

# Standard Form

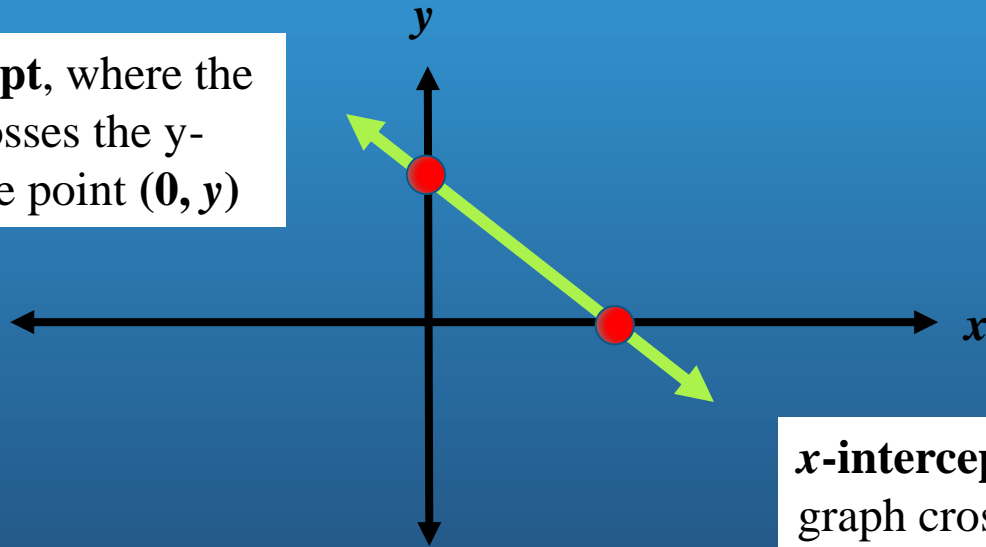
$$Ax + By = C$$

where  $A$ ,  $B$ , and  $C$  are integers

# Standard Form

Used to find the  $x$ -intercept and  $y$ -intercepts

**$y$ -intercept**, where the graph crosses the  $y$ -axis at the point  $(0, y)$



**$x$ -intercept**, where the graph crosses the  $x$ -axis at the point  $(x, 0)$

# Finding the X- and the Y-Intercepts

$$3x + 2y = 12$$

To find the  $x$ -intercept:

1. Let  $y = 0$ .

$$3x + 2(0) = 12$$

2. Solve for  $x$ .

$$3x = 12$$

$$x = 4$$

$$(4, 0)$$

To find the  $y$ -intercept:

1. Let  $x = 0$ .

$$3(0) + 2y = 12$$

2. Solve for  $y$ .

$$2y = 12$$

$$y = 6$$

$$(0, 6)$$

# Find the X- And the Y-Intercepts

$$5x + 3y = 15$$



A. x-intercept = (3, 0), y-intercept = (0, 5)



B. x-intercept = (5, 0), y-intercept = (0, 3)



C. x-intercept = (15, 0), y-intercept = (0, 15)



D. x-intercept = (6, 0), y-intercept = (0, 4)

# Finding the X- And the Y-Intercepts

$$x + 2y = 18$$

**x-intercept = (18,0)**

**y-intercept = (0, 9)**

# Finding the X- And the Y-Intercepts

$$3x - y = 9$$

**x-intercept = (3,0)**

**y-intercept = (0, -9)**

# Graphing a Linear Equation in Standard Form

1. Find the x-intercept and the y-intercept.
2. Plot the coordinates for x- and y-intercepts on the graph.
3. Draw a line connecting the two points.

# Graphing a Linear Equation in Standard Form

$$3x + 2y = 12$$

**x-intercept**

$$3x + 2(0) = 12$$

$$3x = 12$$

$$x = 4$$

$$(4, 0)$$

**y-intercept**

$$3(0) + 2y = 12$$

$$2y = 12$$

$$y = 6$$

$$(0, 6)$$



# Graphing a Linear Equation in Standard Form

$$3x + 2y = 12$$

