Linear Equations in Two Variables Ex 13.3 Q13

Answer :

We are given,

$2x+y=6$

We get,

$y=6-2x$

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

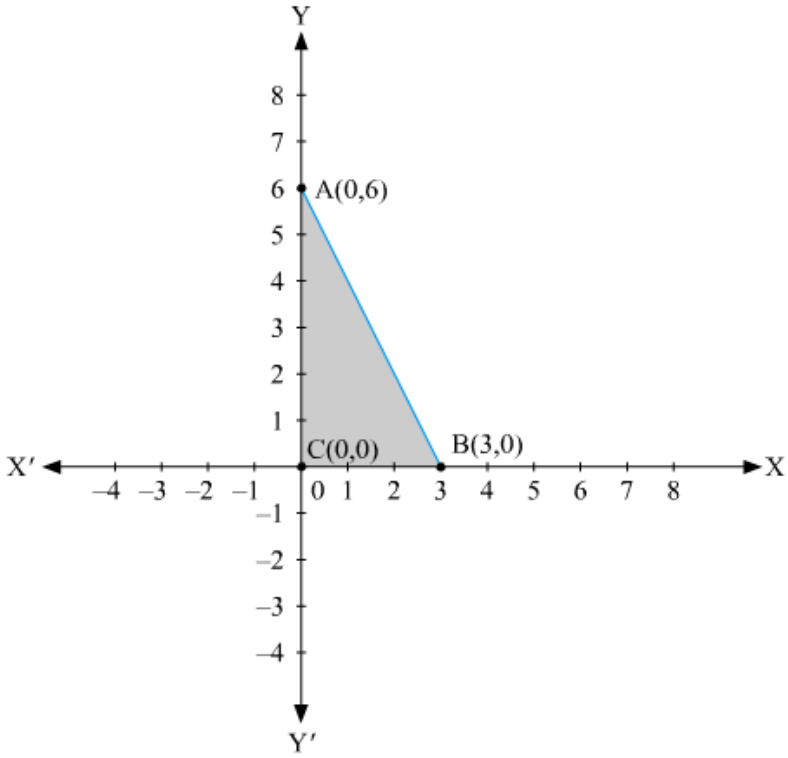
$y=6$

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



The region bounded by the graph is ABC which forms a triangle.

AC at *y* axis is the base of triangle having AC = 6 units on *y* axis.

BC at *x* axis is the height of triangle having BC = 3 units on *x* axis.

Therefore,

Area of triangle ABC, say A is given by

$$A = \frac{1}{2}(\text{Base} \times \text{Height})$$

$$A = \frac{1}{2}(\text{AC} \times \text{BC})$$

$$A = \frac{1}{2}(6 \times 3)$$

$$\boxed{A = 9 \text{ sq. units}}$$

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