



Pair of Linear Equations in Two variables Ex 3.3 Q1

Answer :

The given equations are:

$$11x + 15y + 23 = 0 \quad \dots (i)$$

$$7x - 2y - 20 = 0 \quad \dots (ii)$$

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

$$22x + 30y + 46 = 0$$

$$105x - 30y - 300 = 0$$

$$127x - 254 = 0$$

$$\Rightarrow x = 2$$

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 $x = 2$ and $y = -3$

Pair of Linear Equations in Two variables Ex 3.3 Q2

Answer :

The given equations are:

$$3x - 7y + 10 = 0 \quad \dots (i)$$

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

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

$$6x - 14y + 20 = 0$$

$$3y - 6x - 9 = 0$$

$$-11y + 11 = 0$$

$$\Rightarrow y = 1$$

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 $x = -1$ and $y = 1$

Pair of Linear Equations in Two variables Ex 3.3 Q3

Answer :

The given equations are:

$$0.4x + 0.3y = 1.7 \quad \dots (i)$$

$$0.7x - 0.2y = 0.8 \quad \dots (ii)$$

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

$$0.8x + 0.6y = 3.4$$

$$2.1x - 0.6y = 2.4$$

$$2.9x = 5.8$$

$$\Rightarrow x = 2$$

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 $x = 2$ and $y = 3$

Answer :

The given equations are:

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

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

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

Subtract (ii) from (i) we get

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

$$2x + y = 1.4$$

$$-3x = -1.2$$

$$\Rightarrow x = 0.4$$

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 $x = 0.4$ and $y = 0.6$.**Answer :**

The given equations are:

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

$$7y - 2x = -3$$

$$4(y-2) + 3(x-3) = 2 \dots (ii)$$

$$4y + 3x = 19$$

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

$$21y - 6x = -9$$

$$8y + 6x = 38$$

$$29y = 29$$

$$\Rightarrow y = 1$$

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

$$7 \times 1 - 2x = -3$$

$$\Rightarrow -2x = -10$$

$$\Rightarrow x = 5$$

Hence the value of $x = 5$ and $y = 1$

***** END *****

