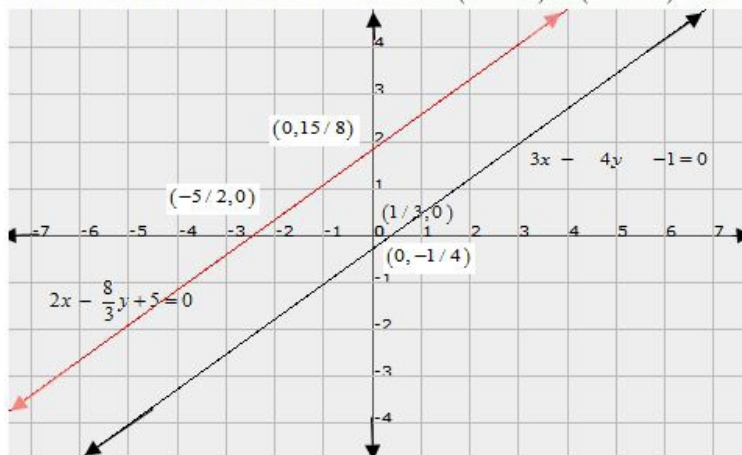
$$\Rightarrow x = -15/6$$

$$\Rightarrow x = -5/2, \quad y = 0$$

Use the following table to draw the graph.

x	0	$-5/2$
y	$15/8$	0

Draw the graph by plotting the two points $C(0, 15/8), D(-5/2, 0)$ from table.



Here, the two lines are parallel.

Hence the given system of equations is inconsistent.

Pair of Linear Equations in Two variables Ex 3.2 Q19

Answer :

(i) Draw the 3 lines as given by equations

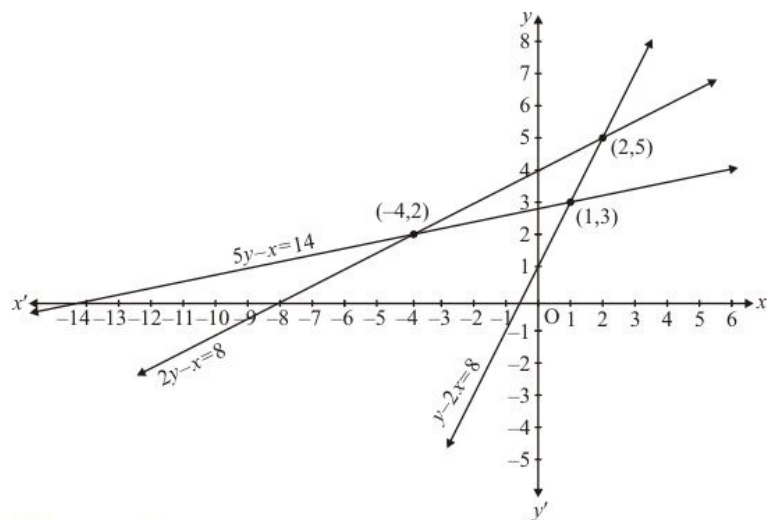
By taking $x=1 = 1$ cm on x -axis

And $y =1=1$ cm on y -axis

$$\frac{y}{4} - \frac{x}{8} = 1$$

$$\frac{y}{2.8} - \frac{x}{14} = 1$$

$$\frac{y}{1} - \frac{x}{0.5} = 1$$



Clearly from graph points of intersection three lines are

$(-4, 2)$, $(1, 3)$, $(2, 5)$

(ii) Draw the 3 lines as given by equations

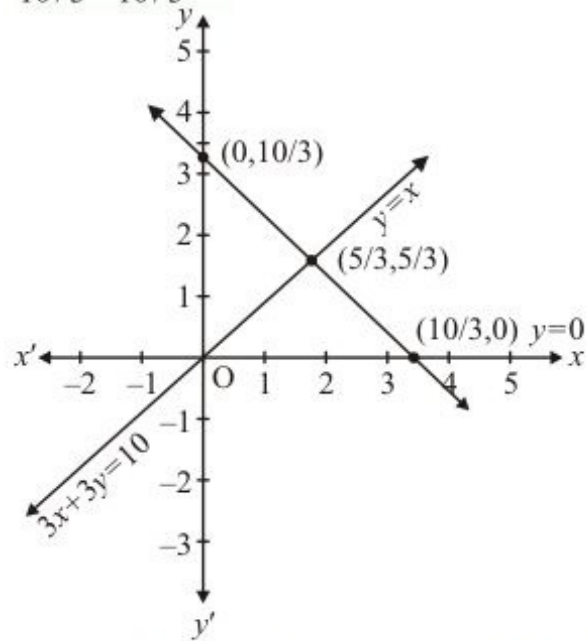
By taking $x=1 = 1$ cm on x -axis

And $y =1=1$ cm on y -axis

$y = 0$

$$y = x$$

$$\frac{y}{10/3} + \frac{x}{10/3} = 1$$



From graph point of intersection are $(0,0)$ $(10/3,0)$ $(5/3,5/3)$

***** END *****