



Pair of Linear Equations in Two variables Ex 3.3 Q14

**Answer :**

The given equations are:

$$0.5x + 0.7y = 0.74 \dots (i)$$

$$0.3x + 0.5 = 0.5 \dots (ii)$$

Multiply equation (i) by 0.5 and (ii) by 2 and subtract equation (ii) from (i) we get

$$0.25x + 0.35y = 0.37$$

$$0.21x + 0.35y = 0.35$$

$$0.04x = 0.02$$

$$\Rightarrow x = 0.5$$

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

$$0.5 \times 0.5 + 0.7y = 0.74$$

$$\Rightarrow 0.7y = 0.49$$

$$\Rightarrow y = 0.7$$

Hence the value of  $x = 0.5$  and  $y = 0.7$

Pair of Linear Equations in Two variables Ex 3.3 Q15

**Answer :**

The given equations are:

$$\frac{1}{7x} + \frac{1}{6y} = 3 \dots (i)$$

$$\frac{1}{2x} - \frac{1}{3y} = 5 \dots (ii)$$

Multiply equation (ii) by  $\frac{1}{2}$  and add both equations we get

$$\frac{1}{7x} + \frac{1}{6y} = 3$$

$$\frac{1}{4x} - \frac{1}{6y} = \frac{5}{2}$$

$$\frac{11}{28x} = \frac{11}{2}$$

$$\Rightarrow x = \frac{1}{14}$$

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

$$\frac{1}{7 \times \frac{1}{14}} + \frac{1}{6y} = 3$$

$$\Rightarrow \frac{1}{6y} = 1$$

$$\Rightarrow y = \frac{1}{6}$$

Hence the value of  $x = \frac{1}{14}$  and  $y = \frac{1}{6}$

Pair of Linear Equations in Two variables Ex 3.3 Q16

**Answer :**

The given equations are:

$$\frac{1}{2x} + \frac{1}{3y} = 2 \dots (i)$$

$$\frac{1}{3x} + \frac{1}{2y} = \frac{13}{6} \dots (ii)$$

Multiply equation (i) by  $\frac{1}{2}$  and (ii) by  $\frac{1}{3}$  and subtract equation (ii) from (i) we get

$$\frac{1}{4x} + \frac{1}{6y} = 1$$

$$\frac{1}{9x} + \frac{1}{6y} = \frac{13}{18}$$

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$$\frac{5}{36x} = \frac{5}{18}$$

$$\Rightarrow x = \frac{1}{2}$$

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

$$\frac{1}{2 \times \frac{1}{2}} + \frac{1}{3y} = 2$$

$$\frac{1}{3y} = 2 - 1$$

$$\frac{1}{3y} = 1$$

$$y = \frac{1}{3}$$

Hence the value of  $x = \frac{1}{2}$  and  $y = \frac{1}{3}$

\*\*\*\*\* END \*\*\*\*\*

