



Linear Equations in Two Variables Ex 13.2 Q5

Answer :

We are given,

$$x + 4y - 7 = 0$$

$(-\lambda, \frac{5}{2})$ is the solution of equation $3x + 4y = k$.

Substituting $x = -\lambda$ and $y = \frac{5}{2}$ in $x + 4y - 7 = 0$, we get

$$-\lambda + 4 \times \frac{5}{2} - 7 = 0$$

$$\lambda = 10 - 7$$

$$\boxed{\lambda = 3}$$

Linear Equations in Two Variables Ex 13.2 Q6

Answer :

We are given,

$$2x - 3y + 5 = 0$$

$(2a+1, a-1)$ is the solution of equation $2x - 3y + 5 = 0$.

Substituting $x = 2a+1$ and $y = a-1$ in $2x - 3y + 5 = 0$, we get

$$2 \times (2a + 1) - 3 \times (a - 1) + 5 = 0$$

$$\Rightarrow 4a + 2 - 3a + 3 + 5 = 0$$

$$\Rightarrow a + 10 = 0$$

$$\Rightarrow a = -10 \text{ (answer)}$$

Linear Equations in Two Variables Ex 13.2 Q7

Answer :

We are given,

$$8x - ay + a^2 = 0$$

$(1,6)$ is the solution of equation $8x - ay + a^2 = 0$.

Substituting $x = 1$ and $y = 6$ in $8x - ay + a^2 = 0$, we get

$$8 \times 1 - a \times 6 + a^2 = 0$$

$$a^2 - 6a + 8 = 0$$

Using quadratic factorization

$$a^2 - 4a - 2a + 8 = 0$$

$$a(a - 4) - 2(a - 4) = 0$$

$$(a - 2)(a - 4) = 0$$

$$\boxed{a = 2, 4}$$

***** END *****