Linear Equations in Two Variables Ex 13.3 Q12

Answer :

(i) We are given,

$6x - 3y = 12$

We get,

$y = \dfrac{6x - 12}{3}$

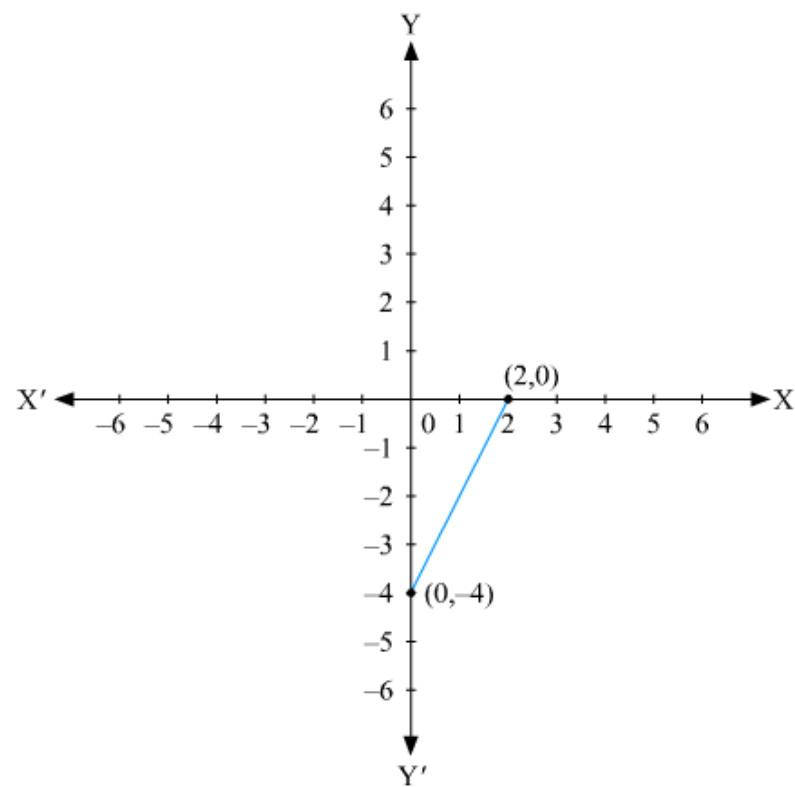Now, substituting $x = 0$ in $y = \dfrac{6x - 12}{3}$, we get

$y = -4$

Substituting $x = 2$ in $y = \dfrac{6x - 12}{3}$, we get

$y = 0$

Thus, we have the following table exhibiting the abscissa and ordinates of points on the line represented by the given equation

x	0	2
y	−4	0

Co-ordinates of the points where graph cuts the co-ordinate axes are $y=-4$ at y axis and $x=2$ at x axis.

(ii) We are given,

$-x+4y=8$

We get,

$y=\dfrac{8+x}{4}$

Now, substituting $x=0$ in $y=\dfrac{8+x}{4}$,we get

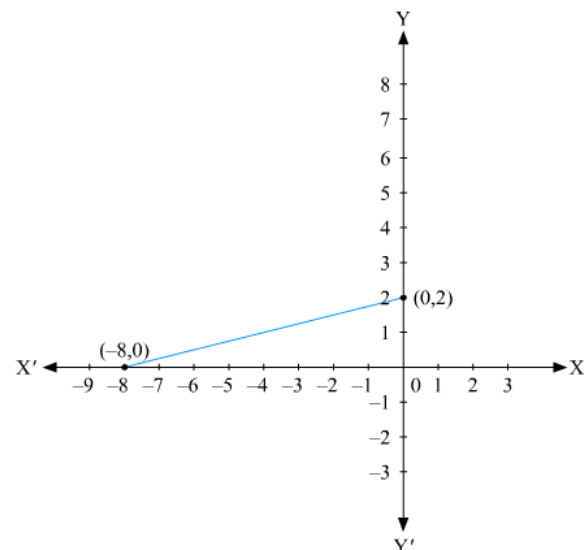$y=2$

Substituting $x=-8$ in $y=\dfrac{8+x}{4}$,we get

$y=0$

Thus, we have the following table exhibiting the abscissa and ordinates of points on the line represented by the given equation

x	0	-8
y	2	0

Co-ordinates of the points where graph cuts the co-ordinate axes are $y=2$ at y axis and $x=-8$ at x axis.

(iii) We are given,

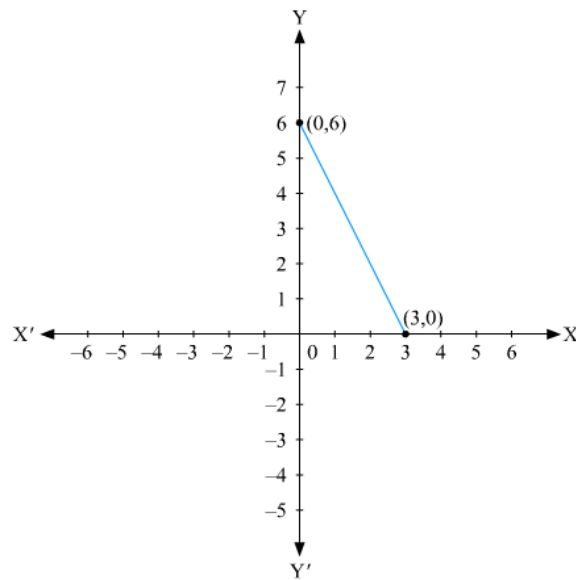$2x+y=6$

We get,

$y=6-2x$

Now, substituting $x=0$ in $y=6-2x$,we get

$y=6$

Substituting $x=3$ in $y=6-2x$,we get

$y=0$

Thus, we have the following table exhibiting the abscissa and ordinates of points on the line represented by the given equation

x	0	3
y	6	0

Co-ordinates of the points where graph cuts the co-ordinate axes are $y = 6$ at y axis and $x = 3$ at x axis.

(iv) We are given,

$3x + 2y + 6 = 0$

We get,

$y = \dfrac{-(6 + 3x)}{2}$

Now, substituting $x = 0$ in $y = \dfrac{-(6 + 3x)}{2}$, we get

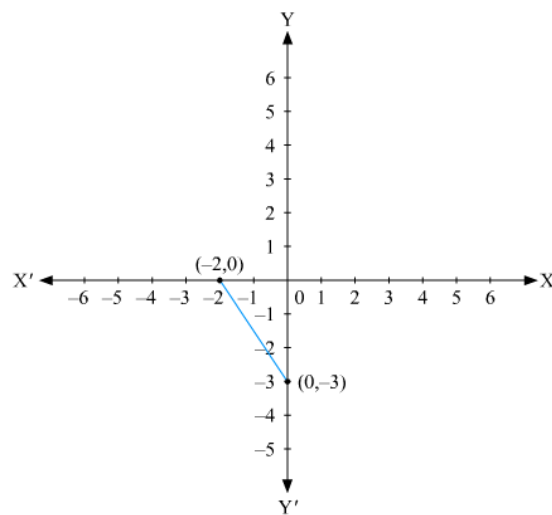$y = -3$

Substituting $x = -2$ in $y = \dfrac{-(6 + 3x)}{2}$, we get

$y = 0$

Thus, we have the following table exhibiting the abscissa and ordinates of points on the line represented by the given equation

x	0	-2
y	-3	0

Co-ordinates of the points where graph cuts the co-ordinate axes are $y = -3$ at y axis and $x = -2$ at x axis.

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