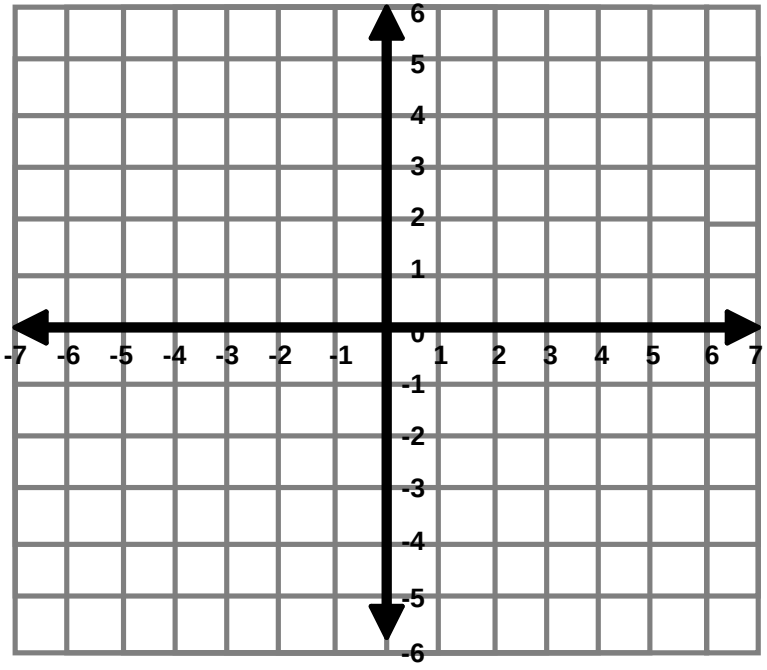
4.6

Writing Equations in Slope Intercept Form

Practice

1) $-3x+9y=-18$



***x*-intercept**

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

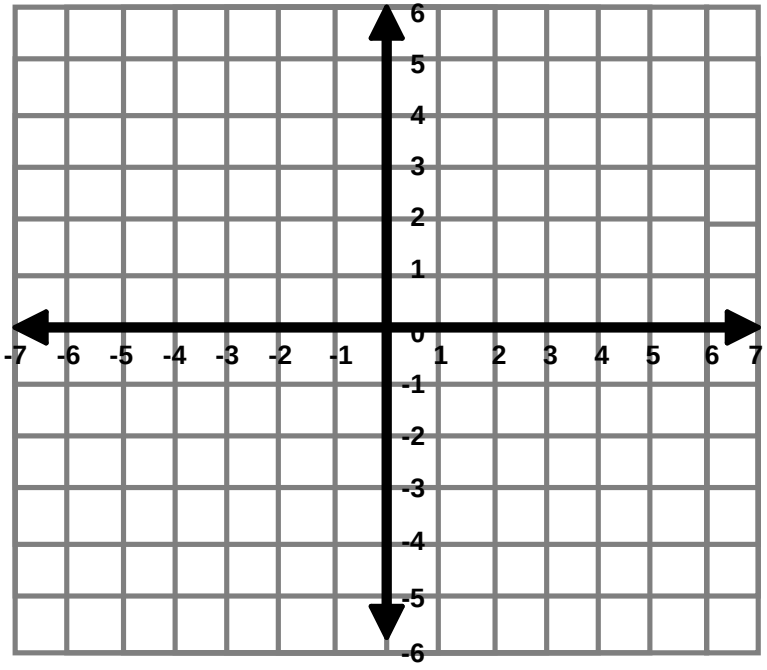
***y*-intercept**

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

Graph the equation using the intercepts.

Practice

2) $2x + y = 10$



x-intercept

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

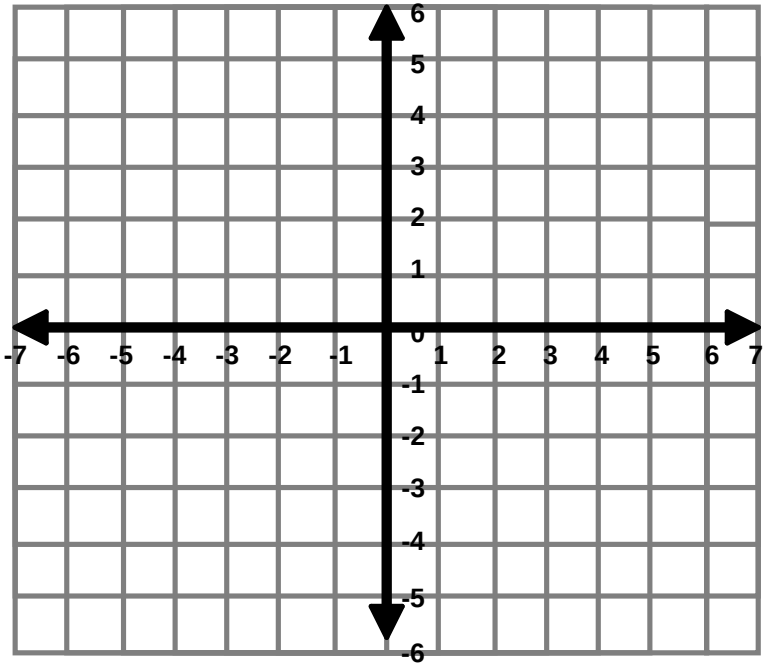
y-intercept

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

Graph the equation using the intercepts.

Practice

3) $-3x+9y=-18$



***x*-intercept**

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

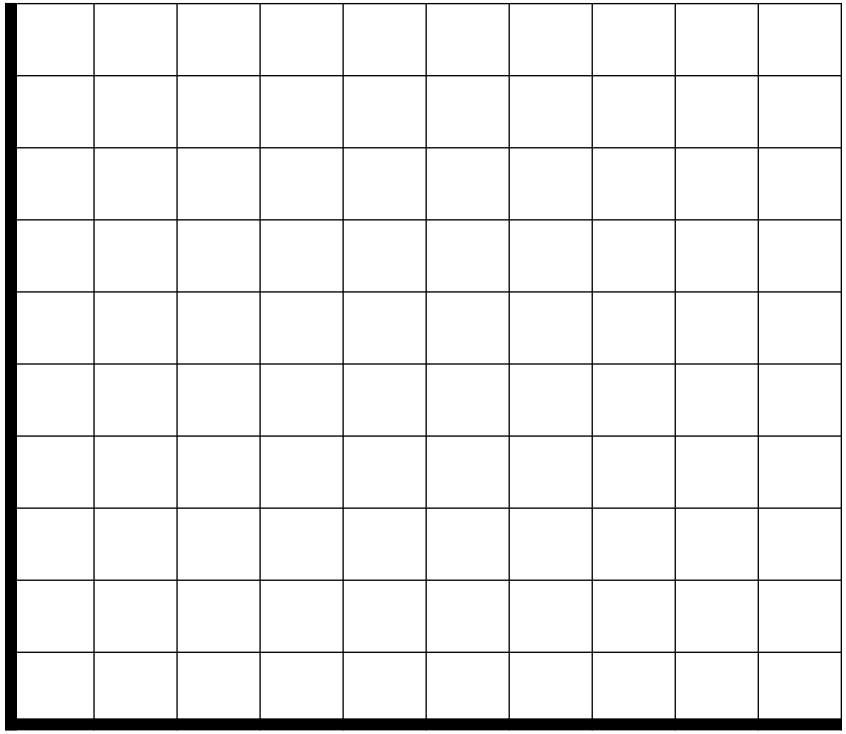
***y*-intercept**

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

Graph the equation using the intercepts.

Exploring

4) 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.

Pg 176-177 #1,2,5-14,20

20. **SCUBA** Five friends go scuba diving. They rent a boat for x days and scuba gear for y days. The total spent is $1000.

a. Write an equation in standard form that represents the situation.

b. Graph the equation and interpret the intercepts.

Slope-Intercept Form

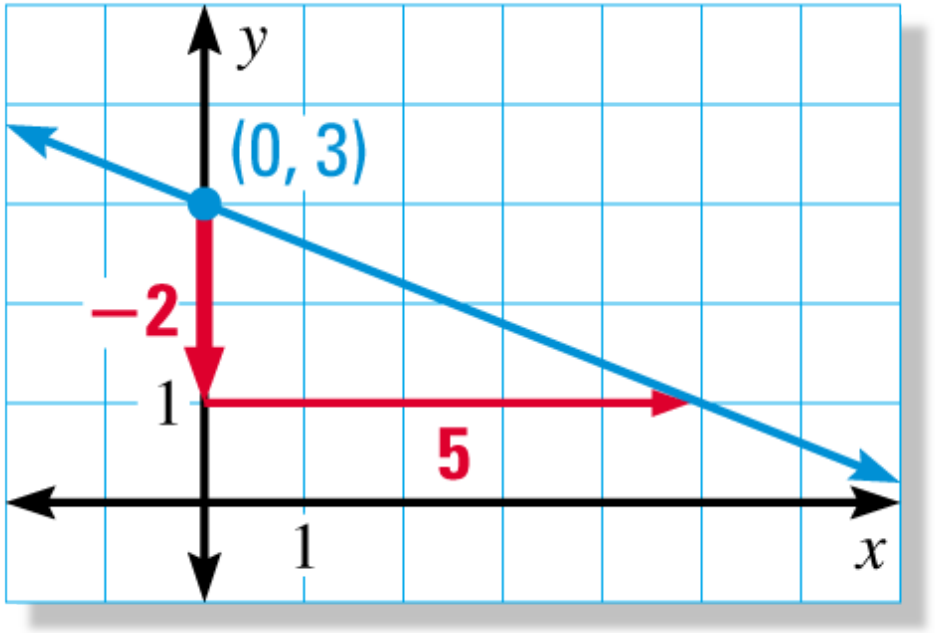
What is the equation of line in slope-intercept form?

Example

a) Write an equation of the line with a slope of -2 and a y-intercept of 5.

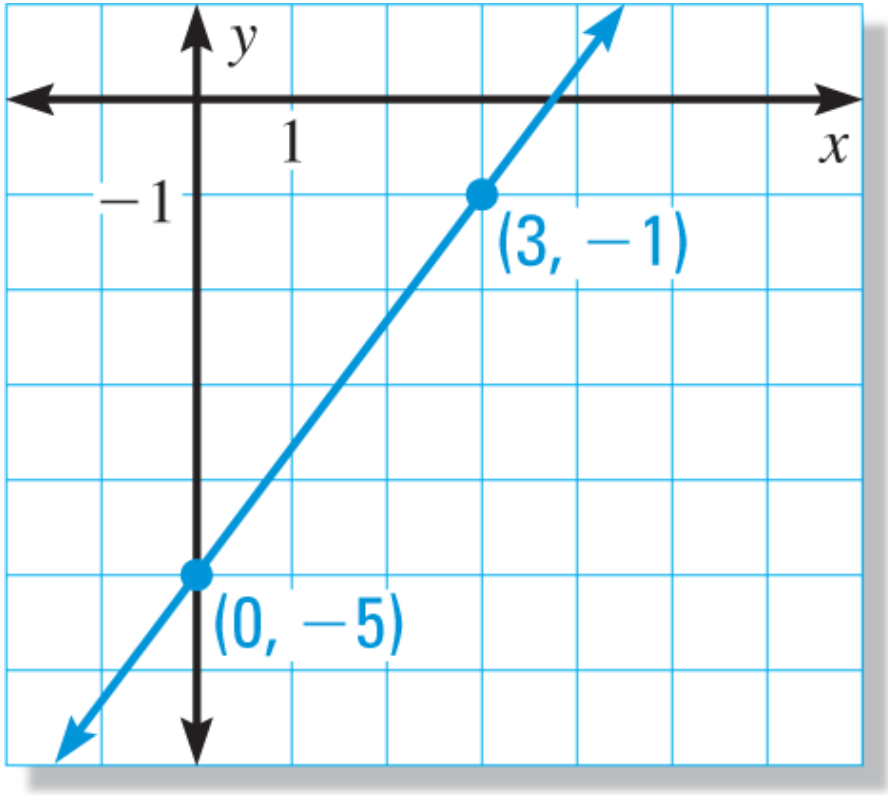
Example

b) Write an equation of the line shown.



Example

c) Write an equation of the line shown.



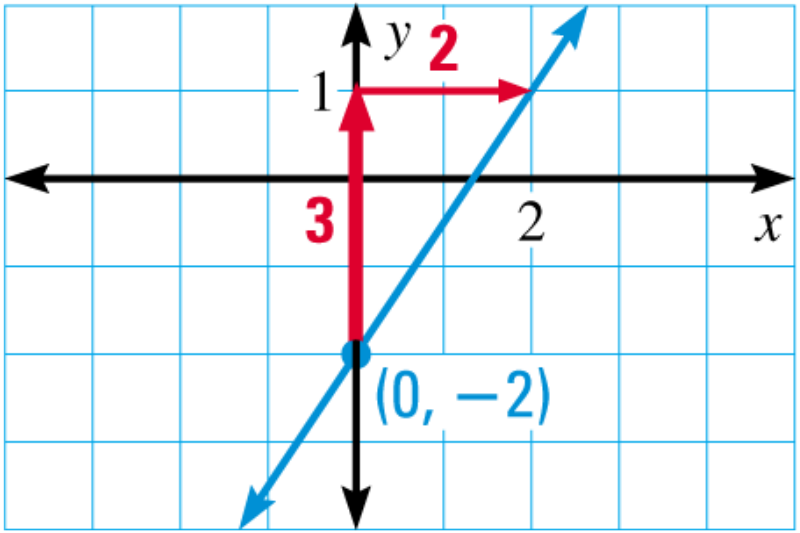
Practice

5) **Write an equation of the line with a slope of 8 and a y-intercept of -7.**

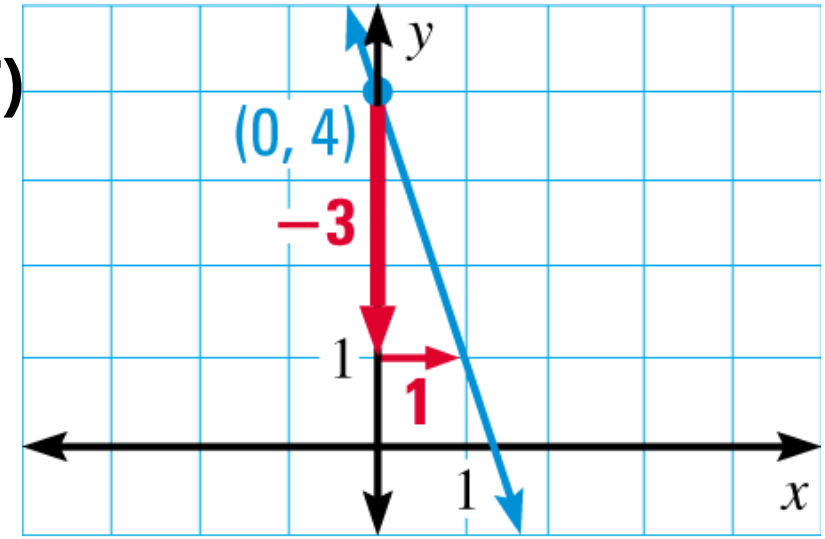
Practice

Write an equation of the line shown.

6)



7)



Writing an Equation of Line from Two Points

Step 1) Find the slope between the two points
Step 2) Plug the slope into slope-intercept form
Step 3) Find the y-int. using one of the two points

Example

a) Write an equation of the line that passes through the points (2, -1), (0, 6).

Writing an Equation of Line from Two Points

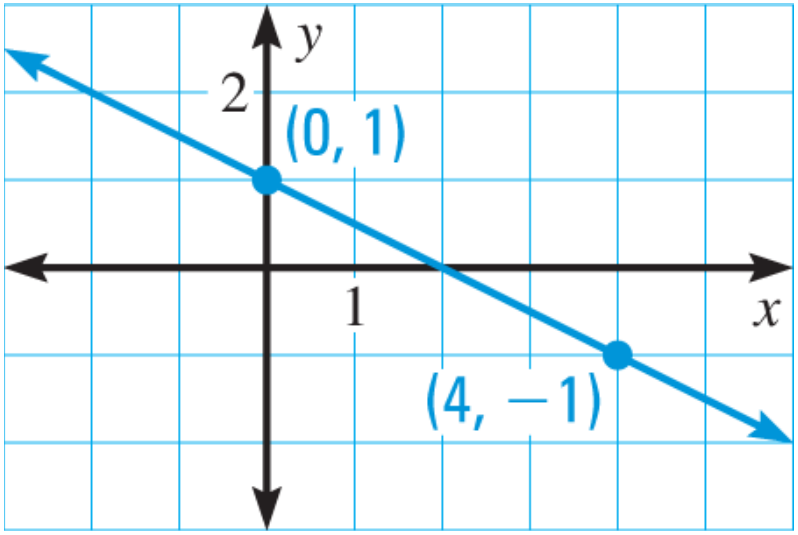
Step 1) Find the slope between the two points
Step 2) Plug the slope into slope-intercept form
Step 3) Find the y-int. using one of the two points

Example

b) Write an equation of the line that passes through the points (3, -1), (0, -4).

Practice

8) **Write an equation of the line shown.**



Practice

9) Write an equation of the line that passes through the points (0, -5), (4, -9).