LESSON 12.1

Name _____ Date _____

Practice

For use with pages 583–586

Tell which operation is indicated by the phrase.

1. increased by
2. the product of
3. the quotient of
4. the sum of
5. fewer than
6. less than

Write the phrase as an expression. Let x represent the number.

7. A number increased by 12
8. The product of 6 and a number
9. 16 divided by a number
10. The total of a number and 8
11. 22 decreased by a number
12. The quotient of 24 and a number
13. A number multiplied by 14
14. The difference of 17 and a number
15. 8 times a number
16. 4 added to a number

Write the sentence as an equation.

17. The product of a number w and 5 is 15.
18. A number z plus 8 is 13.
19. The difference of a number r and 11 is 6.
20. 16 decreased by a number t is 4.
21. The quotient of a number m and 4 is 3.
22. 15 multiplied by a number x is 60.
23. 9 added to a number w is 24.
24. A number p divided by 7 is 10.

LESSON 12.1 Continued

Name _____ Date _____

Practice

For use with pages 583–586

Write a phrase for the variable expression.

25. $4 - r$

26. $8 + w$

27. $\frac{x}{6}$

28. $\frac{45}{m}$

29. $5p$

30. $r - 8$

In Exercises 31–34, match the situation with the equation that describes it.

A. $10 + x = 35$ **B.** $x - 10 = 35$ **C.** $10x = 35$ **D.** $\frac{x}{10} = 35$

31. You have traveled 10 miles toward your destination. Your destination is 35 miles from where you started. How much farther do you have to travel?

32. Ten people went to dinner and split the bill equally. Each person paid \$35. How much was the entire bill?

33. You get paid \$35 for 10 hours of work. How much did you get paid per hour?

34. You spent \$10 at the store. You now have \$35 left in your wallet. How much money did you come with?

LESSON 12.2

Name _____ Date _____

Practice

For use with pages 587–591

Solve the equation.

1. $x + 5 = 12$

2. $8 + x = 24$

3. $x + 6 = 8$

4. $16 + w = 22$

5. $z + 17 = 23$

6. $m + 9 = 25$

7. $d + 21 = 36$

8. $27 + j = 48$

9. $28 + v = 86$

10. $123 + q = 145$

11. $63 + p = 97$

12. $81 + r = 100$

13. A baby is scheduled to have 18 vaccination shots in her first year. After 9 months, the baby has had 15 of the shots. Write and solve an addition problem to determine how many more vaccination shots the baby will get at her 1-year check up.

14. An executive at a company received a total of 120 email messages today. He has already read 46 of them. Write an addition problem to determine how many more of today's email messages he has left to read.

Solve the equation. Tell whether you used *algebra tiles*, *mental math*, or *paper and pencil*.

15. $x + 8 = 12$

16. $1.75 + w = 2.66$

17. $y + 15 = 29$

18. $0.49 + h = 6.82$

19. $11 + k = 19$

20. $14.4 + q = 15.4$

21. $33 + d = 67$

22. $z + 8.009 = 10$

23. $46 + f = 81$

LESSON 12.2 Continued

Name _____ Date _____

Practice

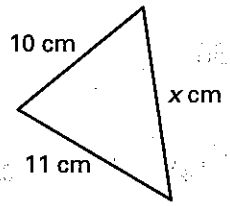
For use with pages 587–591

In Exercises 24 and 25, estimate the solution of the equation.

24. $x + 2\frac{7}{9} = 15\frac{1}{8}$

25. $19\frac{15}{16} + w = 41\frac{22}{23}$

26. The perimeter of the triangle shown is 33 centimeters. Write and solve an addition equation to find the length of the third side.



In Exercises 27–29, use the following information. Two men are unloading chairs from a truck. They need 120 chairs.

27. One of the men has unloaded 32 chairs and the other has unloaded 27 chairs. How many chairs have been unloaded so far?

28. Use the result of Exercise 27 to write an addition equation you could use to find the number of chairs that still need to be unloaded.

29. Solve the equation you wrote in Exercise 28.

LESSON 12.3

Name _____ Date _____

Practice

For use with pages 592–595

Solve the equation.

1. $x - 5 = 8$

2. $x - 7 = 5$

3. $x - 3 = 9$

4. $w - 6 = 15$

5. $z - 8 = 23$

6. $m - 4 = 17$

7. $d - 18 = 23$

8. $21 = j - 2$

9. $13 = v - 12$

10. $10 = q - 11$

11. $25 = p - 20$

12. $32 = r - 22$

13. There are 16 pawns used in the game of chess. There are also 16 other pieces used. Write and solve a subtraction equation to find the total number of pieces that are used in the game of chess.

14. There were 11 boys and 13 girls in the semifinals of the school spelling bee. Write and solve a subtraction problem to find the total number of students in the semifinals.

15. A clothing store has sold 140 tie-dyed shirts so far. The store still has 150 tie-died shirts left to sell. How many of the shirts did the store have to start with? Write and solve a subtraction equation for this situation.

Without solving the equations, tell which equation has a greater solution. Explain.

16. $w - 15 = 725$ or $w - 1500 = 725$

17. $x - 804 = 933$ or $x - 804 = 23$

LESSON 12.3 Continued

Name _____ Date _____

Practice

For use with pages 5–9

Solve the equation.

18. $x - 1.5 = 6.4$

19. $w - 3.3 = 7.1$

20. $5.2 = m - 7.3$

21. $9.41 = f - 4.39$

22. $h - 18.05 = 20$

23. $a - 2\frac{1}{2} = 3\frac{3}{4}$

Write and solve two different subtraction equations for the situation. Compare the solutions.

24. On a trip with your family, you have 110 miles to go to get to your aunt's house. You have already come 70 miles. What is the total distance of the trip?

25. There were 26 half-pint cartons of milk left in the cafeteria after lunch. Students consumed 112 cartons during lunch. How many cartons were there in the cafeteria before lunch started?

LESSON 12.4

Name _____ Date _____

Practice

For use with pages 598–601

Complete the solution.

1. $6x = 18$

$\frac{6x}{\quad} = \frac{18}{\quad}$

$x =$ ____

2. $81 = 9x$

$\frac{81}{\quad} = \frac{9x}{\quad}$

____ $= x$

3. $\frac{x}{4} = 12$

____ $\cdot \frac{x}{4} =$ ____ $\cdot 12$

$x =$ ____

Solve the equation. Then check the solution.

4. $5x = 45$

5. $\frac{b}{3} = 7$

6. $\frac{w}{10} = 6$

Solve the equation.

7. $4x = 16$

8. $8q = 56$

9. $5w = 5$

10. $63 = 9b$

11. $36 = 12m$

12. $84 = 6p$

13. $\frac{x}{2} = 4$

14. $\frac{k}{9} = 14$

15. $\frac{w}{21} = 3$

16. $\frac{f}{4} = 8$

17. $\frac{y}{15} = 4$

18. $\frac{p}{12} = 11$

LESSON 12.4 Continued

Name _____ Date _____

Practice

For use with pages 598–601

In Exercises 19–22, write the sentence as an equation. Then solve the equation.

19. A number w multiplied by 6 is 78.

20. A number m divided by 8 is 13.

21. 112 is 8 times a number p.

22. 24 is a number q divided by 4.

23. You purchase fifteen tickets to an amusement park. The total cost for the tickets is $360. Write a multiplication equation you can use to find t, the cost of a ticket. Then solve the equation.

24. There are 30 students in a class. Each student receives 6 books for all of the different subjects taught. Write and solve a division equation to find b, the total number of books for the students.

Solve the equation.

25. $6w = 32$

26. $8p = 44$

27. $\frac{k}{3} = 2.7$

28. $-286 = -26m$

29. $\frac{h}{7} = -12$

30. $\frac{a}{-8} = -3$