

### Pre-Algebra Ch. 8 Test REVIEW

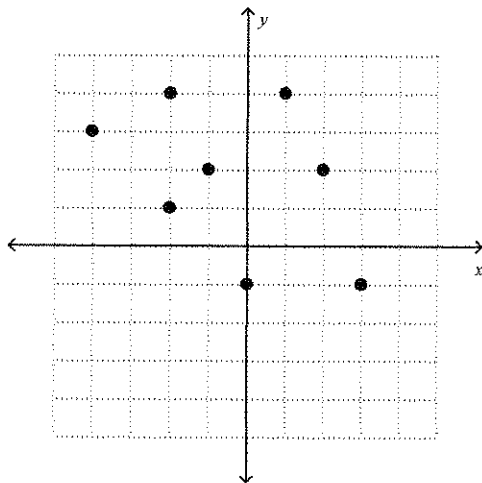
Determine whether the relation is a function. Explain.

1.

$x$	$y$
2	5
4	7
8	5
2	2

- Yes, each  $x$ -value is paired with only one  $y$ -value.
- No, there is an  $x$ -value paired with more than one  $y$ -value.
- No, there is a  $y$ -value paired with more than one  $x$ -value.
- Yes, there are no negative  $y$ -values.

2.



- No, there is a  $y$ -value paired with more than one  $x$ -value.
- No, there is an  $x$ -value paired with more than one  $y$ -value.
- No, there are two negative  $y$ -values.
- Yes, each  $x$ -value is paired with exactly one  $y$ -value.

3.  $\{(5, 9), (4, 8), (-7, 4), (0, 4), (2, 4), (3, 9), (-3, 8)\}$

- Yes, each  $x$ -value is paired with exactly one  $y$ -value.
- No, there is a  $y$ -value paired with more than one  $x$ -value.
- No, there are no negative  $y$ -values.
- No, there is an  $x$ -value paired with more than one  $y$ -value.

Find four solutions of the equation. Write the solutions as ordered pairs.

4.  $y = 4x - 4$

a.  $\{(1, -4), (-3, -16), (2, 0), (0, 8)\}$

b.  $\{(0, -4), (3, -16), (2, 4), (-3, 8)\}$

c.  $\{(0, 0), (-3, -16), (2, 8), (3, 8)\}$

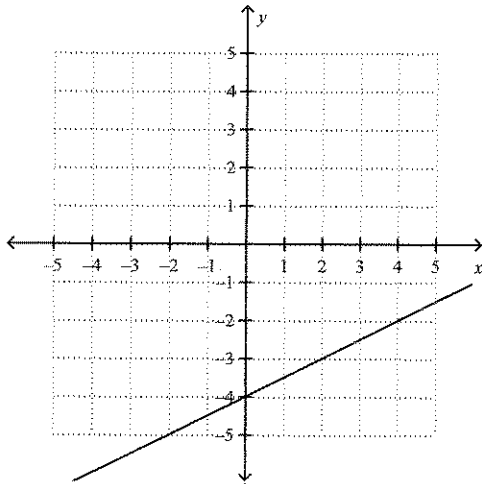
d.  $\{(0, -4), (-3, -16), (2, 4), (3, 8)\}$

use -3, 0, 1, 2, 3 for x

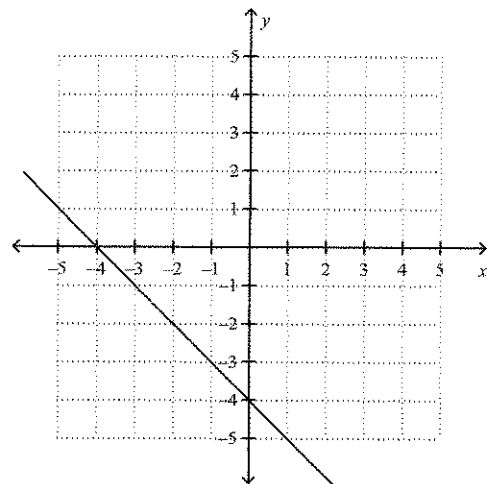
Graph each equation by plotting ordered pairs.

5.  $y = x - 4$

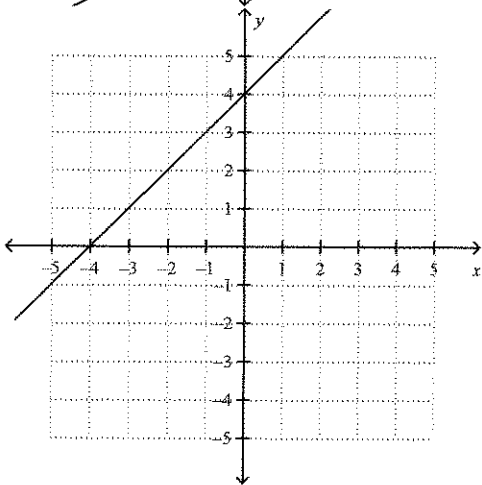
a.



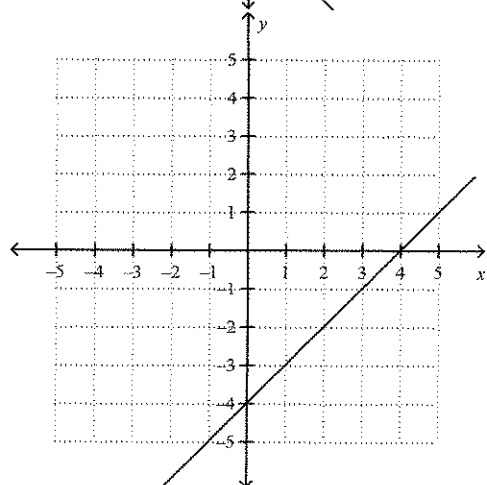
c.



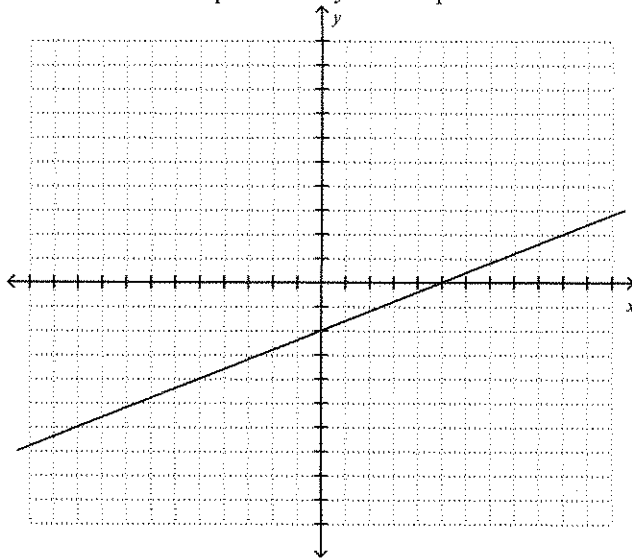
b.



d.



\_\_\_\_\_ 6. State the  $x$ -intercept and the  $y$ -intercept of the line.



- a. 5; -2
- b. 4; -1
- c. 6; -2
- d. 5; -3

\_\_\_\_\_ 7. Find the  $x$ -intercept and the  $y$ -intercept for the graph of the equation.

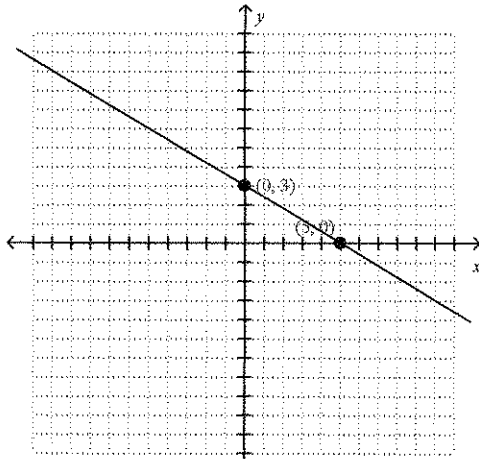
$$x - 2y = 6$$

- a. 7; -3
- b. 6; -3
- c. 5; -2
- d. 6; -4

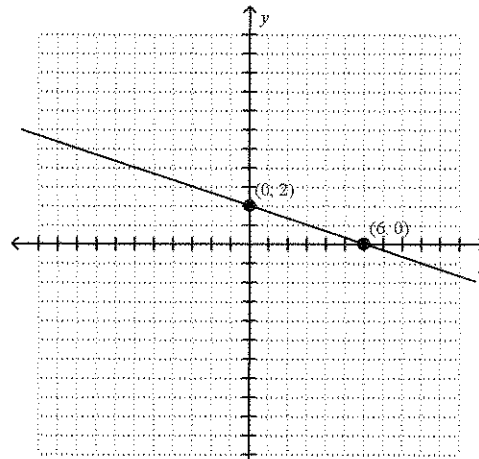
Graph the equation using the  $x$ - and  $y$ -intercepts.

8.  $x + 3y = 6$

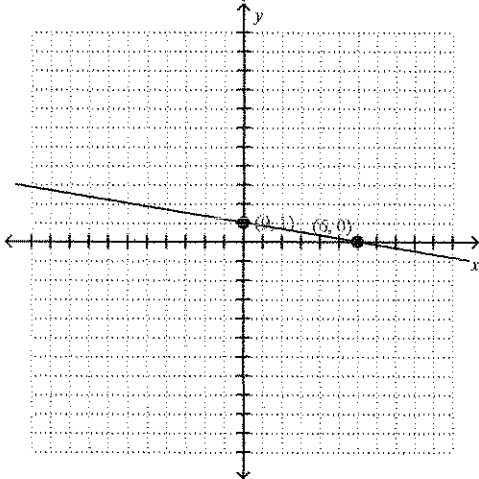
a.



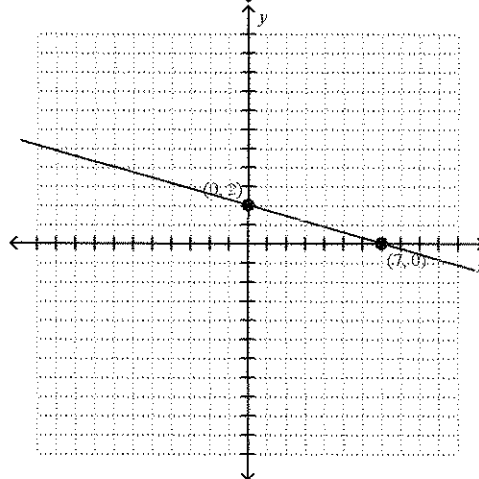
c.



b.



d.



Find the slope of the line that passes through the pair of points.

9.  $(6, 3), (-7, 8)$

a. undefined

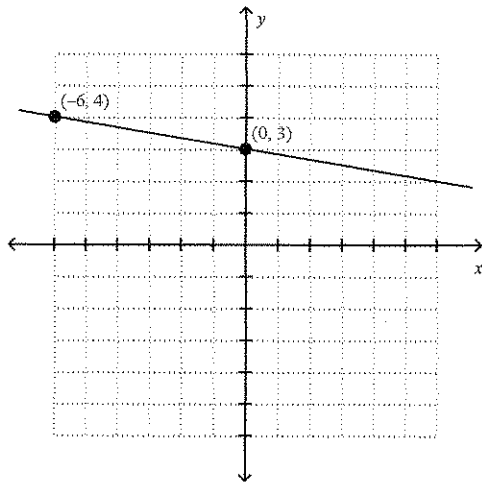
c.  $-\frac{13}{5}$

b.  $\frac{5}{13}$

d.  $-\frac{5}{13}$

Find the slope of the line.

10.



a.  $-6$

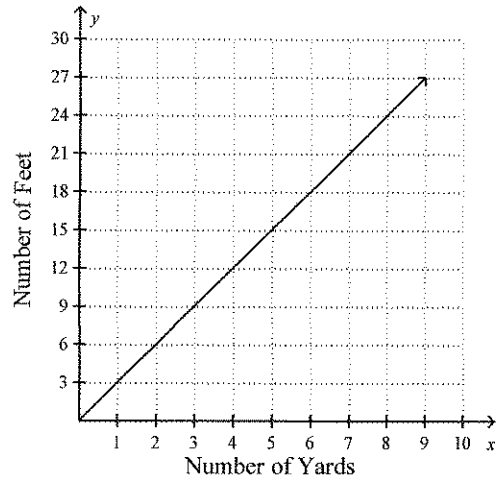
b.  $-\frac{1}{3}$

c.  $\frac{1}{6}$

d.  $-\frac{1}{6}$

Find the rate of change for each linear function.

11.



a. increase of 3 ft/yd

b. decrease of 3 ft/yd

c. increase of 3 yd/ft

d. increase of 6 ft/yd

12.

Gallons	Pints
$x$	$y$
1	8
2	16
3	24
4	32

- a. decrease of 8 pt/gal
- b. increase of 8 pt/gal
- c. increase of 8 gal/pt
- d. increase of 9 gal/pt

*Suppose  $y$  varies directly with  $x$ . Write an equation relating  $x$  and  $y$ .*

13.  $y = 7$  when  $x = 42$

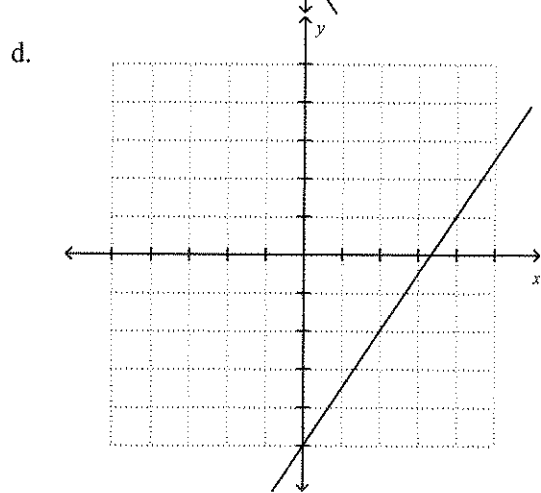
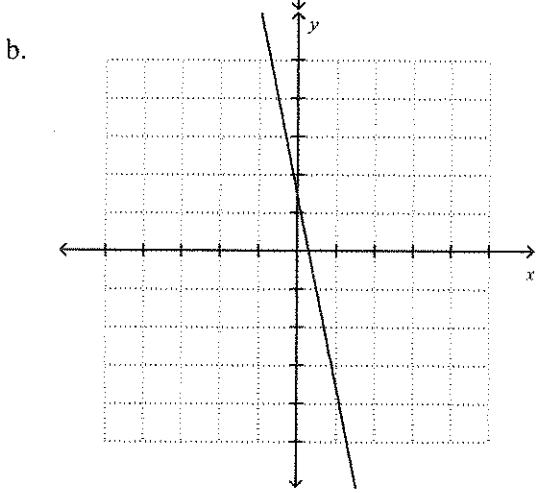
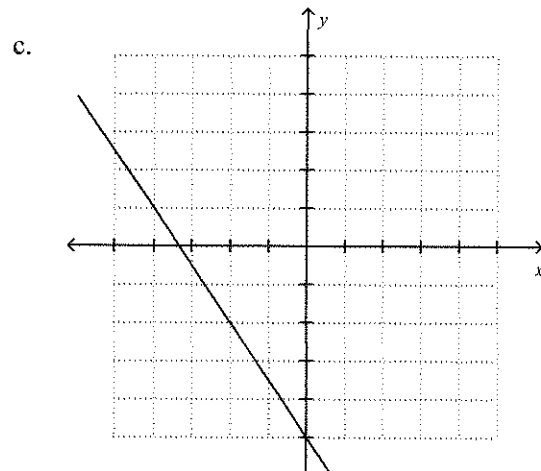
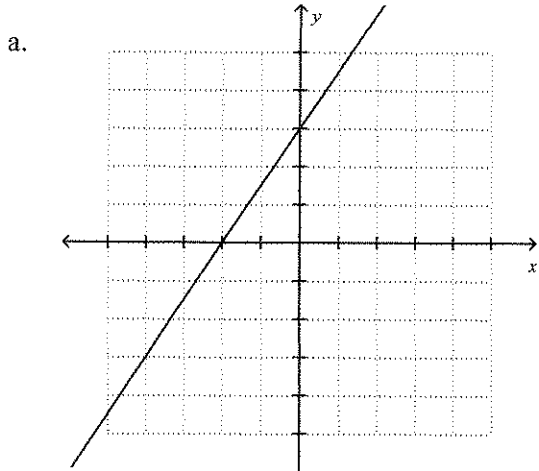
- a.  $y = 6x$
- b.  $y = \frac{1}{6}x$
- c.  $y = 7x$
- d.  $y = -\frac{1}{6}x$

*State the slope and the  $y$ -intercept for the graph of the equation.*

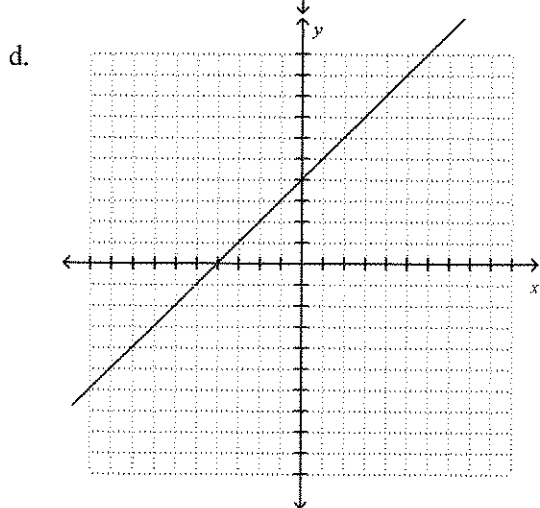
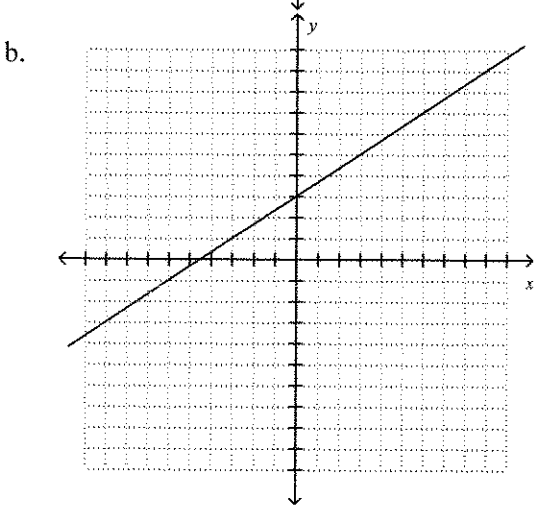
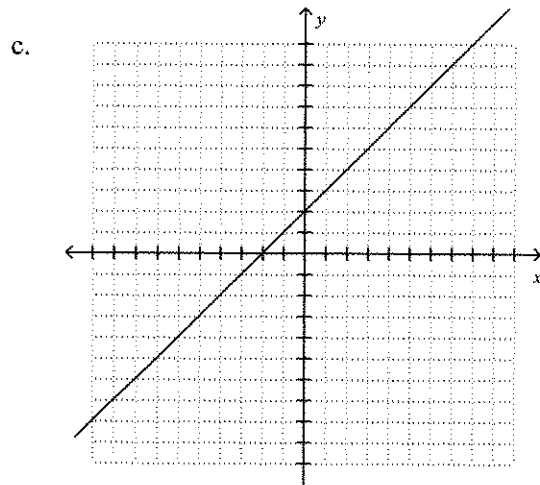
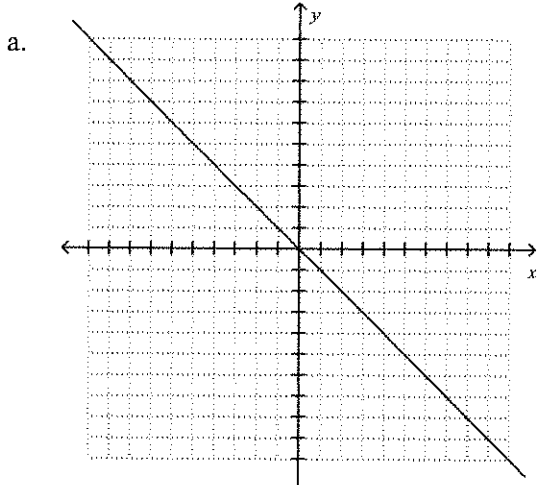
14.  $y = 4x - 5$

- a. 4; -6
- b. 5; -5
- c. -5; 4
- d. 4; -5

\_\_\_\_\_ 15. Graph each line with the given slope and y-intercept.  
slope =  $\frac{3}{2}$ , y-intercept = -5



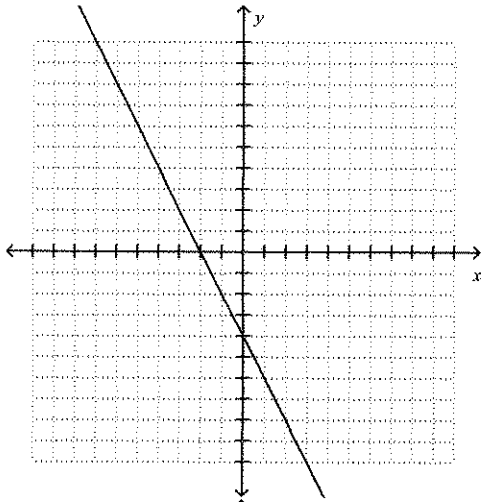
16. Graph the equation using the slope and y-intercept.  
 $y = x + 2$



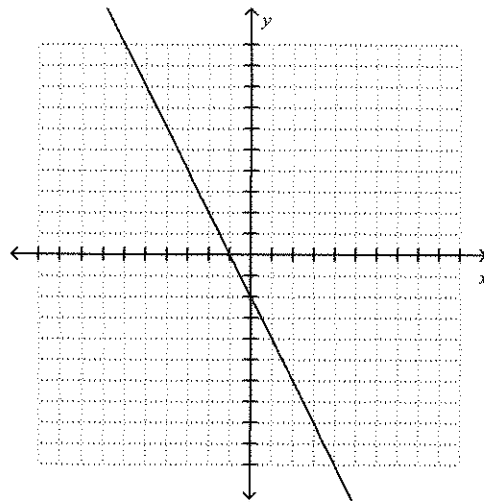
17. Graph the equation using the slope and y-intercept.

$$y = -2x - 4$$

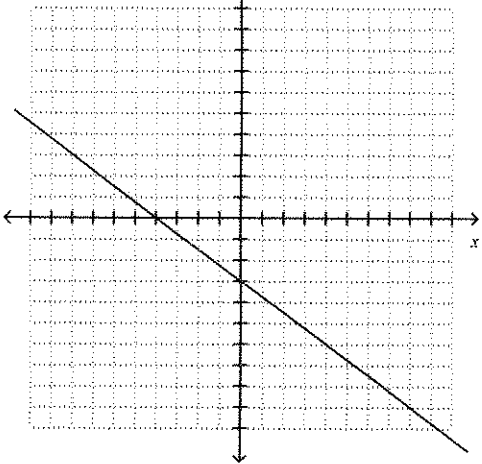
a.



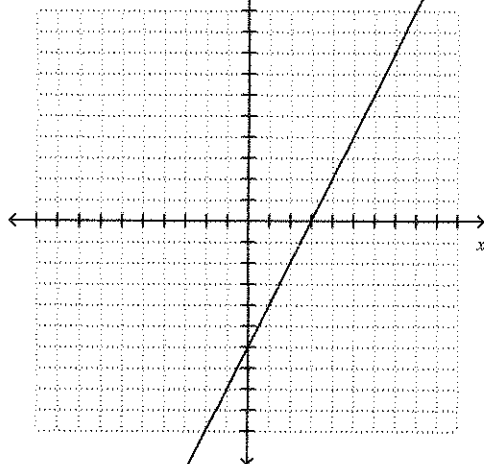
c.



b.

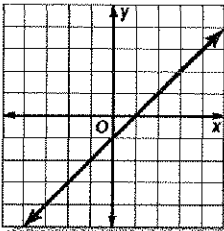


d.

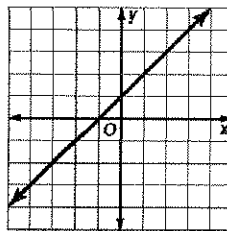


18. Which graph best represents the equation created when the slope of  $y = 4x + 1$  is changed to 1?

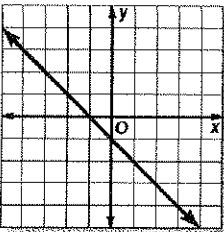
a.



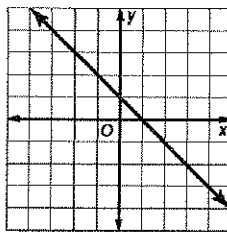
c.



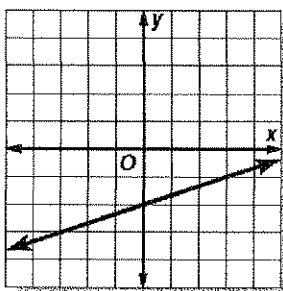
b.



d.



\_\_\_\_\_ 19. The graph below best represents which equation?



a.  $y = \frac{1}{3}x + 2$

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

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

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

*Write an equation in slope-intercept form for the line.*

\_\_\_\_\_ 20. slope =  $\frac{5}{4}$ , y-intercept = 2

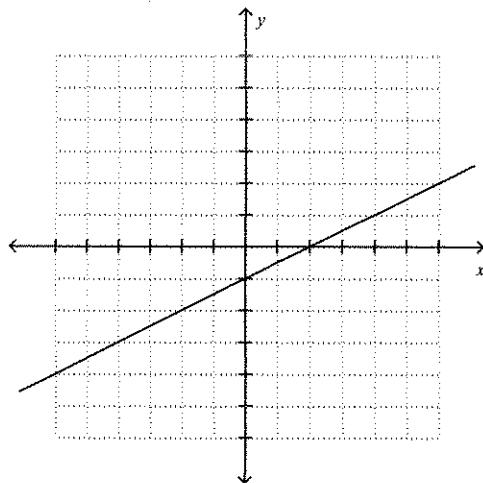
a.  $y = \frac{5}{4}x - 2$

c.  $y = -\frac{5}{4}x - 2$

b.  $y = -\frac{5}{4}x + 2$

d.  $y = \frac{5}{4}x + 2$

\_\_\_\_\_ 21.



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

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

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

d.  $y = x - 3$

*Write an equation in slope-intercept form for the line passing through the pair of points.*

\_\_\_\_\_ 22.  $(2, 3), (4, 4)$

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

c.  $y = -2x - 2$

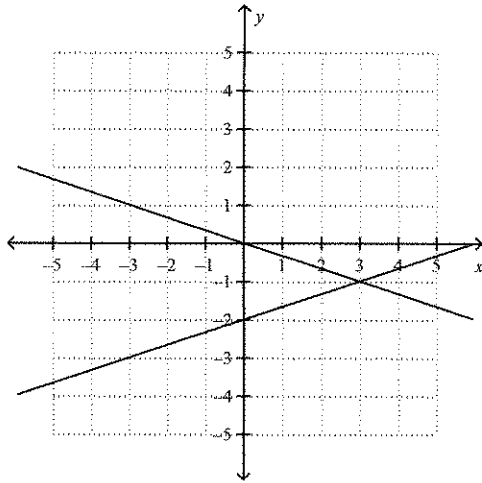
b.  $y = \frac{1}{2}x + 2$

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

Solve the system of equations by graphing.

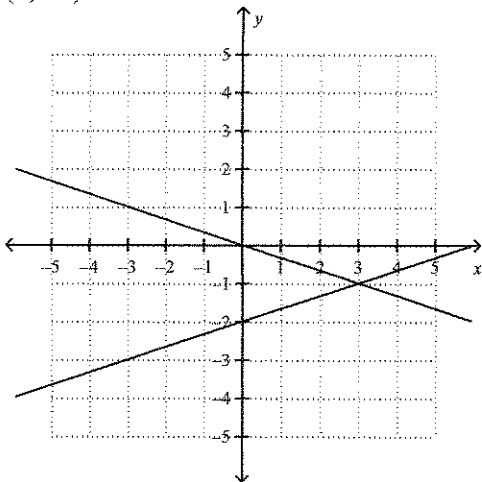
23.  $y = -\frac{1}{3}x$   
 $y = \frac{1}{3}x - 2$

a.



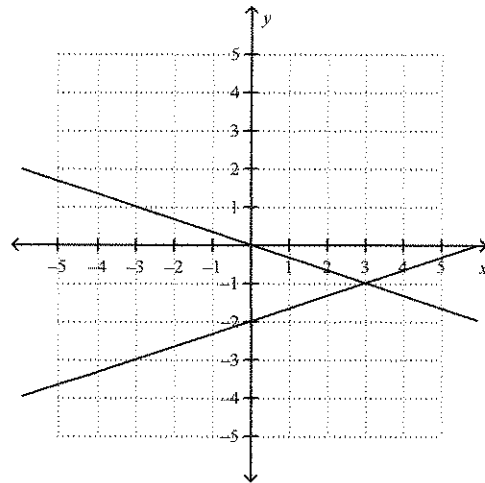
(3, -1)

b.



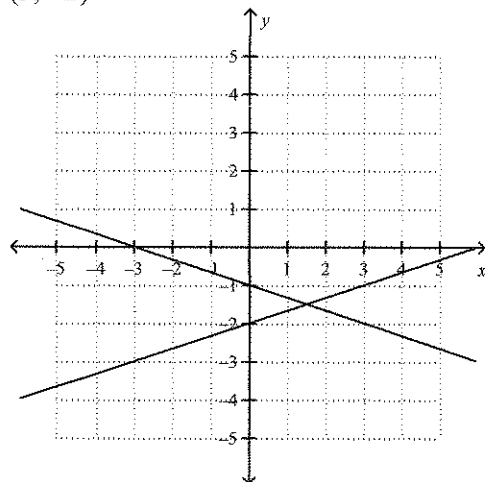
(4, -1)

c.



(3, -2)

d.



(3, -1)

Solve the system of equations by substitution.

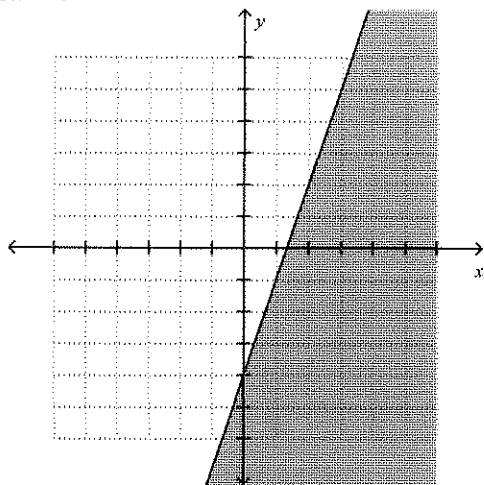
24.  $y = 4x - 4$   
 $x = 5$   
a. (5, 2.25)  
b. (5, 12)

c. (5, 15)  
d. (5, 16)

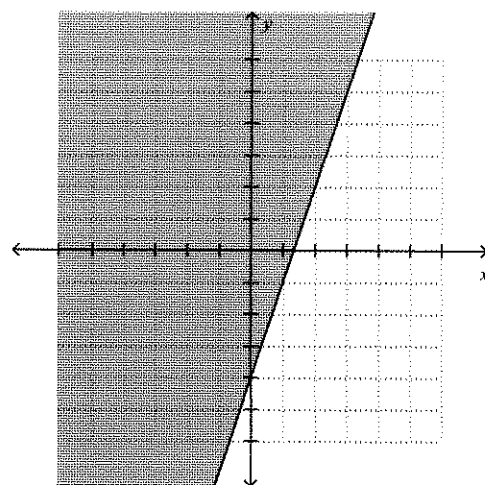
Graph the inequality.

\_\_\_\_\_ 25.  $y > 3x - 4$

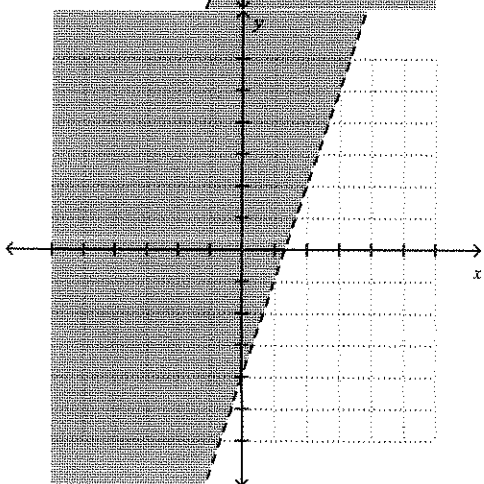
a.



c.



b.



d.

