

## 12.3 More with Graphing and Intercepts

### ❖ USING INTERCEPTS TO GRAPH A LINEAR EQUATION

#### To Find Intercepts

To find the **y-intercept(s)** of an equation's graph, **replace  $x$  with 0** and solve for  $y$ .

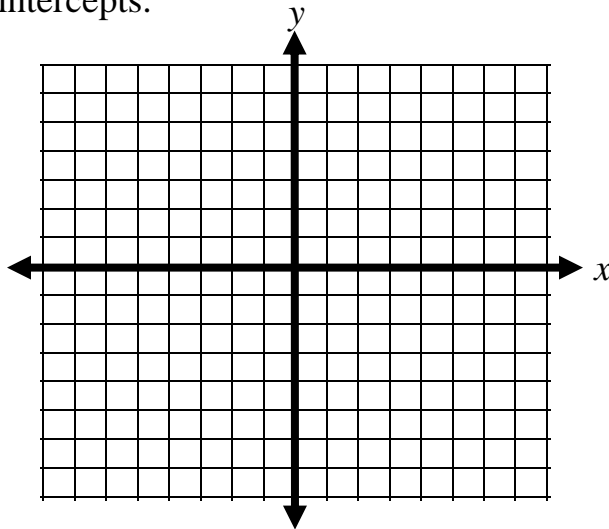
To find the **x-intercept(s)** of an equation's graph, **replace  $y$  with 0** and solve for  $x$ .

Ex. Find the y-intercept and the x-intercept.

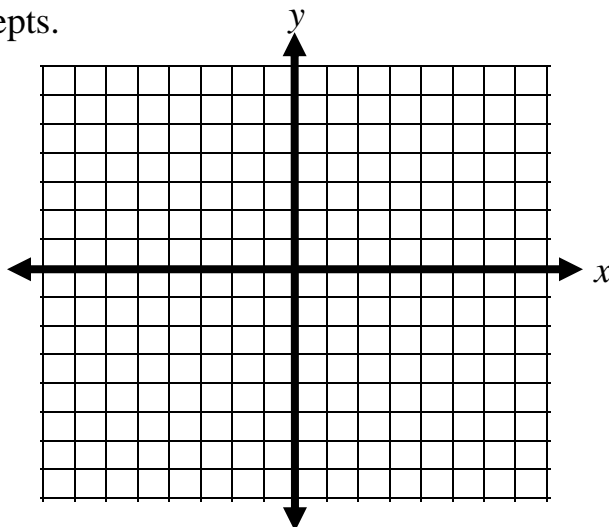
(a)  $4x - 3y = 6$

(b)  $y = 2x$

Ex. Graph  $3x + 2y = 12$  using intercepts.



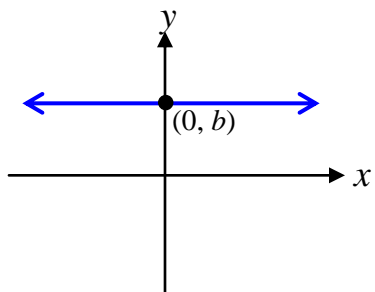
Ex. Graph  $y = \frac{1}{3}x$  using intercepts.



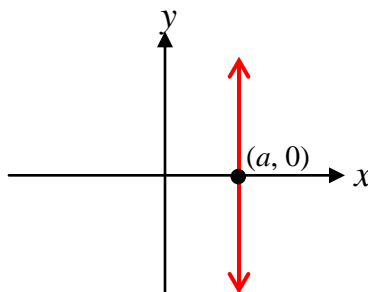
## ❖ GRAPHING HORIZONTAL OR VERTICAL LINES

### Linear Equations in One Variable

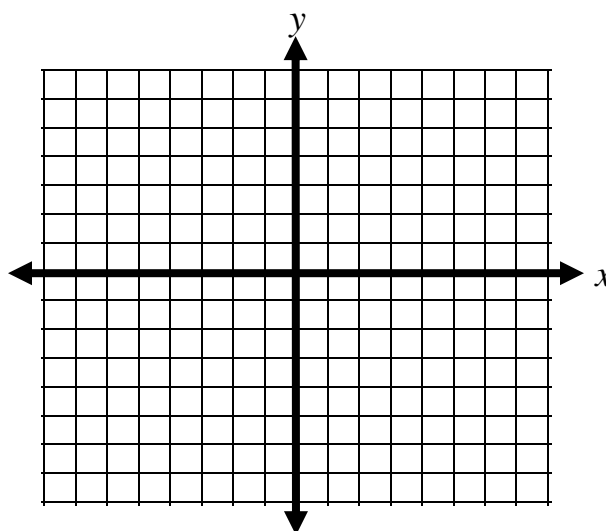
The graph of  $y = b$  is a horizontal line, with y-intercept  $(0, b)$ .



The graph of  $x = a$  is a vertical line, with x-intercept  $(a, 0)$ .



Ex. Graph:  $y = -5$ .



Ex. Graph:  $x - 4 = 0$ .

