Linear Equations in Two Variables Ex 13.2 Q3

Answer :

We are given,

$2x - y = 6$

(i) In the equation $2x - y = 6$,we have

$\text{L.H.S} = 2x - y$ and $\text{R.H.S} = 6$

Substituting $x = 3$ and $y = 0$ in $2x - y$, we get

$\text{L.H.S} = 2 \times 3 - 0 = 6$

$\text{L.H.S} = \text{R.H.S}$

$\boxed{(3,0)}$ is the solution of 2x – y = 6.

(ii) In the equation 2x – y = 6, we have

$\text{L.H.S} = 2x - y$ and $\text{R.H.S} = 6$

Substituting $x = 0$ and $y = 6$ in 2x – y,we get

$\text{L.H.S} = 2 \times 0 - 6 = -6$

$\text{L.H.S} \neq \text{R.H.S}$

$\boxed{(0,6)}$ is not the solution of 2x – y = 6.

(iii) In the equation 2x – y = 6,we have

$\text{L.H.S} = 2x - y$ and $\text{R.H.S} = 6$

Substituting $x = 2$ and $y = -2$ in $2x - y$, we get

$\text{L.H.S} = 2 \times 2 - (-2) = 6$

$\text{L.H.S} = \text{R.H.S}$

$\boxed{(2,-2)}$ is the solution of 2x – y = 6.

(iv) In the equation 2x – y = 6, we have

$\text{L.H.S} = 2x - y$ and $\text{R.H.S} = 6$

Substituting $x = \sqrt{3}$ and y = 0 in 2x – y, we get

$\text{L.H.S} = 2 \times \sqrt{3} - 0 = 2\sqrt{3}$

$\text{L.H.S} \neq \text{R.H.S}$

$\boxed{(\sqrt{3},0)}$ is not the solution of 2x – y = 6.

(v) In the equation 2x – y = 6, we have

$\text{L.H.S} = 2x - y$ and $\text{R.H.S} = 6$

Substituting $x = \frac{1}{2}$ and y = –5 in 2x – y, we get

$\text{L.H.S} = 2 \times \frac{1}{2} - (-5) = 6$

$\text{L.H.S} = \text{R.H.S}$

$\boxed{\left(\frac{1}{2},-5\right)}$ is the solution of 2x – y = 6.

Linear Equations in Two Variables Ex 13.2 Q4

Answer :

We are given,

$3x + 4y = k$

$(-1,2)$ is the solution of equation $3x + 4y = k$.

Substituting $x = -1$ and $y = 2$ in $3x + 4y = k$,we get

$3 \times -1 + 4 \times 2 = k$

$k = -3 + 8$

$\boxed{k = 5}$

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