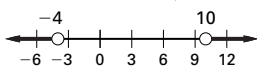
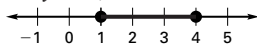


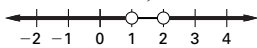
13.  $x < -4$  or  $x > 10$ ;



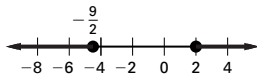
14.  $1 \leq y \leq 4$ ;



15.  $x < 1$  or  $x > 2$ ;



16.  $x \leq -\frac{9}{2}$  or  $x \geq 2$ ;



17.  $20 \leq e \leq 28$ ; between 320 mi and 448 mi, inclusive

18.  $|d - 30| \leq 0.045$ ; between 29.955 mm and 30.045 mm, inclusive

**CHAPTER 1 REVIEW (pp. 58–60)**

1.  $-\pi, -\sqrt{6}, 0.2, \frac{6}{5}$ ;  $-\pi, -\sqrt{6}, -2, 0.2, \frac{6}{5}$

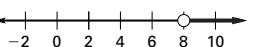


3. distributive property 5. -18 7. 4 9.  $5x + 4y$

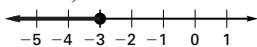
11.  $11x^2 - x$  13. -3 15. -32 17. 4 19.  $y = 5x - 10$

21.  $y = -0.2x + 7$  23.  $y = \frac{5}{6}x + 2$  25.  $l = \frac{P - 2w}{2}$

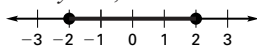
27. about 5 h 55 min 29.  $x > 8$ ;



31.  $x \leq -3$ ;



33.  $-2 \leq y \leq 2$ ;



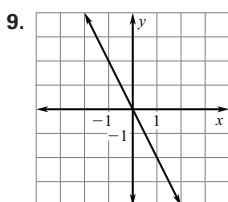
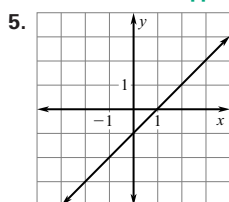
35. -5, 3 37.  $-\frac{8}{3}, 6$  39.  $-2 < x < 7$

**CHAPTER 2**

**SKILL REVIEW (p. 66)** 1. 2 2. 2 3. 3 4.  $y = -3x + 4$

5.  $y = \frac{1}{2}x - 5$  6.  $y = -\frac{5}{6}x - 10$  7.  $x < \frac{9}{2}$  8.  $y \geq -26$  9.  $x < \frac{5}{2}$

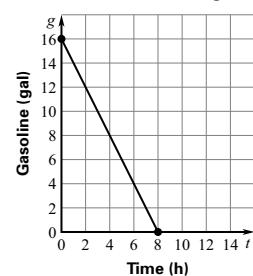
**2.1 PRACTICE (pp. 71–74)**



11. 3 13. 9 15. 1

17. domain:  $0 \leq t \leq 8$ ; range:  $0 \leq g \leq 16$ ;

**Gasoline Remaining**

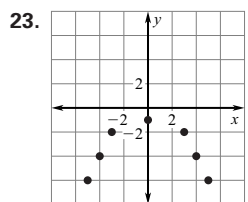


19. domain: -1, 2, 5, 6;

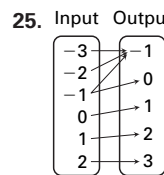
range: -2, 3

21. domain: 1, 2, 3, 4;

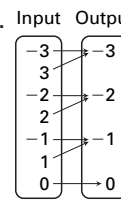
range: 1, 2, 3, 4



yes

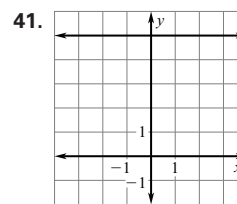
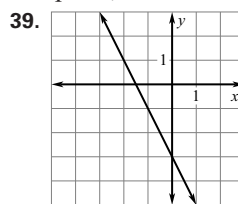


no



yes

29. If a relation is a function, then no vertical line intersects the graph of the relation at more than one point. If no vertical line intersects the graph of a relation at more than one point, then the relation is a function. 31. yes



43. linear; -7 45. not linear; 1 47. not linear; -25

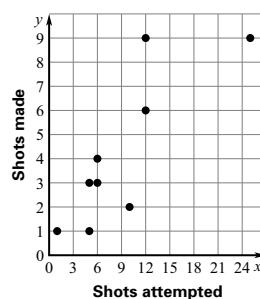
49. 125; the volume of a cube with sides of length 5 units

51. No. *Sample answer:* Not every age corresponds to exactly one place. For example, there were 24-year-olds with finishes of first and third.

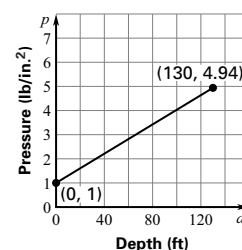
53. domain: 1, 5, 6, 10, 12, 25; 55. domain:  $0 \leq d \leq 130$ ;

range:  $1 \leq p \leq 4\frac{31}{33}$ ;

**Jazz Shooting**



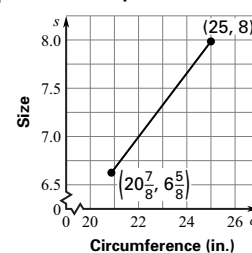
**Pressure Versus Depth**



57. domain:  $20\frac{7}{8} \leq c \leq 25$ ;

range:  $6\frac{5}{8} \leq s \leq 8$ ;

**Cap Size**



**2.1 MIXED REVIEW (p. 74)** 65. 1 67.  $\frac{1}{2}$  69.  $\frac{1}{4}$  71. -7.5

73.  $-4\frac{11}{16}$  75.  $-\frac{12}{11}$  77. yes 79. yes 81. yes

**2.2 PRACTICE (pp. 79–81)** 5. undefined; vertical 7. -1; falls

9. 2; rises 11. line 2 13. neither 15. parallel 17. 1

19. undefined 21. 10; rises  $\frac{1}{2}$ ; rises 25. -1; falls

27. undefined; vertical 29.  $-\frac{1}{2}$ ; falls 31. undefined;

vertical 33. C 35. A 37. line 1 39. line 2 41. parallel

43. perpendicular 45. 6; dollars/h 47. 3; in./year 49. 10.75  
 51. 0.062 ft/year; this is the ratio of the number of vertical feet the volcano must grow to the length of time it will take to grow that high.

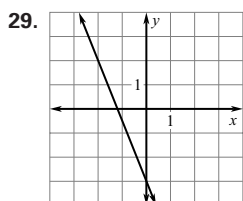
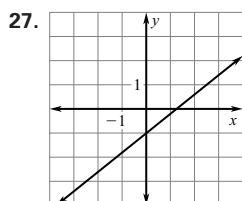
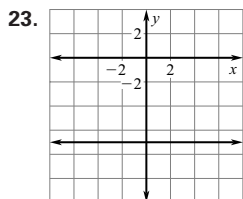
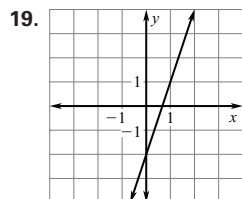
**2.2 MIXED REVIEW (p. 81)** 59. additive inverse property

61. distributive property 63.  $15 - 8x$  65.  $8 - \frac{4}{3}x$  67.  $-8, -1$

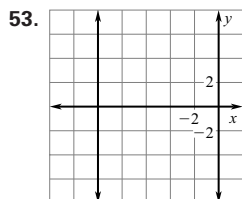
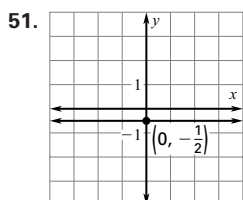
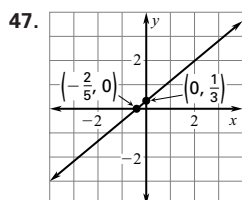
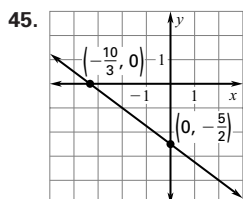
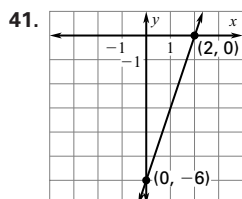
69.  $-1, \frac{5}{3}$  71. about \$.45/oz

**2.3 PRACTICE (pp. 86–88)** 5.  $-2; -7$  7.  $x$ -intercept: 11;

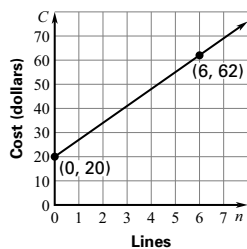
$y$ -intercept:  $-11$  9.  $x$ -intercept: 3;  $y$ -intercept:  $-15$  17. A



31. 6; 10 33. 0; 100 35. 4;  $-7$  37. B 39. A

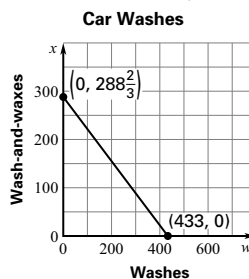


59. **Cost of Color Advertisement**

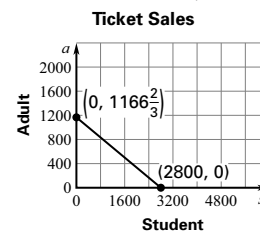


The slope, 7, represents the price of each line in the ad, while the intercept, 20, represents the initial cost of placing a colored ad.

61.  $8w + 12x = 3464$ ;



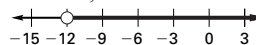
63.  $2.5s + 6a = 7000$ ;



*Sample answer:*  
 1600 student tickets,  
 500 adult; 880 student,  
 800 adult; 400 student,  
 1000 adult

**2.3 MIXED REVIEW (p. 88)**

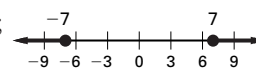
69.  $x > -12$ ;



71.  $x \leq 45$ ;

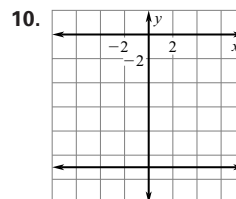
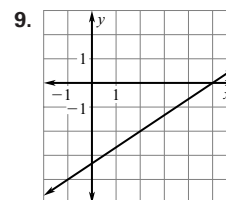
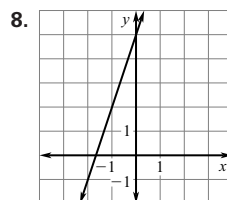


73.  $x \leq -7$  or  $x \geq 7$ ;



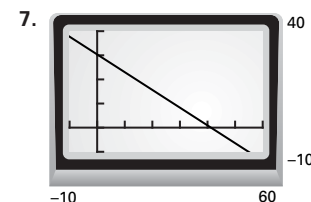
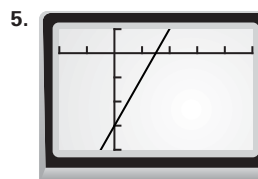
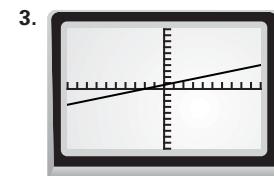
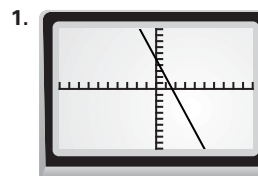
75. 12 77. 8 79.  $-16$  81.  $-\frac{6}{7}$  83. undefined 85.  $-2$

**QUIZ 1 (p. 89)** 1. domain:  $-2, -1, 0, 1, 2$ ; range:  $-2, 1$ ; function 2. domain: 1, 2, 3, 4; range: 1, 2, 3, 4; not a function 3. domain:  $-3, -1, 0, 1, 2$ ; range:  $-3, -2, 0, 1$ ; function 4.  $-21$  5. 139 6. perpendicular 7. neither



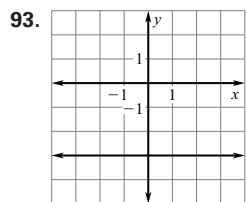
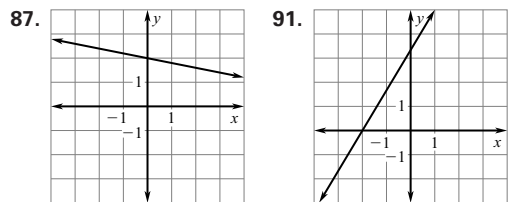
11. about 8.36 mi/h

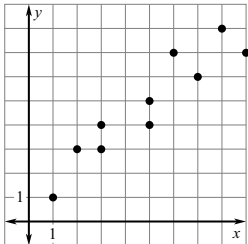
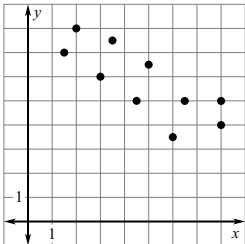
**TECHNOLOGY ACTIVITY 2.3 (p. 90)**



- 2.4 PRACTICE (pp. 95–98)** 5.  $y = 2x - 4$  7.  $y = -\frac{3}{4}x - \frac{21}{4}$   
 9.  $y = \frac{2}{5}x + 2$  11.  $y = 5x - 6$  13.  $y = 5x - 3$  15.  $y = -4x$   
 17.  $y = \frac{3}{5}x + 6$  19.  $y = 2x + 4$  21.  $y = 5$  23.  $y = -\frac{4}{3}x + 2$   
 25.  $y = 2x - 3$  27.  $x = 2$  29.  $y = \frac{3}{2}x - \frac{1}{2}$  31.  $y = -\frac{1}{2}x - \frac{15}{2}$   
 33.  $y = -x + 8$  35.  $y = 3x - 19$  37.  $y = -\frac{7}{8}x + 1$   
 39.  $y = x + 10$  41.  $3 = -\frac{1}{2}(2) + b$ ;  $3 = -1 + b$ ;  $b = 4$ . The equation is  $y = -\frac{1}{2}x + 4$ , the same as in Example 2. The slope-intercept equation of a line is unique. 43.  $y = \frac{7}{2}x$ ; 28  
 45.  $y = -3x$ ; -24 47.  $y = \frac{1}{2}x$ ; 4 49.  $y = \frac{1}{2}x$ ; -10  
 51.  $y = \frac{1}{5}x$ ; -25 53.  $y = \frac{1}{2}x$ ; -10 55. yes;  $y = \frac{1}{2}x$   
 57. yes;  $y = -x$  59.  $P = 60,300t + 2,842,200$ ; 4,289,400  
 61.  $s = 0.629t + 7.4$ ; about \$21.2 billion 63.  $h = \frac{1}{7}t$ ; 38.5 ft  
 65.  $r = \frac{1}{240}t$ ; 11 min 67. no

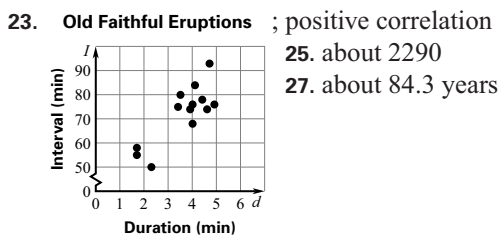
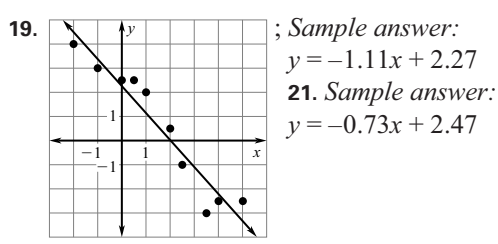
- 2.4 MIXED REVIEW (p. 98)** 71. -7, 27 73. -10, -8  
 75.  $-\frac{38}{55}, \frac{8}{55}$  77. 14 79. 2 81. 0 83. -2 85. 1



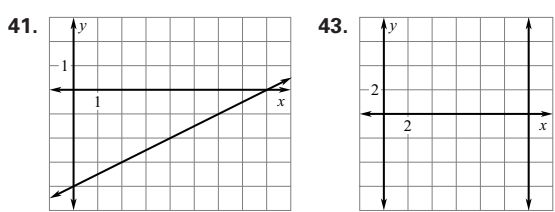
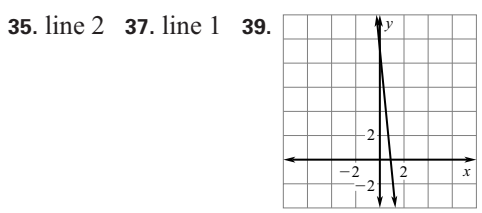
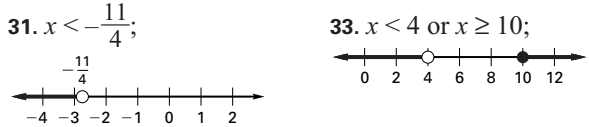
- 2.5 PRACTICE (pp. 103–105)** 5. about 1.4 m  
 7. *Sample answer:* about 8830 9. positive correlation  
 11.  ; 13.  ;

positive correlation                      negative correlation

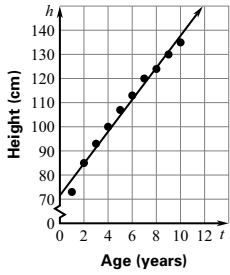
15. *Sample answer:* List the data points so that the values of  $x$  are in increasing order. If the  $y$ -values mostly increase along with the  $x$ -values, there is a positive correlation. If the  $y$ -values mostly decrease as the  $x$ -values increase, there is a negative correlation. Otherwise, there is relatively no correlation. 17. *Sample answer:*  $y = -0.86x - 0.05$



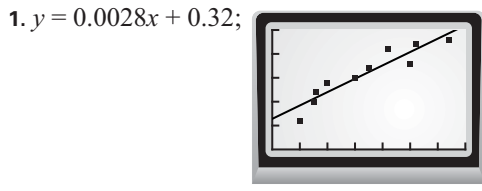
**2.5 MIXED REVIEW (p. 106)**



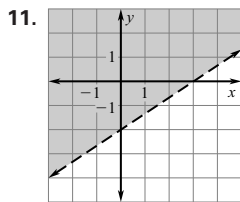
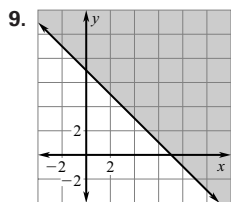
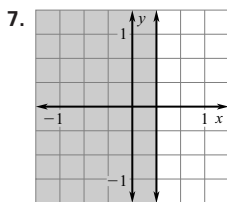
- QUIZ 2 (p. 106)** 1.  $y = \frac{2}{3}x + 6$  2.  $y = 2x + 5$  3.  $y = -\frac{1}{5}x - \frac{33}{5}$   
 4.  $y = 2x - 4$  5. relatively no correlation 6. negative correlation 7. positive correlation 8.  $d = 1.3h$ ; 4 ft  
 9. **Heights of Children** ; *Sample answer:*  $h = 6.63t + 71.5$



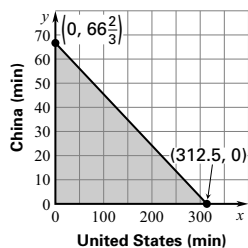
**TECHNOLOGY ACTIVITY 2.5 (p. 107)**



**2.6 PRACTICE (pp. 111–113)**



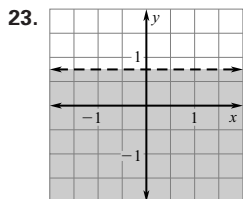
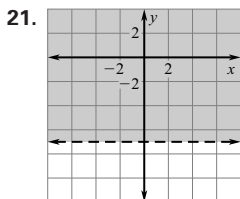
13.  $0.16x + 0.75y \leq 50$ ;  
Calls for \$50



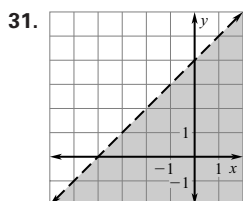
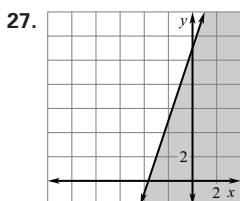
; One possible solution is to spend 50 min on calls to China and 78 min on calls in the United States, for a total cost of \$49.98. Another solution would be to spend 50 min on calls within the United States and 56 min on calls to China; this uses exactly \$50. A third

solution is 100 min on calls within the United States and 45 min on calls to China. This solution uses a total of \$49.75.

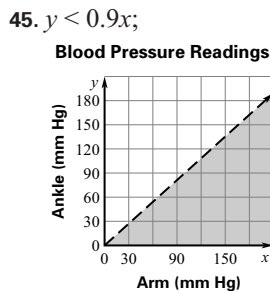
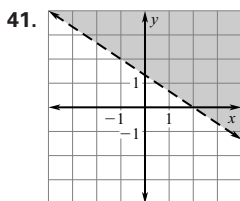
15. no; yes 17. yes; no



25. C



33. C  
35. B

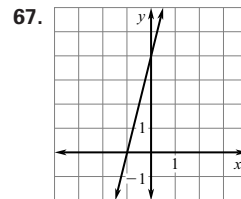
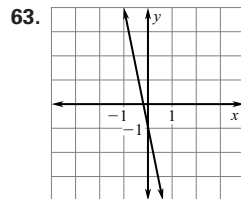


47. about 1.77 cups 49. *Sample answer:* You can attend 5 matinees and no evening showings for a total of \$22.50, 2 of each for a total cost of \$24, or 3 evening showings at a cost of \$22.50.

51. *Sample answer:* 9 touchdowns and no field goals for 63 points; 5 touchdowns and 1 field goal for 38 points; 2 touchdowns and 3 field goals for 23 points; 3 touchdowns and 3 field goals for 30 points; 4 touchdowns and 6 field goals for 46 points

**2.6 MIXED REVIEW (p. 113)**

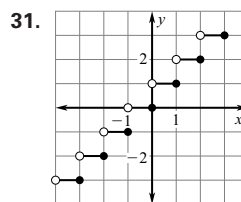
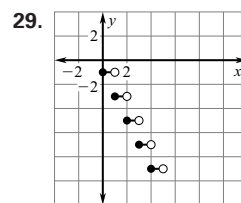
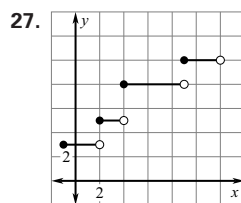
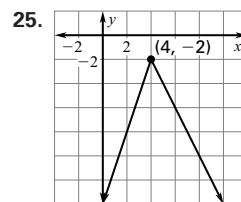
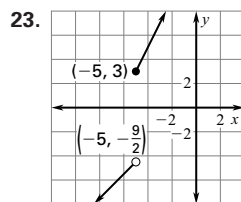
57.  $1.65 \times 10^9$  59.  $6.7 \times 10^{-4}$  61.  $8.08 \times 10^{-2}$



69.  $y = -\frac{6}{5}x + 7$  71.  $x = 3$  73.  $y = -8$

**2.7 PRACTICE (pp. 117–120)** 5. 27 7. 11

11.  $f(x) = -\frac{4}{3}x + 6$ , if  $0 \leq x < 3$ ,  $f(x) = -\frac{2}{5}x + \frac{16}{5}$ , if  $3 \leq x \leq 8$  13. -21 15. -9 17. -9.5 19. -7

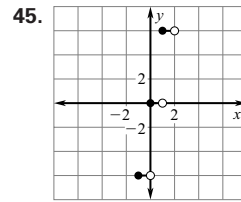
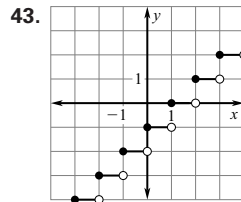


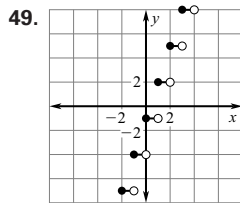
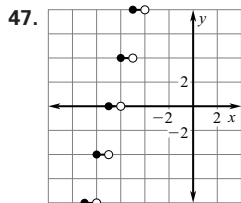
; *Sample answer:* The function graphs each  $x$ -value to the smallest integer that is not less than it, giving a sort of upper limit to the  $x$ -values in each interval.

35.  $f(x) = \begin{cases} x, & \text{if } x < 0 \text{ (or } x \leq 0) \\ 2x, & \text{if } x \geq 0 \text{ (or } x > 0) \end{cases}$

37.  $f(x) = \begin{cases} \frac{3}{2}x + \frac{9}{2}, & \text{if } x < -1 \\ -1, & \text{if } x \geq -1 \end{cases}$

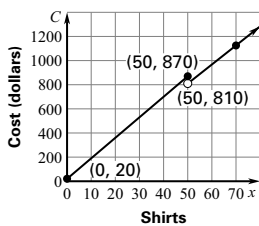
39.  $f(x) = \begin{cases} x + 2, & \text{if } x \leq -1 \\ x + 3, & \text{if } -1 < x < 1 \\ x + 1, & \text{if } 1 \leq x \end{cases}$





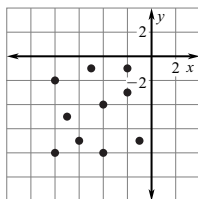
51. domain:  $0 < x \leq 80$ ; range: 11.75, 15.75, 18.50, 21.25, 24.00  
 53. 450 photocopies cost more than 501 would.

55. Charges 57. \$1860 59. 15 in.



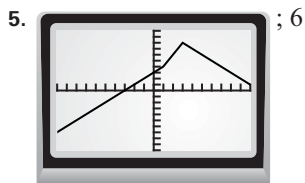
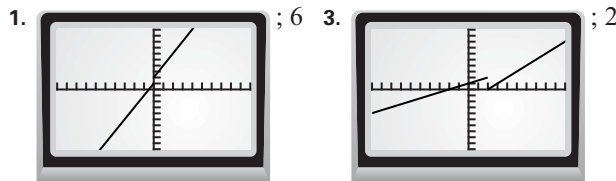
**2.7 MIXED REVIEW (p. 120)** 63.  $\frac{3}{2}, -6$  65. 6, 15 67. -12, 32

69. ; relatively no correlation

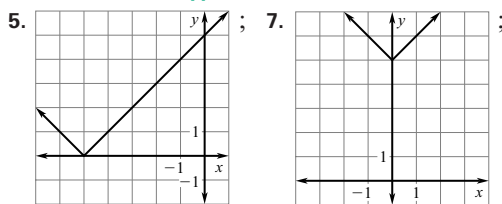


71.  $n = -\frac{1}{40}T + 2.5$ ; 2.5 in.

**TECHNOLOGY ACTIVITY 2.7 (p. 121)**



**2.8 PRACTICE (pp. 125-127)**

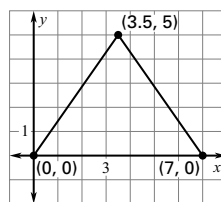


$(-5, 0)$ ; opens up; same width

$(0, 5)$ ; opens up; same width

9.  $(\frac{1}{2}, -14)$ ; opens down; same width

11. Sample answer:  $y = -\frac{10}{7}|x - 3.5| + 5$ ;

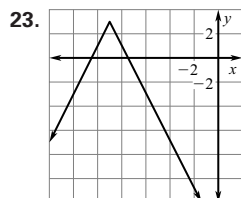


; domain:  $0 \leq x \leq 7$ ; range:  $0 \leq y \leq 5$

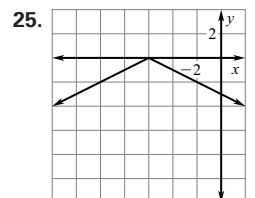
13. C 15. C 17. B

19.  $(0, 9)$ ; opens up; same width

21.  $(-2, 11)$ ; opens down; same width



$(-9, 3)$ ; opens down; narrower



$(-6, 0)$ ; opens down; wider

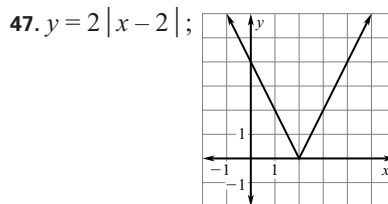
27. -23, -5 29.  $-\frac{39}{7}, \frac{31}{7}$  31. -2.8125, 2.8125 33. 1.5, 4.5

35.  $y = -|x - 3| + 1$  37.  $y = 2|x + 1| - 1$

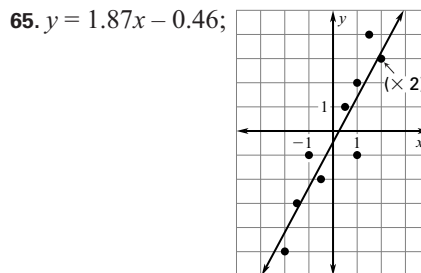
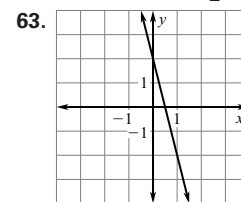
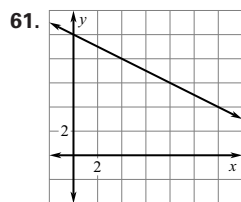
39.  $y = -4|x| + 20$  41. 40,000

43. 2 h; 1 h after the rain started

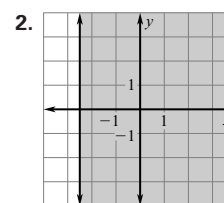
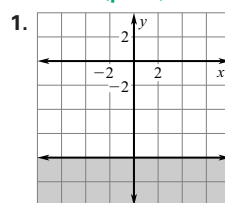
45. after 2 measures and again after 6 measures

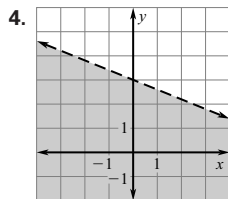
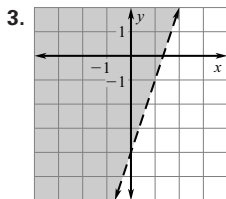


**2.8 MIXED REVIEW (p. 128)** 57.  $y = -3x - \frac{9}{2}$

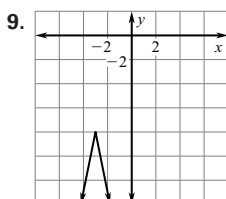
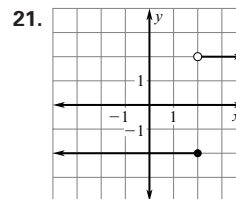
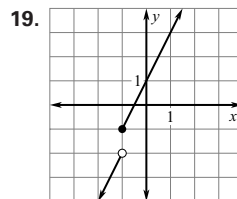
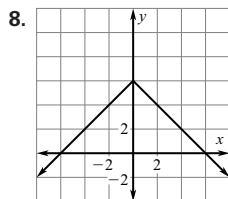
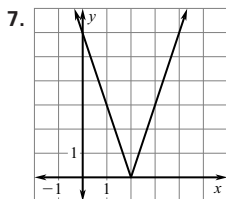
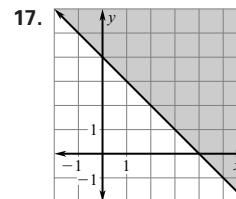
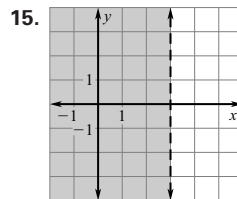


**QUIZ 3 (p. 128)**

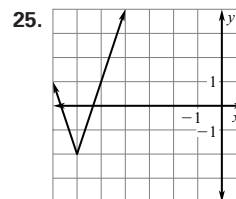
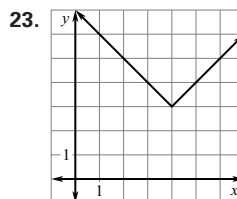




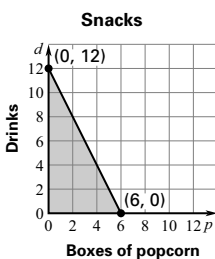
5. 7 6. 5



10.  $y = \frac{3}{2}|x - 2|$   
 11.  $y = -|x + 2| + 2$   
 12.  $y = \frac{1}{3}|x + 1| + 2$



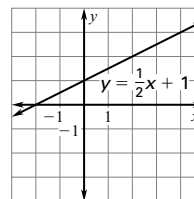
13.  $2.5p + 1.25d \leq 15$ ;



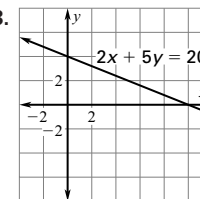
**CHAPTER 3**

**SKILL REVIEW (p. 138)** 1. no 2. yes 3. yes 4. yes 5. no

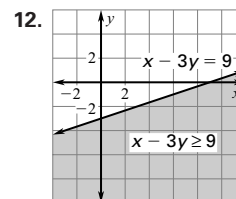
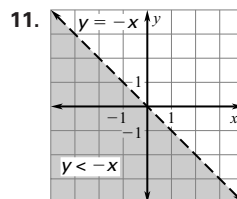
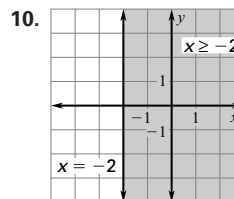
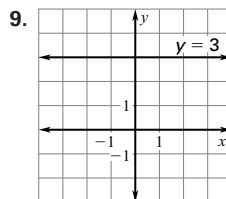
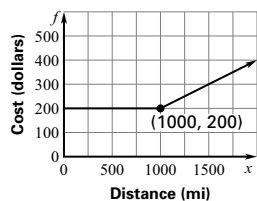
6. yes 7.



8.

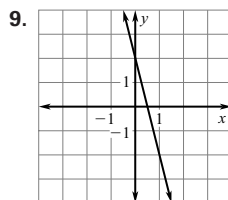
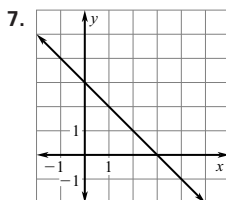


14.  $f(x) = \begin{cases} 200, & \text{if } 0 < x \leq 1000 \\ 0.2x, & \text{if } x > 1000 \end{cases}$   
 Rental Charges ; \$240



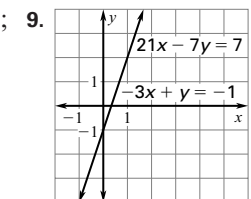
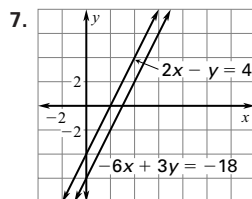
**CHAPTER 2 REVIEW (pp. 130–132)**

1. ; yes 3.  $\frac{2}{3}$  5. -1



11.  $y = -x + 2$  13.  $y = 2x - 14$

**3.1 PRACTICE (pp. 142–145)** 5. yes



0 infinitely many  
 11. yes 13. no 15. yes 17. no 19. no