

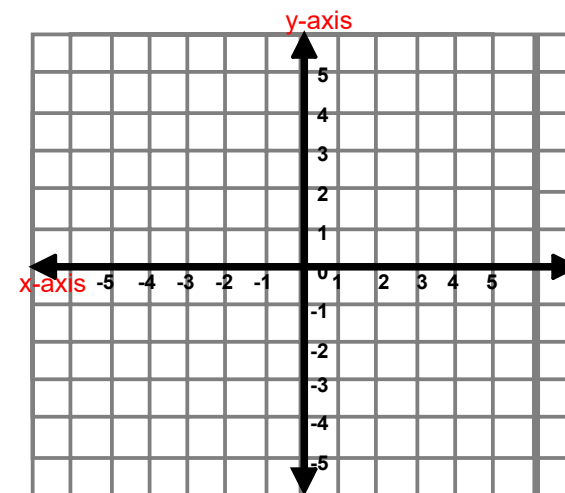
4.5

Graphing Linear Equations in Standard Form

Graphing Linear Equations

Graph the following equation using slope-intercept form.

1) $-2x + 3y = -6$



Standard Form of a Linear Equation

$$-2x + 3y = -6$$

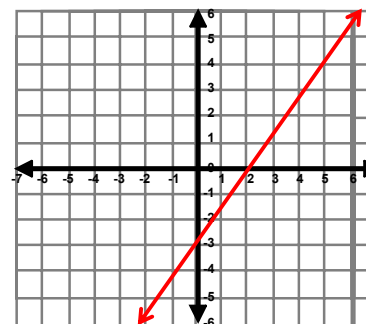


Any equation in this form will form a line.

Graphings Using Intercepts

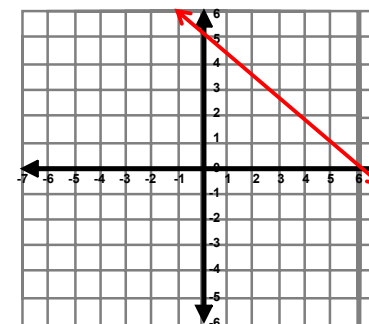
x-intercept - the x-coordinate of a point where the graph crosses the x-axis

y-intercept - the y-coordinate of a point where the graph crosses the y-axis



x-intercept:

y-intercept



x-intercept:

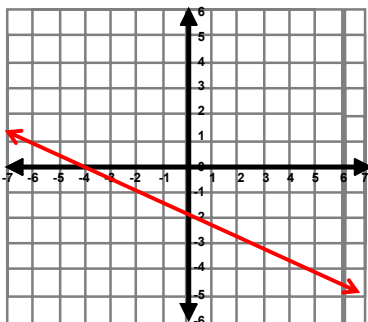
y-intercept:

"Intercepts method of graphing"

Graphings Using Intercepts

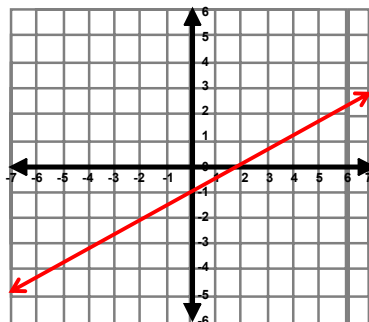
x-intercept - the x-coordinate of a point where the graph crosses the x-axis

y-intercept - the y-coordinate of a point where the graph crosses the y-axis



x-intercept:

y-intercept



x-intercept:

y-intercept:

Finding the Intercepts of a Line

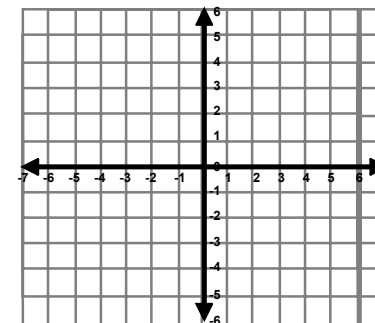
$$x - 3y = 3$$

x-intercept

Plug-in $y=0$ into the equation and solve for x .

y-intercept

Plug-in $x=0$ into the equation and solve for y .



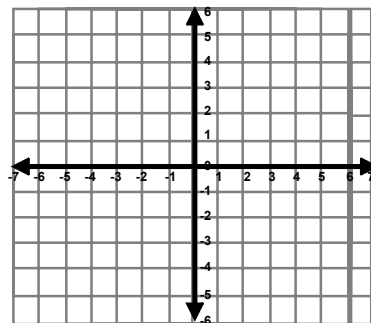
Graph the equation using the intercepts.

Practice

1) $4x - 6y = 12$

x-intercept

Plug-in $y=0$ into the equation and solve for x .



Graph the equation using the intercepts.

y-intercept

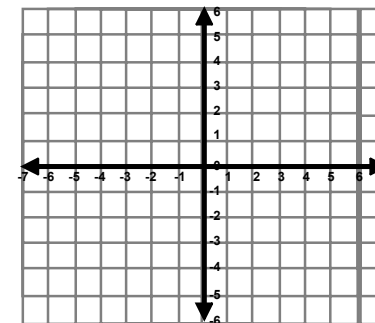
Plug-in $x=0$ into the equation and solve for y .

Practice

2) $2x - 3y = 12$

x-intercept

Plug-in $y=0$ into the equation and solve for x .



Graph the equation using the intercepts.

y-intercept

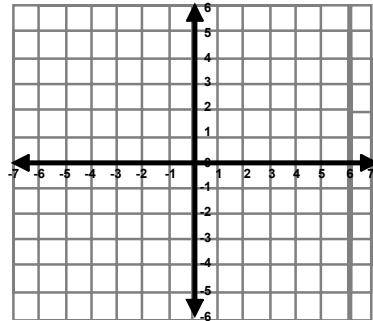
Plug-in $x=0$ into the equation and solve for y .

Practice

3) $-2x + y = -4$

x-intercept

Plug-in $y=0$ into the equation and solve for x .



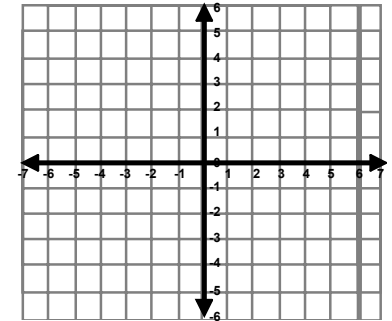
Graph the equation using the intercepts.

y-intercept

Plug-in $x=0$ into the equation and solve for y .

Practice

4) $4x + 2y = 8$



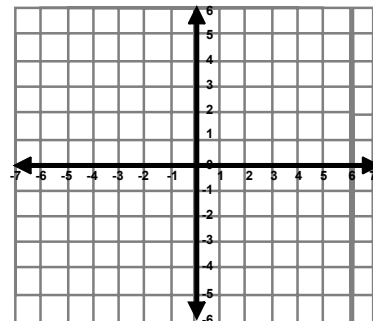
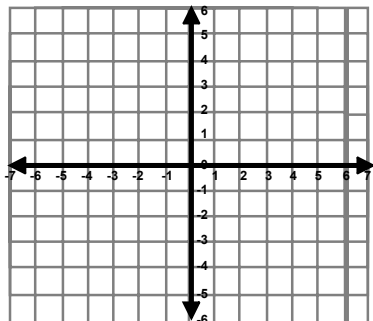
Graph the equation using the intercepts.

Practice

5) Graph the following two ways: $-2x + 3y = -6$

Change to slope-intercept form:

Use intercepts.



Exploring

- 6) You have \$12 to spend on apples and bananas. Graph the equation $2x + 3y = 12$, where x is the number of apples and y is the number of bananas.

Interpret the intercepts.

