Pair of Linear Equations in Two varibles Ex 3.3 Q1

Answer :

The given equations are:

$11x + 15y + 23 = 0$ ...(i)

$7x - 2y - 20 = 0$ ...(ii)

Multiply equation (i) by 2 and equation (ii) by 15, and add both equations we get

$$22x + 30y + 46 = 0$$
$$\underline{105x - 30y - 300 = 0}$$
$$127x - 254 = 0$$
$$\Rightarrow x = 2$$

Put the value of x in equation (i) we get

$11 \times 2 + 15y + 23 = 0$

$\Rightarrow 15y = -45$

$\Rightarrow y = -3$

Hence the value of $\boxed{x = 2}$ and $\boxed{y = -3}$

Pair of Linear Equations in Two varibles Ex 3.3 Q2

Answer :

The given equations are:

$3x - 7y + 10 = 0$ ... (i)

$y - 2x - 3 = 0$ ... (ii)

Multiply equation (i) by 2 and equation (ii) by 3, and add both equations we get

$6x - 14y + 20 = 0$

$\underline{3y - 6x - 9 = 0}$

$-11y + 11 = 0$

$\Rightarrow y = 1$

Put the value of y in equation (i) we get

$3x - 7 \times 1 + 10 = 0$

$\Rightarrow 3x = -3$

$\Rightarrow x = -1$

Hence the value of $\boxed{x = -1}$ and $\boxed{y = 1}$

Pair of Linear Equations in Two varibles Ex 3.3 Q3

Answer :

The given equations are:

$0.4x + 0.3y = 1.7$ ... (i)

$0.7x - 0.2y = 0.8$ ... (ii)

Multiply equation (i) by 2 and equation (ii) by 3, and add both equations we get

$0.8x + 0.6y = 3.4$

$\underline{2.1x - 0.6y = 2.4}$

$2.9x = 5.8$

$\Rightarrow x = 2$

Put the value of x in equation (i) we get

$0.4 \times 2 + 0.3y = 1.7$

$\Rightarrow 0.3y = 0.9$

$\Rightarrow y = 3$

Hence the value of $\boxed{x = 2}$ and $\boxed{y = 3}$

Answer :

The given equations are:

$$\frac{x}{2} + y = 0.8 \quad \dots (i)$$

$$\frac{7}{x + \frac{y}{2}} = 10$$

$$\Rightarrow 2x + y = 1.4 \dots (ii)$$

Subtract (ii) from (i) we get

$$\frac{x}{2} + y = 0.8$$

$$\underline{2x + y = 1.4}$$

$$-3x = -1.2$$

$$\Rightarrow x = 0.4$$

Put the value of x in equation (ii) we get

$$2 \times 0.4 + y = 1.4$$

$$\Rightarrow y = 0.6$$

Hence the value of $\boxed{x = 0.4}$ and $\boxed{y = 0.6}$.

Pair of Linear Equations in Two varibles Ex 3.3 Q5

Answer :

The given equations are:

$7(y+3) - 2(x+2) = 14$ ... (i)
$7y - 2x = -3$

$4(y-2) + 3(x-3) = 2$ ... (ii)
$4y + 3x = 19$

Multiply equation (i) by 3 and equation (ii) by 2 and add both equations we get

$21y - 6x = -9$
$\underline{8y + 6x = 38}$
$29y = 29$
$\Rightarrow y = 1$

Put the value of x in equation (i) we get

$7 \times 1 - 2x = -3$
$\Rightarrow -2x = -10$
$\Rightarrow x = 5$

Hence the value of $\boxed{x = 5}$ and $\boxed{y = 1}$

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