

## Linear Equations in Two Variables Ex 13.3 Q14 Answer:

We are given,

$$\frac{x}{3} + \frac{y}{4} = 1$$

$$4x + 3y = 12$$

We get,

$$y = \frac{12 - 4x}{3}$$

Now, substituting 
$$x = 0$$
 in  $y = \frac{12 - 4x}{3}$ , we get

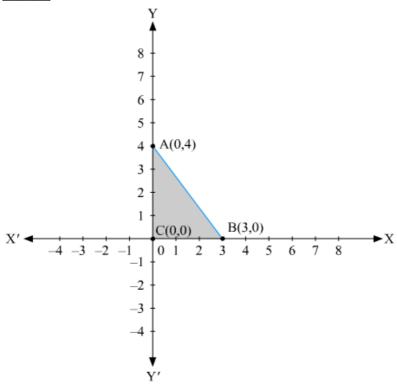
$$v = 4$$

Substituting 
$$x = 3$$
 in  $y = \frac{12 - 4x}{3}$ , we get

$$v = 0$$

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

х	0	3
y	4	0



The region bounded by the graph is ABC which form a traingle. AC at y axis is the base of traingle having AC = 4 units on y axis. BC at x axis is the height of traingle having BC = 3 units on x axis.

Therefore,

Area of traingle ABC, say A is given by

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

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

$$A = \frac{1}{2} (4 \times 3)$$

$$A = 6 \text{ sq. units}$$

\*\*\*\*\*\* END \*\*\*\*\*\*