Linear Equations in Two Variables Ex 13.2 Q1

Answer :

(i) We are given,

$3x+4y=7$

Substituting $x = 1$ in the given equation, we get

$3\times 1+4y=7$

$4y=7-3$

$y=\frac{4}{4}$

$y=1$

Thus $\boxed{x=1}$ and $\boxed{y=1}$ is the solution of $3x+4y=7$

Substituting $x = 2$ in the given equation, we get

$3\times 2+4y=7$

$4y=7-6$

$y=\frac{1}{4}$

$y=\frac{1}{4}$

Thus $\boxed{x=2}$ and $\boxed{y=\frac{1}{4}}$ is the solution of $3x+4y=7$

(ii) We are given,

$x = 6y$

Substituting $x = 0$ in the given equation, we get

$0 = 6y$

$y = \frac{0}{6}$

$y = 0$

Thus $\boxed{x = 0}$ and $\boxed{y = 0}$ is the solution of $x = 6y$

Substituting $x = 6$ in the given equation, we get

$6 = 6y$

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

$y = 1$

Thus $\boxed{x = 6}$ and $\boxed{y = 1}$ is the solution of $x = 6y$

(iii) We are given,

$x + \pi y = 4$

Substituting $x = 0$ in the given equation, we get

$0 + \pi y = 4$

$\pi y = 4 - 0$

$y = \frac{4}{\pi}$

Thus $\boxed{x = 0}$ and $\boxed{y = \frac{4}{\pi}}$ is the solution of $x + \pi y = 4$

Substituting $x = 4$ in the given equation, we get

$$4+\pi y=4$$

$$\pi y=4-4$$

$$y=\frac{0}{\pi}$$

$$y=0$$

Thus $\boxed{x=4}$ and $\boxed{y=0}$ is the solution of $x+\pi y=4$

(iv) We are given,

$$\frac{2}{3}x-y=4$$

Substituting $x = 0$ in the given equation, we get

$$\frac{2}{3}\times 0-y=4$$

$$0-y=4$$

$$y=-4$$

Thus $\boxed{x=0}$ and $\boxed{y=-4}$ is the solution of $\frac{2}{3}x-y=4$

Substituting $x = 3$ in the given equation, we get

$$\frac{2}{3}\times 3-y=4$$

$$-y=4-2$$

$$y=-2$$

Thus $\boxed{x=3}$ and $\boxed{y=-2}$ is the solution of $\frac{2}{3}x-y=4$

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