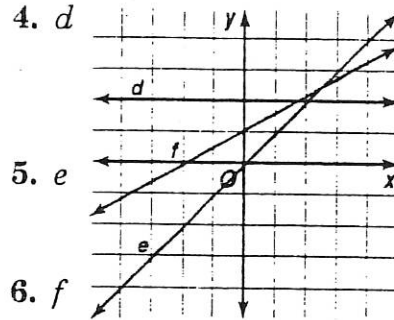
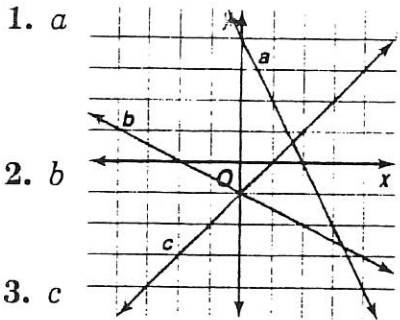


# 8-7 Practice

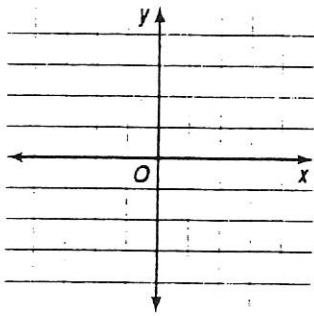
## Intercepts

State the x-intercept and the y-intercept for each line.

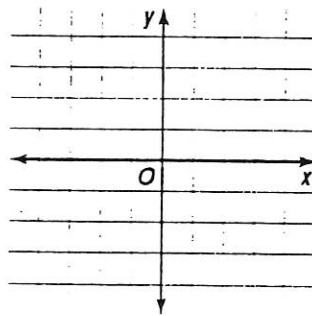


Use the x-intercept and the y-intercept to graph each equation.

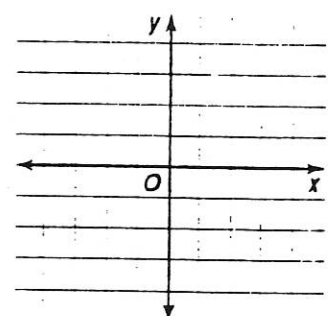
7.  $y = 2x + 4$



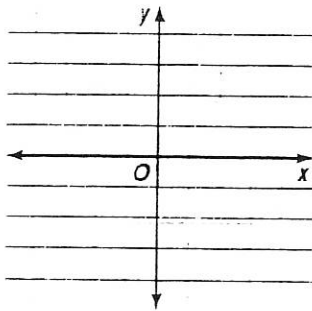
8.  $y = \frac{1}{2}x - 2$



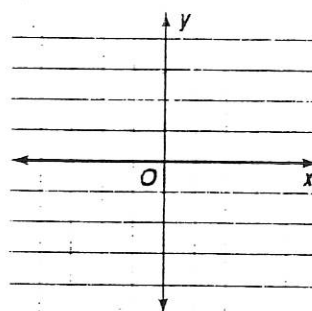
9.  $y = 0.5x + 1$



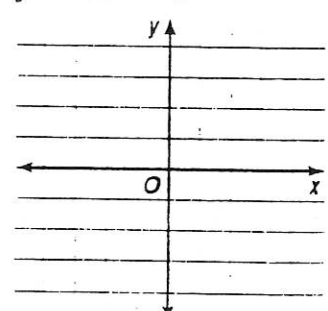
10.  $2x - 3 = y$



11.  $y = 3 - 2x$

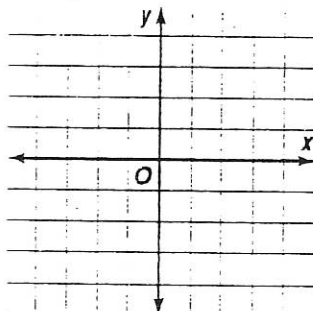


12.  $y + 2x = -4$

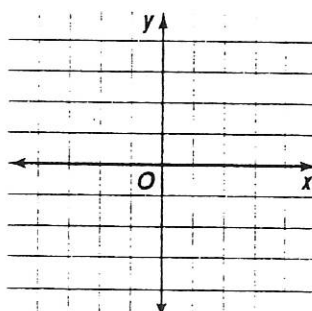


Graph each equation using the slope and y-intercept.

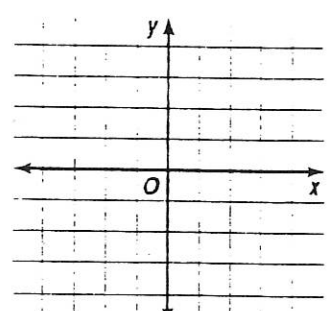
13.  $y = \frac{1}{2}x - 3$



14.  $-x + 2y = 2$



15.  $3y - 6 = -x$



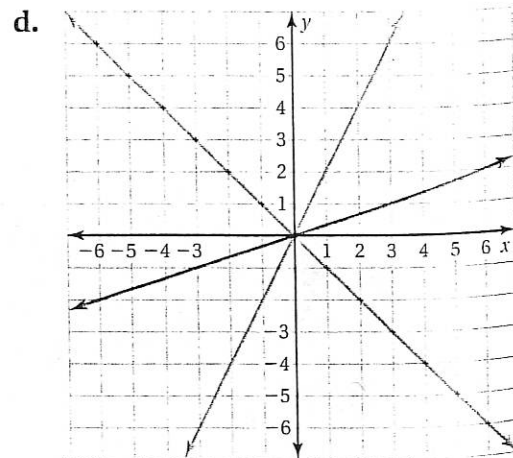
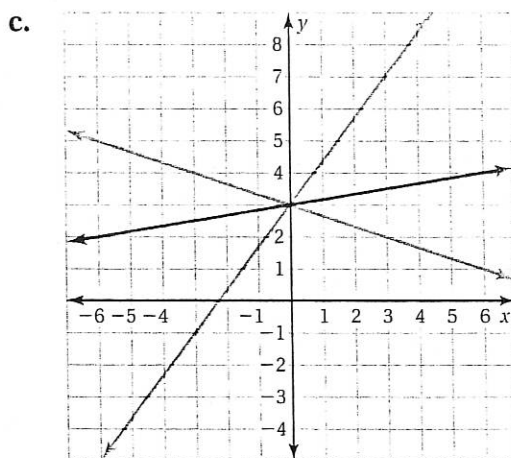
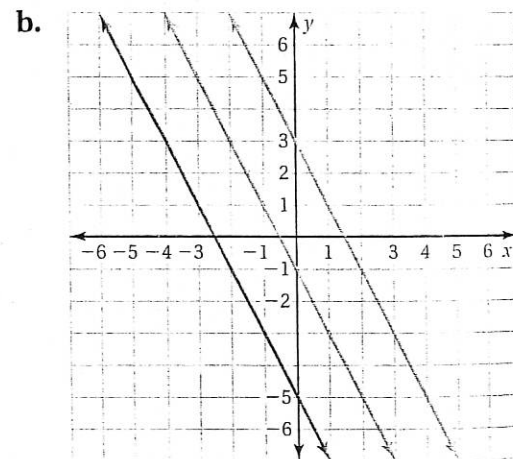
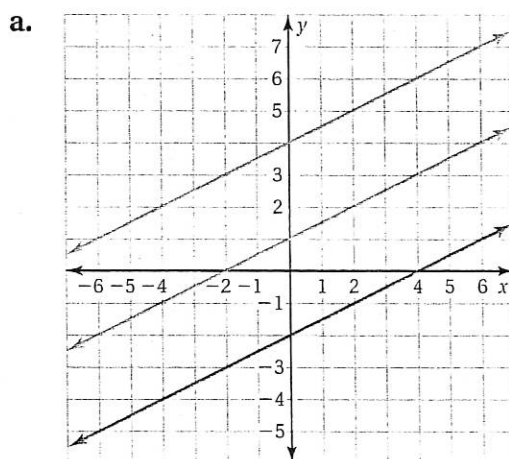
# Writing Equations in Slope-Intercept Form

**Essential Question** How can you write an equation of a line when you are given the slope and the y-intercept of the line?

## 1 ACTIVITY: Writing Equations of Lines

Work with a partner.

- Find the slope of each line.
- Find the y-intercept of each line.
- Write an equation for each line.
- What do the three lines have in common?



### COMMON CORE

#### Writing Equations

In this lesson, you will

- write equations of lines in slope-intercept form.

Preparing for Standard 8.F.4

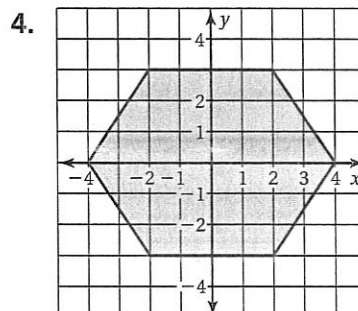
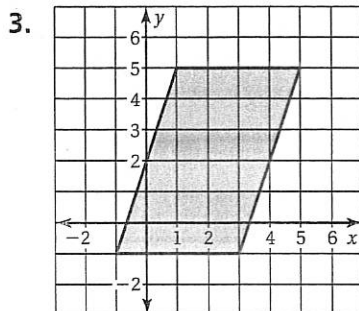
# 4.6 Exercises

## Vocabulary and Concept Check

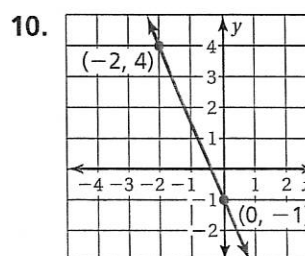
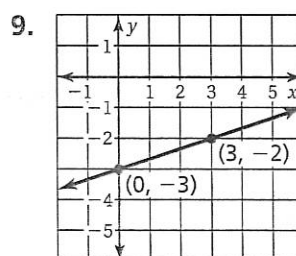
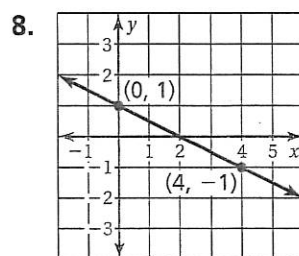
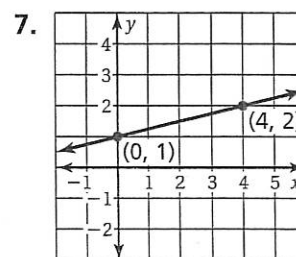
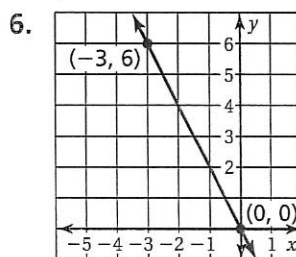
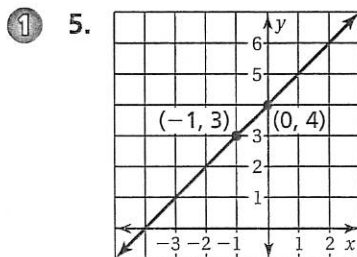
- PRECISION** Explain how to find the slope of a line given the intercepts of the line.
- WRITING** Explain how to write an equation of a line using its graph.

## Practice and Problem Solving

Write an equation that represents each side of the figure.



Write an equation of the line in slope-intercept form.

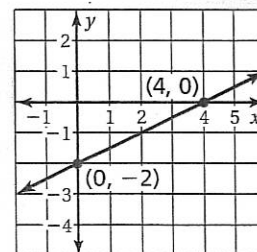


11. **ERROR ANALYSIS** Describe and correct the error in writing an equation of the line.

~~$y = \frac{1}{2}x + 4$~~



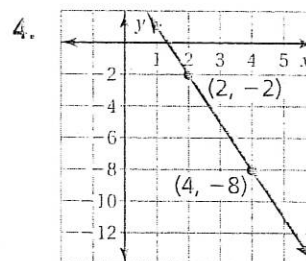
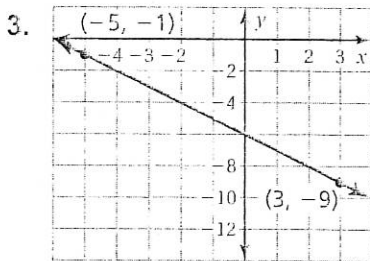
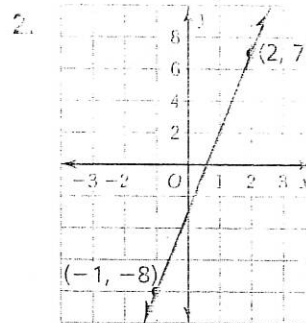
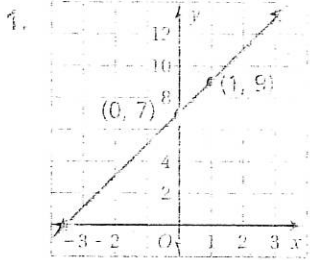
12. **BOA** A boa constrictor is 18 inches long at birth and grows 8 inches per year. Write an equation that represents the length  $y$  (in feet) of a boa constrictor that is  $x$  years old.



**4.6****Practice**

For use after Lesson 4.6

Write an equation of the line in slope-intercept form.



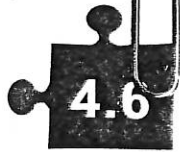
Write an equation of the line that passes through the points.

5.  $(3, 8), (-2, 8)$

6.  $(4, 3), (6, -3)$

7.  $(-1, 0), (-5, 0)$

8. You organize a garage sale. You have \$30 at the beginning of the sale. You earn an average of \$20 per hour. Write an equation that represents the amount of money  $y$  you have after  $x$  hours.



## Puzzle Time

### What Should You Know If You Want To Become A Lion Tamer?

Write the letter of each answer in the box containing the exercise number.

Write an equation of the line that passes through the points.

1.  $(0, 3), (1, 4)$
2.  $(0, 0), (5, -2)$
3.  $(-2, 0), (0, 4)$
4.  $(-3, 2), (0, -3)$
5.  $(-7, 4), (0, 4)$
6.  $(0, -8), (4, 8)$
7.  $(0, -2), (-5, -2)$
8.  $(-12, -9), (0, -3)$
9.  $(0, 10), (5, 0)$
10.  $(-14, 12), (0, 6)$
11.  $(0, -6), (6, -24)$
12.  $(0, -15), (5, 0)$
13. You are planning to make a scrapbook. The album costs \$20 and each of the scrapbook papers costs an additional \$1. Write an equation that represents the cost of the completed scrapbook where  $x$  represents the number of scrapbook papers you purchase.
14. A hot tub that holds 300 gallons of water drains at a rate of 8 gallons per minute. Write an equation that represents how many gallons of water are left in the tub after it has drained for  $x$  minutes.
15. An elevator in a tall building is at a point 180 feet above the ground. The elevator descends at a rate of 12 feet per second. Write an equation that represents how far above the ground the elevator is after descending for  $x$  seconds.

#### Answers

T.  $y = -2x + 10$

N.  $y = \frac{1}{2}x - 3$

H.  $y = x + 3$

R.  $y = -12x + 180$

E.  $y = 2x + 4$

A.  $y = -\frac{2}{5}x$

H.  $y = -\frac{3}{7}x + 6$

N.  $y = x + 20$

E.  $y = 4$

T.  $y = 4x - 8$

I.  $y = 3x - 15$

L.  $y = -3x - 6$

M.  $y = -8x + 300$

O.  $y = -2$

O.  $y = -\frac{5}{3}x - 3$

14	7	15	3		6	10	2	13		9	1	5		11	12	4	8
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