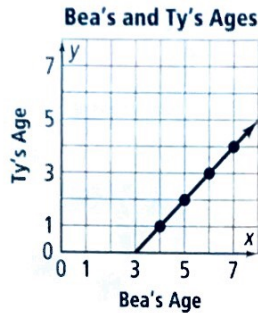


17.

Bea's and Ty's Ages				
Bea's age	4	5	6	7
Ty's age	1	2	3	4

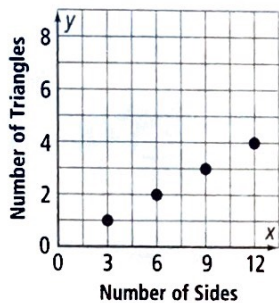
$y = x - 3$



19.

Sides and Triangles				
Number of sides	3	6	9	12
Number of triangles	1	2	3	4

$y = \frac{1}{3}x$

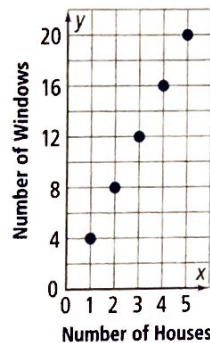


21. 56 in. 23. $y = x - 12$; 52 in.

25.

Number of Houses	1	2	3	4	5
Number of Windows	4	8	12	16	20

a. 36 windows b. $k + 4$

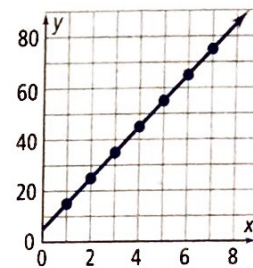


27. yes 29. no 31. 11 h 33. Check students' work.
 35. $y = -x - 3.5$; the graph is of a line, which passes through (0, -3.5), (3.5, 0) 37. H 39. F 40. no 41. yes
 42. yes 43-48. Check students' work. 47. 9 48. -3
 49. -14 50. -27 51. 40 52. -30 53. -1 54. -81

Chapter Review pp. 68-72

1. irrational 2. opposite 3. like terms 4. absolute value
 5. inductive reasoning 6. $737w$ 7. $q - 8$ 8. $x + 84$

9. $51t + 9$ 10. $\frac{63}{h} - 14$ 11. $b - \frac{k}{5}$ 12. the sum of 12 and a number a 13. 31 less than a number r 14. the product of 19 and a number t 15. the quotient of b and 3 16. 3 less than the product of 7 and c 17. the sum of 2 and the quotient of x and 8 18. 6 less than the quotient of y and 11 19. 13 more than the product of 21 and d 20. 81 21. 125 22. $\frac{1}{36}$ 23. 9.8 24. 100
 25. 48 26. $8\frac{1}{3}$ 27. 40 28. 79 29. 123 30a. 216
 b. The surface area is reduced to a fourth of its previous value. 31. 615 mi 32. irrational 33. rational
 34. irrational 35. rational 36. 10 37. 7 38. 5
 39. rational numbers, integers 40. rational numbers
 41. irrational numbers 42. rational numbers, whole numbers, natural numbers, integers 43. rational numbers
 44. rational numbers 45. $-1\frac{4}{5}$, $-1\frac{2}{3}$, 1.6 46. -0.8 , $\frac{7}{9}$, $\sqrt{3}$
 47. $9w - 31$ 48. -96 49. 0 50. $41 - 4t$ 51. 1
 52. yes 53. no 54. no 55. no 56. 5 57. -5 58. -9
 59. 1.8 60. -144 61. 40 62. -3 63. -19 64. 3
 65. -8 66. 60 67. 16 68. 12 69. -11 70. 19
 71. -100 72. -56 73. 225 74. $-\frac{3}{10}$ 75. $10x - 15$
 76. $-14 + 2a$ 77. $-\frac{1}{2}j + 4$ 78. v^2 79. $6y - 6$
 80. $\frac{3}{2}y - \frac{1}{4}$ 81. $6 - 6y$ 82. $y - 3$ 83. $-\frac{1}{3}y + 6$
 84. $-2ab^2$ 85. \$2850 86. Yes; the variable parts of the terms are the same. 87. yes 88. no 89. no 90. yes
 91. 10 92. between 12 and 13 93. between 2 and 3
 94. between 3 and 4 95. yes 96. no 97. no 98. no
 99. y is 5 more than the product of 10 and x ;
 $y = 10x + 5$.
 55, 65, 75



Chapter 2

Get Ready!

p. 77

1. Answers may vary. Sample: For each lawn mowed, \$7.50 is earned; $y = 7.50x$. 2. Answers may vary. Sample: 30 pages are read each hour; $y = 30x$. 3. 3
 4. -10 5. 8 6. -8 7. 7.14 8. 16.4 9. $-\frac{9}{20}$ 10. $-\frac{7}{15}$
 11. 17 12. -3 13. 576 14. -2.75 15. $16k^2$ 16. $13xy$
 17. $2t + 2$ 18. $12x - 4$ 19. Answers may vary. Sample: The shirts might look the same but be different sizes or different colors; the triangles will be the same shape but different sizes. 20. Answers may vary. Sample: The model ship is the same shape but just a smaller size than the actual ship.

Lesson 2-1**pp. 81-87**

Got It? 1a. -8 **b.** The Subtr. Prop. of Eq. states that subtracting the same number from each side of an equation produces another equation that is equivalent. **2a.** -6 **b.** 2 **3a.** $\frac{2}{3}$ **b.** -4.375 **4a.** 57 **b.** -72 **5a.** 16 **b.** Yes; multiplying each side of the second equation by the reciprocal of $\frac{2}{3}$ produces the first equation. **6.** 6 months

Lesson Check 1. -4 **2.** 13 **3.** $4\frac{4}{5}$ **4.** $\frac{1}{3}b = 117$; 351 pages **5.** Subtr. Prop. of Eq. **6.** Div. Prop. of Eq. **7.** Add. Prop. of Eq. **8.** Mult. Prop. of Eq. **9.** Check students' work.

Exercises 11. 19 **13.** -9 **15.** 26 **17.** 7.5 **19.** 132 **21.** 13.5 **23.** 2 **25.** -4 **27.** -4 **29.** 0.16 **31.** 5 **33.** $-\frac{1}{2}$ **35.** 175 **37.** -117 **39.** 81 **41.** -34 **43.** 12 **45.** -25 **47.** 81 **49.** 24 **51.** $p =$ city's population at start of three-year period; $p - 7525 = 581,600$; 589,125 **53.** \$4500 **55.** $-\frac{1}{21}$ **57.** $7\frac{1}{3}$ **59.** $31\frac{1}{4}$ **61.** $\frac{1}{3}$ **63.** 0.8 **65.** $2\frac{1}{2}$ **67.** -25 **69.** $-\frac{1}{2}$ **71.** Each side of the equation should be multiplied by 9, not $\frac{1}{9}$; $(9)(-36) = (9)(\frac{x}{9})$, so $x = -324$. **73.** 21 aces **75.** 2450 letters **77.** $\frac{1}{2}s = 12$ **79.** A **81.** B **82.** 10,000 **83.** $52x$ **84.** $6 - x$ **85.** $m + 4$ **86.** 2 **87.** $\frac{25}{36}$ **88.** 1

Lesson 2-2**pp. 88-93**

Got It? 1. 16 **2.** 56 ads **3a.** 26 **b.** $6 = \frac{x}{4} - \frac{2}{4}$; 26; answers may vary. Sample: The equation in part (a) is easier because it uses fewer fractions.

4. $\frac{x}{3} - 5 + 5 = 4 + 5$ Add. Prop. of Eq.
 $\frac{x}{3} = 9$ Use addition to simplify.

$\frac{x}{3} \cdot 3 = 9 \cdot 3$ Mult. Prop. of Eq.

$x = 27$ Use multiplication to simplify.

Lesson Check 1. -5 **2.** 63 **3.** -7 **4.** -13 **5.** \$.62

6. Subtr. Prop. of Eq. and Mult. Prop. of Eq.; subtr. **7.** Add. Prop. of Eq. and Div. Prop. of Eq.; add. **8.** Add. Prop. of Eq. and Mult. Prop. of Eq.; add. **9.** Subtr. Prop. of Eq. and Div. Prop. of Eq.; subtr. **10.** Answers may vary. Sample: No, you must either multiply both sides by 5 first or write the left side as the difference of two fractions and then add $\frac{3}{5}$ to both sides.

Exercises 11. -12 **13.** -1 **15.** -2 **17.** -27 **19.** 126 **21.** -3 **23.** 16 boxes **25.** \$1150 **27.** 29 **29.** -2 **31.** -8 **33.** 8 **35.** 6 **37.** -15 **39.** 2.7 **41.** 5 **43.** -3.8 **45.** 0.449 **47.** $15 - 9 = 9 - 3p - 9$ Subtr. Prop. of Eq.
 $6 = -3p$ Use subtraction to simplify.
 $\frac{6}{-3} = \frac{-3p}{-3}$ Div. Prop. of Eq.
 $-2 = p$ Use division to simplify.

49. $9 + \frac{c}{-5} - 9 = -5 - 9$ Sub. Prop. of Eq.
 $\frac{c}{-5} = -14$ Use subtraction to simplify.
 $\frac{c}{-5} \cdot -5 = -14 \cdot -5$ Mult. Prop. of Eq.
 $c = 70$ Use multiplication to simplify.

51. 4 should be added to each side; $2x - 4 + 4 = 8 + 4$ so $2x = 12$ and $x = 6$. **53a.** 4 **b.** yes **c.** Answers may vary. Sample: The method in part (a) is easier because it doesn't involve fractions. **55.** 10.5 **57.** 4 **59.** about 2 km **61.** 2 in. **63.** No; the left side of the equation is 0 and the right side of the equation is 4. **65.** No; division by 0 is not allowed. **67.** 46 **69.** 5 **70.** 3.8 **71.** 144 **72.** 6.5 **73.** false; sample: $|-5| - |2| \neq -5 - 2$ **74.** false; sample: $-4 + 1 = -3$, $|-4| = 4$ and $|-3| = 3$ **75.** $35 - 7t$ **76.** $4x - 10$ **77.** $-6 + 3b$ **78.** $10 - 25n$

Lesson 2-3**pp. 94-100**

Got It? 1a. 6 **b.** 3 **2.** \$14 **3a.** 6 **b.** Yes; divide both sides of the equation by 3 first. **4a.** $2\frac{14}{23}$ **b.** $2\frac{1}{6}$ **5.** 12.55

Lesson Check 1. $4\frac{11}{15}$ **2.** -7 **3.** 2 **4.** 2 **5.** 16 ft **6.** Answers may vary. Sample: Subtract 1.3 from each side, and then divide each side by 0.5. **7.** Answers may vary. Sample: Apply the Distr. Prop., and then add 28 to each side and divide each side by 21. **8.** Answers may vary. Sample: Multiply each side by the common denominator 18 to clear the fractions. Add 72 to each side and then divide by -4. **9.** Answers may vary. Sample: Amelia's method: it does not involve working with fractions until the end.

Exercises 11. $2\frac{6}{7}$ **13.** 6 **15.** $5\frac{4}{7}$ **17.** -10 **19.** $3x + 6x + 20 = 92$; \$8 per h **21.** 6 **23.** 3.75 or $3\frac{3}{4}$ **25.** $7\frac{3}{7}$ **27.** $\frac{1}{6}$ **29.** 9.75 or $9\frac{3}{4}$ **31.** $\frac{7}{25}$ **33.** $2\frac{1}{3}$ **35.** $56\frac{5}{8}$ **37.** $\frac{1}{5}$ **39.** 3.5 **41.** 5 **43.** 4.27 **45.** $43\frac{3}{7}$ **47.** $3\frac{5}{16}$ **49.** 1.5 or $1\frac{1}{2}$ **51.** 2 **53.** $6\frac{2}{3}$ **55.** \$15 **57.** Answers may vary. Sample: Combine the like terms on the left side of the equation. **59.** 3 games **61.** 25 **63.** 20 **65.** 4 weeks **67.** 4 c

Lesson 2-4**pp. 102-108**

Got It? 1a. -4 **b.** The answer is the same, -4. **2.** about 27 months **3a.** -5 **b.** 4 **4a.** infinitely many solutions **b.** no solution

Lesson Check 1. 7 **2.** -3 **3.** infinitely many solutions **4.** no solution **5.** 100 business cards **6.** C **7.** A **8.** B **9.** If the numeric values are the same on both sides, it is an identity. If they are different, there is no solution. **Exercises 11.** -9 **13.** 6 **15.** -4 **17.** $-1\frac{3}{4}$ **19.** 22 ft **21.** 25 **23.** -37 **25.** 18 **27.** no solution **29.** no solution **31.** identity **33.** $\frac{2}{63}$ **35.** -19 **37.** no solution **39.** -9 **41a.** $\frac{d}{60}$ **b.** $\frac{d}{40}$ **c.** $\frac{d}{60} + 1 = \frac{d}{40}$; 120 mi; 48 mi/h **43.** Subtraction should be used to isolate the variable, not division by the variable. $2x = 6x$, so $0 = 4x$, and $x = 0$. **45.** 2 months **47.** about 857 bottles **49a.** always true **b.** sometimes true **c.** sometimes true **51.** Check students' work. **53.** Check students' work. **55.** Check students' work. **57.** B **59.** A **60.** 5 **61.** -6 **62.** 1 **63.** 0.9 m **64.** 22 **65.** 9 **66.** 11.2

Lesson 2-5

pp. 109–114

Got It? 1a. $\frac{4+5n}{2}$, -3 ; 2, 7 **b.** $y = 10$; $y = 4$ **2.** $x = \frac{-t-r}{p}$ **3.** 6 in. **4.** about 55 days**Lesson Check 1.** $y = \frac{2x+12}{5}$ **2.** $b = \frac{a+10}{2}$ **3.** $x = \frac{p}{m+2n}$ **4.** $F = \frac{9}{5}C + 32$ **5.** 40 yd **6.** literalequation **7.** literal equation **8.** both **9.** both**10.** Answers may vary. Sample: They are the same in each case since you are isolating a variable by using inverse operations. They are different because, in an equation in one variable, to isolate the variable, inverse operations are used on numbers only. In a literal equation, inverse operations are used on variables as well as numbers.**Exercises 11.** $y = -2x + 5$; 7; 5; -1 **13.** $y = \frac{3x-9}{5}$; $-\frac{12}{5}$; $-\frac{9}{5}$; $-\frac{6}{5}$ **15.** $y = \frac{-5x-4}{4}$; $-\frac{1}{4}$; $-\frac{3}{2}$; $-\frac{11}{4}$ **17.** $y = \frac{x+4}{4}$; $\frac{1}{2}$; 2; $\frac{5}{2}$ **19.** $x = \frac{p}{m+n}$ **21.** $x = \frac{t}{r+s}$ **23.** $x = \frac{S-C}{C}$ **25.** $x = \frac{A-C}{Bt}$ **27.** $x = 2y - 4$ **29.** 4.5 in.**31.** 7 cm **33.** 0.4 h **35.** $h = \frac{n}{7t}$; 8 ft **37.** $x = \frac{ay}{b} + a$ **39.** $h = \frac{3V}{\pi r^2}$ **41.** $a = 2b - x$ **43.** -108.4°F **45.** 3 wasadded to the left side of the equation instead of subtracted; $2m - 3 = -6n$, $\frac{2m-3}{-6} = n$ **47.** 5 cm^3 **49a.** $A = 2s^2 + 4sh$ **b.** $h = \frac{A-2s^2}{4s}$; 14 cm**c.** $A = 6s^2$ **51.** 6 **53.** 92 chirps **54.** 5 **55.** 3 **56.** -4 **57.** 3 **58.** identity **59.** no solution **60.** 147 **61.** -40 **62.** 567 **63.** 100 **64.** 3 **65.** $\frac{8}{5}$ **66.** $\frac{7}{45}$

Lesson 2-6

pp. 116–121

Got It? 1. No; Store C is still the lowest. **2.** 12.5 m**3a.** about 442 m **b.** about 205 euros **4a.** about 22 mi/h**b.** Yes; $\frac{60\text{ s}}{1\text{ min}} \cdot \frac{60\text{ min}}{1\text{ h}}$ is the same as $\frac{3600\text{ s}}{1\text{ h}}$.**Lesson Check 1.** 8 bagels for \$4.15 **2.** 116 oz **3.** 12 m**4.** $80\frac{2}{3}\text{ ft/s}$ **5.** not a unit rate **6.** unit rate **7.** No; a conversion factor is a ratio of two equivalent measures in different units and is always equal to 1. **8.** Greater; to convert you multiply by 16.**Exercises 9.** Olga **11.** 189 ft **13.** 40 oz **15.** 240 s**17.** about 8.2 m **19.** 7900 cents **21.** about 35 in.**23.** 1.875 gal/h **25.** 87 **27.** 150 **29.** 18 **31.** 0.5 mi**33.** 5 oz **35.** recipe B **37.** Miles; kilometers; kilometers cancel out and miles are left. **39.** 1580.82 INR; 19.98 GBP**41.** Answers may vary. Sample: Estimating the size to the nearest inch is appropriate because the carpenter is leaving an estimated amount on either side of the television, not an exact amount. **43.** 2255.6 mm

Lesson 2-7

pp. 124–129

Got It? 1. 5.6 **2a.** 1.8 **3.** -5 **4.** 145.5 mg**Lesson Check 1.** 4.8 **2.** 27 **3.** 3 **4.** 5 **5.** 6.75 h **6.** mand q 7. n and p 8. mq and np 9. Yes; sample: One method creates an equation using the fact that the cross products are equal, and the other method creates an equivalent equation using the Mult. Prop. of Eq. to clear the denominators.**Exercises 11.** -19.5 **13.** 4.2 **15.** 112.5 **17.** $16\frac{2}{3}$ **19.** 10 **21.** 14 **23.** $26\frac{2}{3}$ **25.** -15 **27.** 4.75 **29.** 11**31.** $-6\frac{2}{3}$ **33.** -5 **35.** 8 dozen **37.** about 14 people**39.** $\frac{\$.07}{1\text{ kWh}} = \frac{\$143.32}{x\text{ kWh}}$; 2047.4 kWh **41.** at the same time asyou **43.** 1.8 **45.** 2.7 **47.** 4.2 **49.** $-\frac{2}{3}$ **51.** 3 was notfully distributed when multiplying 3 and $x + 3$; $16 =$ $3x + 9$, $7 = 3x$, $x = \frac{7}{3}$. **53.** Check students' work.**55.** $\frac{-4}{3}$ **57.** $\frac{-5}{7}$ **59.** 22 h **61.** H **63.** 1.5 **64.** 7 **65.** 90**66.** 190 **67.** no solution **68.** $\frac{1}{5}$ **69.** identity **70.** $2\frac{4}{5}$ or 2.8**71.** $2\frac{2}{15}$ or $2.1\bar{3}$ **72.** $6\frac{2}{3}$ or 6. $\bar{6}$ **73.** $\frac{3}{5}$ or 0.6

Lesson 2-8

pp. 130–136

Got It? 1. 24 **2.** 30 ft **3a.** about 66 mi **b.** Write and solve the proportion $\frac{2}{250} = \frac{1}{x}$; 1 in. represents 125 mi.**4.** 300 ft**Lesson Check 1a.** 32.5 cm **b.** 1 : 2.5 **2.** 225 km**3.** The order of the letters in each triangle tells which parts are corresponding. **4a.** yes **b.** no **c.** yes **5.** Answers may vary. Sample: No, it is greater than 100 times since 100 mi is more than 100 times greater than 1 in.**Exercises 7.** $\angle F \cong \angle K$, $\angle G \cong \angle L$, $\angle H \cong \angle M$, $\angle I \cong \angle N$, $\frac{FG}{KL} = \frac{GH}{LM} = \frac{HI}{MN} = \frac{FI}{KN}$ **9.** 40 **11.** 100**13.** 37.5 km **15.** 225 km **17.** 67.5 ft **19.** $6\frac{1}{2}\text{ ft} \times 2\frac{1}{2}\text{ ft}$ **21.** no **23a.** The student used CJ instead of AJ .**b.** $\frac{BC}{AJ} = \frac{GH}{FN}$ **25.** 39,304 times **27.** Yes; all squares will have sides that are in proportion (the same length), and the measures of corresponding \angle s are equal (90°).**29.** Answers may vary. Sample: No; the finished table could have been a parallelogram with different angles than the parallelogram in the sketch. The angle measures were not given.

Lesson 2-9

pp. 137–143

Got It? 1. 60% **2.** 75%; the answers are the same.**3.** \$3600 **4.** $41\frac{2}{3}$ **5.** 4 yr**Lesson Check 1.** 30% **2.** 120% **3.** 28 **4.** 48 **5.** \$180**6.** 100 **7.** \$75 **8.** Answers may vary. Sample: 12 is what percent of 10?**Exercises 9.** 20% **11.** 62.5% **13.** $41\frac{2}{3}\%$ **15.** 36**17.** 13 **19.** 16 **21.** \$52 **23.** 400 **25.** 22.5 **27.** $22\frac{2}{3}$ **29.** \$108 **31.** part; 5.04 **33.** part; 142.5 **35.** percent; $1333\frac{1}{3}$ **37.** 66,000 mi² **39.** 16 **41.** 75 **43.** B **45.** 121%;

it costs more to make a penny than the penny is worth.

47. The values for a and b are reversed; $\frac{3}{1.5} = \frac{p}{100}$, $1.5p = 300$, $p = 200\%$. 49. \$181 51. $29\frac{1}{6}\%$
 53. 25 students 55. F 57. 14.4 cm 58. 18 cans
 59. $c = 1.75 + 2.4\left(m - \frac{1}{8}\right)$; $2\frac{5}{8}$ mi 60. 1250%
 61. 0.6 62. 175%

Lesson 2-10

pp. 144-150

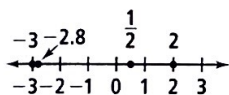
Got It? 1. about 32% 2. about 17% 3. about 16%
 4. 65.5 in. and 66.5 in. 5. It would be smaller since the measurement of each dimension is closer to the actual value of each dimension.

Lesson Check 1. about 2% 2. about 61% 3. 7.25 ft and 7.75 ft
 4a. percent decrease b. percent decrease c. percent increase
 5. 0.05 m 6. A percent increase involves an increase of the original amount and a percent decrease involves a decrease of the original amount.

Exercises 7. increase; 50% 9. decrease; 7%
 11. decrease; 4% 13. increase; 54% 15. increase; 27%
 17. about 55% 19. about 13% 21. 1.05 kg; 1.15 kg
 23. about 28% 25. 175% increase 27. 42% decrease
 29. 39% increase 31. 48.75 m²; 63.75 m²

33. 505.25 ft²; 551.25 ft² 37. The original amount is 12, not 18; $\frac{18-12}{12} = \frac{6}{12} = 0.5 = 50\%$. 39. 12.63

41a. 21% b. 21% c. 21%; sample: the new length is 1.1 times as great as the original length. $1.1^2 = 1.21$ or 121%, which shows a 21% increase over the original amount of 100%. 43. I 45. $66\frac{2}{3}\%$ 46. 64.75 47. 21 48-51.



$-3, -2.8, \frac{1}{2}, 2$

Chapter Review

pp. 152-156

1. inverse operations 2. identity 3. rate 4. scale
 5. cross products 6. -7 7. 7 8. 14 9. 65 10. 3.5
 11. -4 12. -5 13. -8 14. \$6.50 15. Add. Prop. of Eq.; Simplify.; Div. Prop. of Eq.; Simplify. 16. 11 17. 8
 18. -7.5 19. $3\frac{18}{85}$ 20. 28 21. 14.7 22. $4h + 8h + 50 = 164$; \$9.50 23. $37t + 8.50t + 14.99 = 242.49$; 5 tickets 24. -90 25. 7.2 26. identity 27. no solution
 28. $8h = 16 + 6h$; 8 ft 29. $\frac{d}{65} = \frac{d}{130} + 3$; 390 mi
 30. $x = \frac{-c}{a+b}$ 31. $x = -t - r$ 32. $x = \frac{m-p}{5}$
 33. $x = \frac{pqs}{p+q}$ 34. 40 cm 35. 15 mm 36. 16 in.
 37. 78 in. 38. 71 oz 39. 2.25 min 40. 3960 yd
 41. 240 loaves 42. about 6 lb 43. $\frac{5}{11}$ s or about 0.45 s
 44. 21 45. -4 46. 1.6 47. 21 48. 39 49. -1
 50. 12 in. 51. 42 in. 52. 300% 53. 108 54. 170
 55. 60 seeds 56. 30% 57. 72 students 58. increase;

- 11% 59. decrease; 20% 60. decrease; 11% 61. increase; 32% 62. about 47% 63. about 39% 64. Yes; 50% of 38° is 19° and $38^\circ + 19^\circ = 57^\circ$.

Chapter 3

Get Ready!

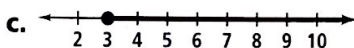
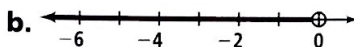
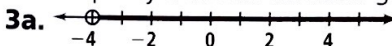
p. 161

1. $>$ 2. $=$ 3. $>$ 4. $<$ 5. 7 6. -4 7. 1 8. 2 9. 3
 10. -12 11. 32.4 12. 23 13. 29.5 14. -28 15. -12
 16. 48 17. 5 18. -24 19. -10 20. 1.85 21. -24
 22. -2 23. 3 24. 60 25. -4 26. 3 27. $\frac{1}{2}$ 28. 2.5
 29. 4.1 30. 24 31. Answers may vary. Sample: Two inequalities are joined together. 32. Answers may vary. Sample: the part that the two groups of objects have in common

Lesson 3-1

pp. 164-170

Got It? 1a. $p \geq 1.5$ b. $t + 7 < -3$ 2a. 1 and 3
 b. The solution of the equation is -2. The solution of the inequality is all real numbers greater than -2.

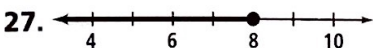
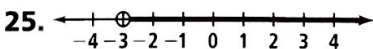
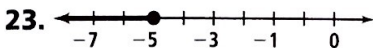
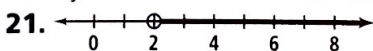


4a. $x < -3$ b. $x \geq 0$ 5. No; the speed limit can only be nonnegative real numbers.

Lesson Check 1. $y \geq 12$ 2a. no b. no c. yes d. yes
 3.

5. Substitute the number for the variable and simplify. If the number makes the inequality true, then it is a solution of the inequality. 6. Answers may vary. Sample: $x \geq 0$, whole numbers, a baseball team's score during an inning, amount in cubic centimeters of liquid in a chemistry beaker; $x > 0$, counting numbers, length of a poster, distance in blocks between your house and a park
 7. Check students' work.

Exercises 9. $b < 4$ 11. $\frac{k}{9} > \frac{1}{3}$ 13a. yes b. no c. yes
 15a. yes b. no c. no 17. D 19. A



29. $x > -4$ 31. $x \geq 2$ 33. $x \geq 5$ 35. Let p = the number of people seated; $p \leq 172$. 37. Let w = number of watts of the light bulb; $w \leq 75$. 39. Let m = amount of money earned; $m > 20,000$. 41. Check students' work. 43. $x \leq 186,000$ 45. b is greater than 0. 47. z is