

Practice A

For use with pages 210–217

#16-29

Decide which of the two points lies on the graph of the line.

- | | | |
|---------------------------------------|---|---|
| 1. $x + y = 8$
a. (2, 4) b. (2, 6) | 2. $2x + y = 8$
a. (2, 2) b. (3, 2) | 3. $y - x = 2$
a. (5, 3) b. (3, 5) |
| 4. $x = 4$
a. (4, 2) b. (2, 4) | 5. $y = -3$
a. (-3, 2) b. (3, -3) | 6. $y = 0$
a. (0, 3) b. (-1, 0) |
| 7. $y = x - 2$
a. (4, 6) b. (6, 4) | 8. $y = x + 3$
a. (-2, 1) b. (1, -2) | 9. $y = -3x + 1$
a. (0, 1) b. (1, 4) |

Find three different ordered pairs that are solutions of the equation.

- | | | |
|------------------|-------------------|--------------------|
| 10. $y = x - 5$ | 11. $x = -2$ | 12. $y = 1$ |
| 13. $y = -x + 4$ | 14. $y = -3x - 4$ | 15. $y = 2(x + 4)$ |

Rewrite the equation in function form.

- | | | |
|--------------------|---------------------|--------------------|
| 16. $-x + y = 6$ | 17. $x + y = -2$ | 18. $-x + y = -2$ |
| 19. $-2x + y = -4$ | 20. $3x - y = 1$ | 21. $-2x + y = 0$ |
| 22. $4x + 2y = 1$ | 23. $-9x + 3y = -6$ | 24. $-2x - 4y = 3$ |

Use a table of values to graph the equation.

- | | | |
|-----------------|----------------------------|----------------------------|
| 25. $y = x + 3$ | 26. $y = x - 2$ | 27. $y = 2x + 3$ |
| 28. $y = 6$ | 29. $x = -1$ | 30. $x = 0$ |
| 31. $y = -x$ | 32. $y = \frac{2}{3}x + 6$ | 33. $y = \frac{1}{2}x + 4$ |
| 34. $y = 2 - x$ | 35. $y = 3(x + 1)$ | 36. $y = -2(x + 3)$ |

Summer Income Use the following information.

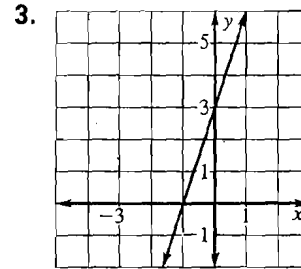
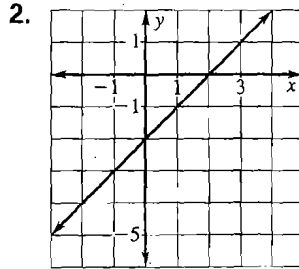
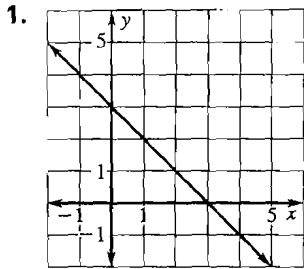
You earn \$15 an hour mowing lawns and \$10 an hour washing windows. You want to make \$400 in one week. An algebraic model for your earnings is $15x + 10y = 400$, where x is the number of hours mowing lawns and y is the number of hours washing windows.

37. What are your earnings for 3 hours of mowing and 5 hours of window washing?
38. Solve the equation for y .
39. Sketch a graph of the equation.

Practice A

7-10, 13-17

For use with pages 218-224

Use the graph to find the x -intercept and the y -intercept of the line.Find the x -intercept of the graph of the equation.

4. $x + y = 5$

5. $x - y = -6$

6. $x - 3y = 7$

7. $-3x + y = 15$

8. $2x - 10y = -30$

9. $6x + 12y = 36$

Find the y -intercept of the graph of the equation.

10. $y = -3x - 4$

11. $y = \frac{1}{2}x + 6$

12. $y = 3 - 2x$

13. $-3x + 6y = 18$

14. $4x + 4y = -16$

15. $5x - 10y = -40$

Graph the line that has the given intercepts.

16. x -intercept: 2
 y -intercept: 2

17. x -intercept: 3
 y -intercept: -1

18. x -intercept: -3
 y -intercept: 5

19. x -intercept: -4
 y -intercept: -5

20. x -intercept: -8
 y -intercept: 4

21. x -intercept: 10
 y -intercept: -6

Find the x -intercept and the y -intercept of the line. Graph the equation. Label the points where the line crosses the axes.

22. $y = x + 3$

23. $y = x - 4$

24. $y = 1 + x$

25. $y = 2 - x$

26. $y = 2x - 4$

27. $y = 3x + 5$

28. $-3x + 5y = 15$

29. $-4x + 2y = -4$

30. $7x - 5y = 35$

Ticket Sales Use the following information.

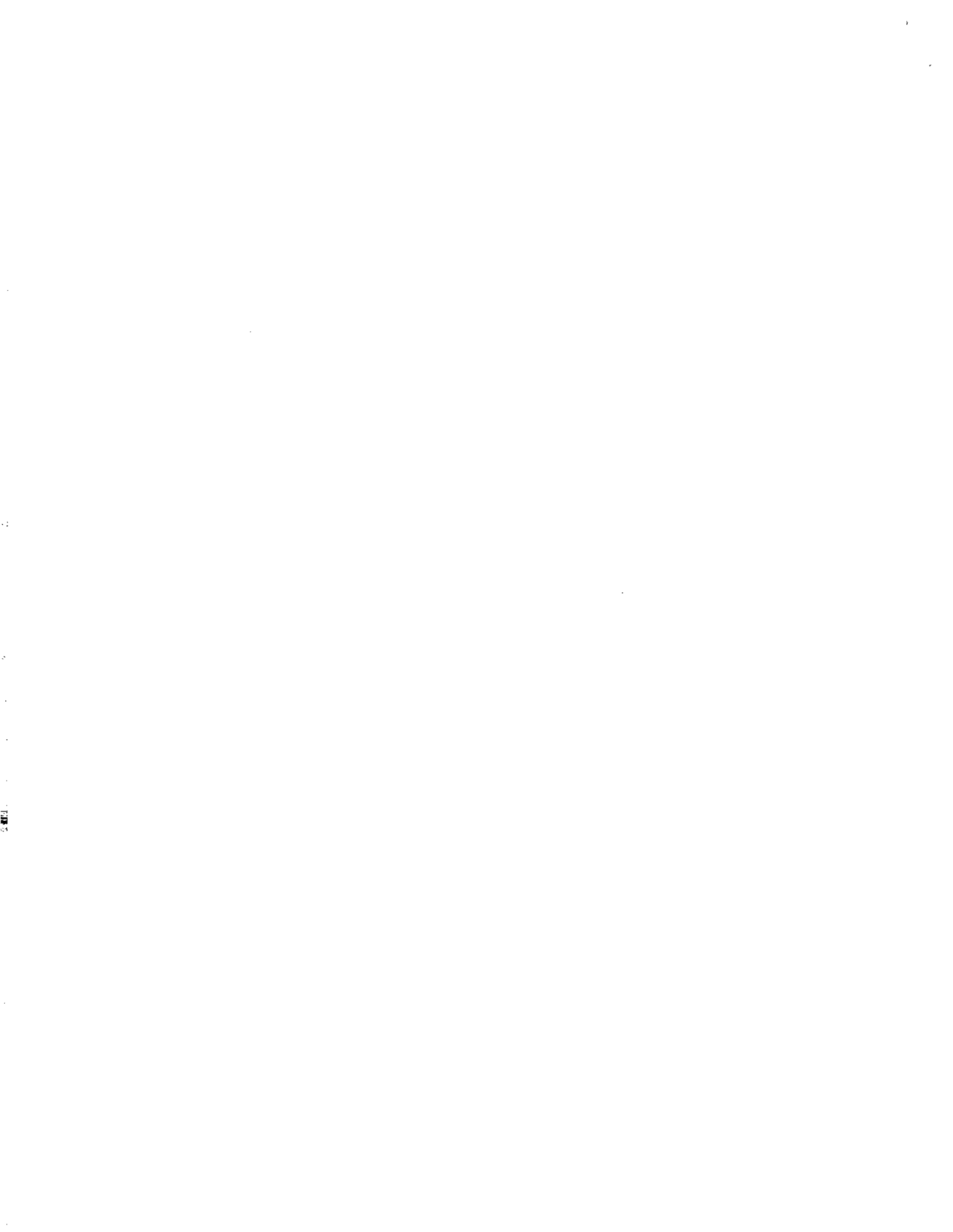
You sold tickets to the school play. Advanced tickets were \$4. Tickets bought at the door were \$5. Total ticket sales were \$400. Let x represent the number of advanced tickets sold and y represent the number of tickets sold at the door.

31. Graph the linear function $4x + 5y = 400$.
32. Label the x -intercept and the y -intercept. What does each represent in the situation?

Club Membership Use the following information.

The Spanish Club is open to juniors and seniors. There are now 18 members in the club. Let x represent the number of junior members and y represent the number of senior members.

33. Graph the linear function $x + y = 18$.
34. Label the x -intercept and the y -intercept. What does each represent in the situation?

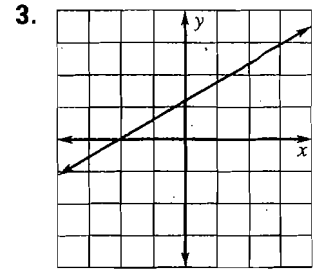
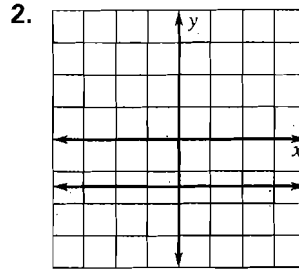
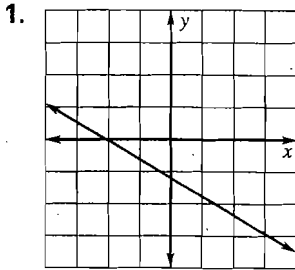


Practice A

13-24

For use with pages 226–233

State whether the slope of the line is *positive*, *negative*, *zero*, or *undefined*.



Plot the points and draw a line through them. Without calculating, state whether the slope of the line is *positive*, *negative*, *zero*, or *undefined*.

4. $(2, 4), (5, 2)$

5. $(2, -5), (2, 4)$

6. $(4, 1), (6, 7)$

7. $(-3, 5), (2, 5)$

8. $(1, -4), (-2, 3)$

9. $(-4, 2), (0, 5)$

10. $(2, -3), (-4, -3)$

11. $(-5, 1), (5, -1)$

12. $(-1, 3), (-1, -2)$

Find the slope of the line passing through the given points.

13. $(1, 5), (2, 9)$

14. $(2, 4), (1, 1)$

15. $(4, 1), (2, 7)$

16. $(2, 3), (4, 3)$

17. $(0, 4), (-2, 8)$

18. $(6, -8), (6, 4)$

19. $(3, 7), (-9, -5)$

20. $(-2, 3), (4, -1)$

21. $(-5, 2), (2, -4)$

22. $(3, -1), (-6, -1)$

23. $(-3, -9), (-3, -1)$

24. $(-3, -2), (-1, -7)$

Find the value of y so that the line passing through the two points has the given slope.

25. $(1, y), (2, 4), m = 1$

26. $(4, y), (5, 3), m = 3$

27. $(-2, 4), (0, y), m = 2$

28. $(3, 5), (1, y), m = -2$

29. $(-2, y), (0, 3), m = -\frac{1}{2}$

30. $(4, -2), (-1, y), m = 1$

31. $(1, 5), (10, y), m = -4$

32. $(-3, 6), (-4, y), m = 5$

33. $(-4, 8), (8, y), m = -9$

In Exercises 34–39, find the rate of change between the two points. Give the units of measure for the rate.

34. $(4, 10)$ and $(6, 15)$; x in minutes, y in miles

35. $(3, 5)$ and $(11, 69)$; x in years, y in dollars

36. $(7, 21)$ and $(14, 42)$; x in days, y in gallons

37. $(1, 2)$ and $(8, 16)$; x in weeks, y in pounds

38. $(4, 100)$ and $(8, 200)$; x in gallons, y in miles

39. $(8, 1)$ and $(4, 2)$; x in months, y in inches

