



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

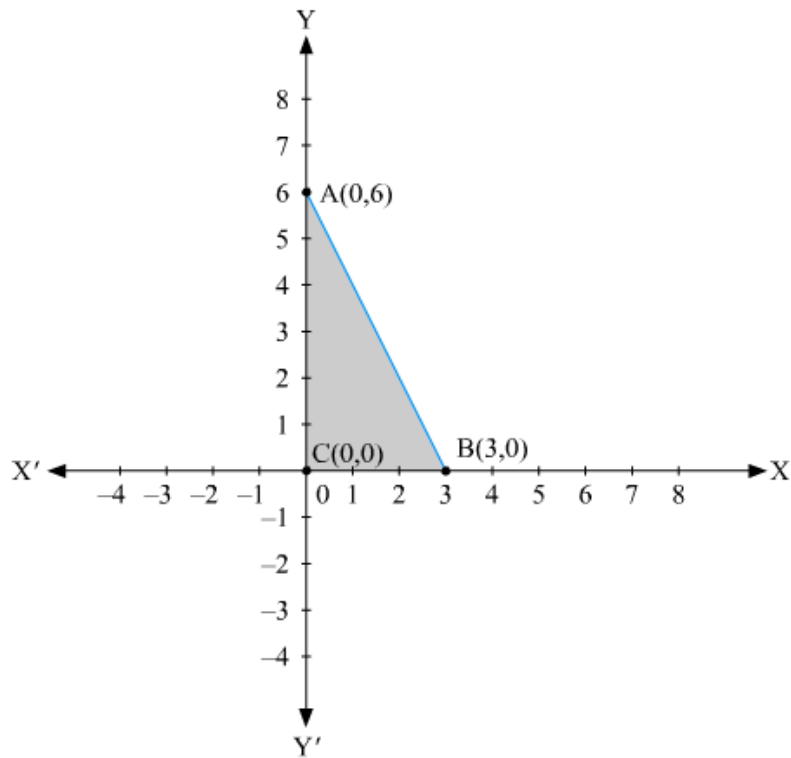
$$y = 6$$

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

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

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

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

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

***** END *****