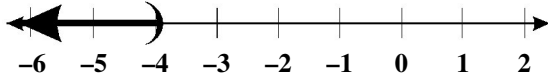
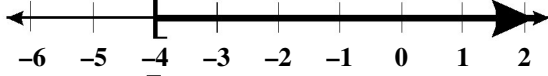
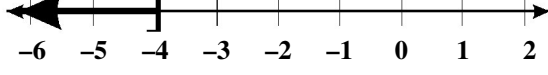
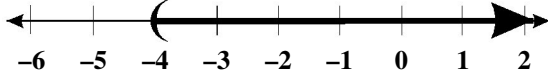


Chapter 2

- Which of the following satisfies the equation $-9x + 7 = -20$?
A) 3 B) 0 C) 5 D) 1
- Solve: $10(z - 8) = -35 + z$
A) {6} B) {8} C) {5} D) {7}
- Solve the equation and identify it as a conditional equation, inconsistent equation or identity.
$$-7(n - 10) = -7(n + 1)$$

A) \emptyset , Inconsistent C) {0}, Identity
B) {-10}, Conditional D) {0}, Inconsistent
- The expression $19x + 270$ can be used to approximate the number of wild turkeys in Rockingham County in the year $1990 + x$. When will the population reach 650?
A) 2013 B) 2010 C) 2000 D) 2020
- Solve for the specified variable: $np^2 - nq^2 = -4 - m^2n$ for n
A) $n = \frac{-4}{m^2 - p^2 + q^2}$ C) $n = -4(m^2 + p^2 - q^2)$
B) $n = \frac{-4}{m^2 - p^2 - q^2}$ D) $n = \frac{-4}{m^2 + p^2 - q^2}$
- For $\frac{1}{x} - \frac{1}{y} = -\frac{1}{z}$, find x given $y = 2$ and $z = 5$.
A) $x = \frac{10}{3}$ B) $x = \frac{10}{7}$ C) $x = \frac{2}{3}$ D) None of these.
- The area of a rectangular drop cloth is 84 square feet. The length of the cloth is $l = 12$ ft. Find the width.
A) 12 ft B) 8 ft C) 17 ft D) 7 ft
- Write an algebraic expression for the length l of a rectangle that has a width of x ft and a perimeter of 50 ft.
A) $25 - x$ ft B) $50 - \frac{x}{2}$ C) $50 + x$ ft D) $50 - x$ ft
- A triangular field is surrounded by 880 yards of fence. The longest side of the field is 20 yards less than three times the length the shortest side. The length of the next-longest side is two times the length of the shortest side. What is the length of the shortest side?
A) 175 yards B) 150 yards C) 165 yards D) 170 yards

10. Brenda deposited some money at 12% simple interest in a certificate of deposit. She invested \$2000 less than this amount in a mutual fund account bearing simple interest at 5%. If Brenda's total interest income was \$1600 for the year, how much did she invest in each account?
- A) \$10,000 in the CD, \$8000 in the mutual fund.
 B) \$9500 in the CD, \$9000 in the mutual fund.
 C) \$10,000 in the CD, \$8500 in the mutual fund.
 D) \$11,500 in the CD, \$8500 in the mutual fund.
11. How many pints of a 6% cleaning solution must be mixed with 9 pints of a 14% cleaning solution to give a 12% solution?
- A) 9 pints B) 6 pints C) 4 pints D) 3 pints
12. Ted walked for 30 minutes and biked for 60 minutes. He bikes four times faster than he walks. If the total distance traveled is 9 miles, then what was his walking speed in miles per hour?
- A) 1.5 mph B) 3.5 mph C) 3 mph D) 2 mph
13. Robert and Nikki want to get \$125,000 from the sale of their home. The realtor's commission rate is 7% of the selling price. What should the selling price be? Round your answer to the nearest hundred dollars.
- A) \$134,400 B) \$130,200 C) \$132,300 D) \$137,600
14. True or False: $-1 < 4$
- A) False B) True
15. Write the solution set in interval notation.
- $$x \leq -11$$
- A) $(-\infty, -11]$ B) $[-11, 11]$ C) $[-11, \infty)$ D) $(-11, \infty)$
16. Graph the solution to the inequality. $x - 2 \geq -6$
- A) 
- B) 
- C) 
- D) 
17. Solve the inequality. Write the solution set in interval notation.
- $$\frac{x-6}{-4} > -5$$
- A) $(-\infty, 26)$ B) $(26, \infty)$ C) $(-14, \infty)$ D) $(-\infty, -14]$

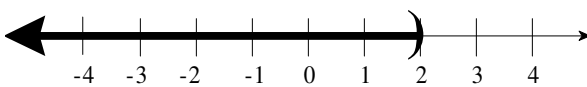
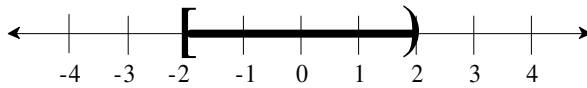
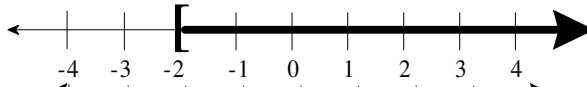
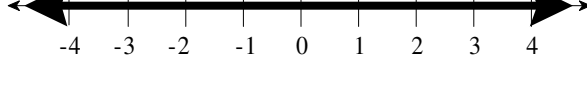
18. Solve by using an inequality.

Professor Zewail counts her midterm exam as $\frac{3}{5}$ of the final grade and the final exam as $\frac{2}{5}$ of the grade. Dale must have a final average of 70 to receive a C or better in the course. If Dale scored 82 on the mid-term exam, what range of scores on the final exam will give Dale at least a C?

- A) f is the final exam score ; $f > 47$ C) f is the final exam score ; $f > 52$
 B) f is the final exam score ; $f \geq 47$ D) f is the final exam score ; $f \geq 52$

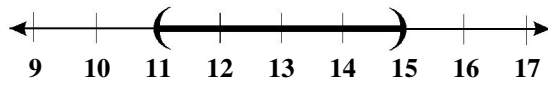
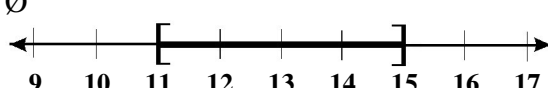
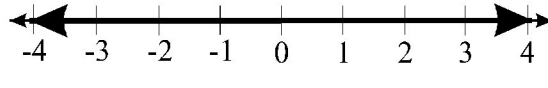
19. Graph the solution set of the compound inequality.

$$x < 2 \text{ or } x \geq -2$$

- A) 
- B) 
- C) 
- D) 

20. Graph the solution to the compound inequality.

$$6 < \frac{x+1}{2} < 8$$

- A) 
- B) \emptyset
- C) 
- D) 

21. Write as a single interval if possible: $[2, \infty) \cup (5, \infty)$

- A) $[2, \infty) \cup (5, \infty)$ B) $(2, \infty)$ C) $[2, \infty)$ D) $(5, \infty)$

22. The formulas

$$s = 0.12t + 4.63$$

and

$$w = 0.08t + 2.48$$

give an approximate model for the yearly average price s of a bushel of soy beans and w of a bushel of wheat over the past five years, where t is the number of years since 1994. What is the first year in which the price of soy beans exceeded \$4.99/bu and the price of wheat exceeded \$2.64/bu?

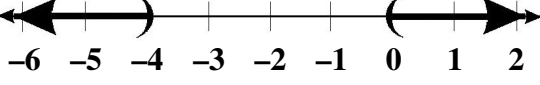
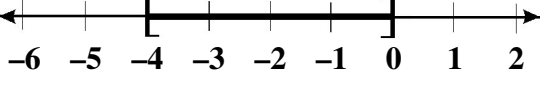
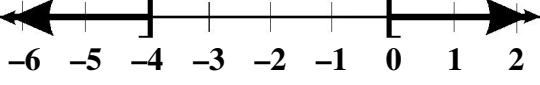
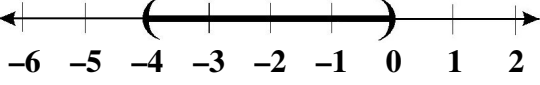
- A) 1998 B) 1997 C) 1996 D) None of these.

23. Solve:
- $-13 - |8 - x| = -15$

- A) {4, 12} B) {6, 10} C) {7, 13} D) {7, 11}

24. Graph the solution to the absolute value inequality.

$$2|x+2|+1 \geq 5$$

- A) 
- B) 
- C) 
- D) 

25. The gas prices for two neighboring convenience stores generally differ by no more than 9¢ per gallon. If one store's gas price is currently at \$1.35 per gallon, what is the range of possible gas prices for the other store?

- A) p is the price per gallon ; $p \geq 1.44$
- B) p is the price per gallon ; $1.26 \leq p \leq 1.44$
- C) p is the price per gallon ; $p \leq 1.44$
- D) p is the price per gallon ; $p \leq 1.26$ or $p \geq 1.44$

Answer Key

1. A
2. C
3. A
4. B
5. D
6. A
7. D
8. A
9. B
10. A
11. D
12. D
13. A
14. B
15. A
16. B
17. A
18. D
19. D
20. A
21. C
22. B
23. B
24. C
25. B