



### Pair of Linear Equations in Two variables Ex 3.3 Q11

**Answer :**

The given equations are:

$$\sqrt{2}x - \sqrt{3}y = 0 \dots (i)$$

$$\sqrt{3}x - \sqrt{8}y = 0 \dots (ii)$$

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

$$\sqrt{6}x - 3y = 0$$

$$\sqrt{6}x - 2\sqrt{6}y = 0$$

$$(2\sqrt{6} - 3)y = 0$$

$$\Rightarrow y = 0$$

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

$$\sqrt{2}x + 0 \times y = 0$$

$$\Rightarrow x = 0$$

Hence the value of  $x = 0$  and  $y = 0$

### Pair of Linear Equations in Two variables Ex 3.3 Q12

**Answer :**

The given equations are:

$$3x - \frac{y+7}{11} + 2 = 10$$

$$\Rightarrow 3x - \frac{(y+7)}{11} = 8$$

$$\Rightarrow \frac{33x - y - 7}{11} = 8$$

$$\Rightarrow 33x - y - 7 = 88$$

$$\Rightarrow 33x - y = 95 \quad \dots\dots\dots(1)$$

$$2y + \frac{x+11}{7} = 10$$

$$\Rightarrow \frac{14y + x + 11}{7} = 10$$

$$\Rightarrow 14y + x + 11 = 70$$

$$\Rightarrow 14y + x = 59$$

$$\Rightarrow x + 14y = 59 \quad \dots\dots\dots(2)$$

Multiply equation (1) by 14 , we get

$$462x - 14y = 1330 \quad \dots\dots\dots(3)$$

adding (2) and (3), we get

$$(x + 14y) + (462x - 14y) = 59 + 1330$$

$$\Rightarrow 463x = 1389$$

$$\Rightarrow x = 3$$

Substituting the value of  $x$  in (2), we get

$$3 + 14y = 59$$

$$\Rightarrow 14y = 59 - 3$$

$$\Rightarrow 14y = 56$$

$$\Rightarrow y = 4$$

Hence the value of  $x$  and  $y$  are  $\boxed{x=3}$  and  $\boxed{y=4}$

**Answer :**

The given equations are:

$$2x - \frac{3}{y} = 9 \dots (i)$$

$$3x + \frac{7}{y} = 2 \dots (ii)$$

Multiply equation (i) by 3 and (ii) by 2 and subtract equation (ii) from (i) we get

$$6x - \frac{9}{y} = 27$$

$$6x + \frac{14}{y} = 4$$

$$\frac{-23}{y} = 23$$

$$\Rightarrow y = -1$$

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

$$2x - \frac{3}{-1} = 9$$

$$\Rightarrow 2x = 6$$

$$\Rightarrow x = 3$$

Hence the value of  $\boxed{x=3}$  and  $\boxed{y=-1}$

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