

EXERCISES

 For more practice, see *Extra Practice*.

A Practice by Example

Tell whether each equation is true or false.

Example 1
(page 84)

1. $3 + 50 = 80$

2. $4 \times 7 = 28$

3. $25 = 35 + 10$

4. $0 \times 5.7 = 5.7$

5. $54 \div 9 = 7$

6. $3 + 4 + 6 = 3 + 10$

Example 2
(page 85)

Mental Math Use mental math to solve each equation.

7. $x + 5 = 7$

8. $4x = 32$

9. $25 = 25 - x$


10. $x + 2 = 6.3$

11. $g \div 4 = 2$

12. $p - 6 = 25$

13. $x + 14 = 23$

14. $1.2 = a + 0.2$

-  **15. Sports** A hockey team spends \$75 on chin straps. Each strap costs \$5. Solve the equation $5n = 75$ to find how many straps the team buys.

Example 3
(page 85)

Estimation Estimate the solution of each equation.

16. $6d = 75$

17. $k + 9.3 = 28.4$

18. $p \div 4 = 7.99$

19. $420 = 63n$

20. $b - 2.33 = 6.8$

21. $w + 12.8 = 68.7$

B Apply Your Skills

Tell whether each equation is true or false.

22. $0 + 3a = 3a$

23. $1 \cdot 3a = 3a$



24. $3 \cdot 5 + x = 8 + x$

Tell whether the given number is a solution of the equation.

25. $3x + 2x = 10$; 2

26. $120n = 40$; 30

27. $b + b = 22$; 2

-  **28. Shopping** Suppose you spent \$20 for a shirt. You also bought a jacket, but you cannot find the sales receipt. You know that the total amount you spent was \$75. Solve the equation $20 + j = 75$ to find how much you spent on the jacket.
-  **29. Pollution** When burned, 18 gallons of gasoline produce about 360 pounds of carbon dioxide. Solve the equation $18n = 360$ to find how much carbon dioxide 1 gallon produces.
- 30. Writing in Math** Write a real-world problem that could be modeled by the equation $x - 7.5 = 1.2$.

Reasoning Tell whether each equation is true or false. Explain.

31. $x + 1 = x$

32. $3 + x = 1 + 2 + x$

33. $98n = (100 - 2)n$

34. $8 + x = x + 8$

Tell which choice, 100, 500, or 1,000, is the best estimate of the solution.

35. $4,272 = 53x$

36. $n - 109.15 = 326.5$

37. $m \div 47 = 8.89$

38. You have 1.5 pounds of pecans, a pounds of almonds, and 2.7 pounds of peanuts. You have 6 pounds of nuts altogether. To find how many pounds of almonds you have, solve the equation $1.5 + a + 2.7 = 6$, which models this situation.

39. **Error Analysis** Your friend claims that the equation $2x = 3x$ is always false. Do you agree with your friend? Explain.

40. **Writing in Math** Explain how to estimate the solution of the equation $s - 4.87 = 32.42$.

Challenge

Number Sense Without solving the equations, tell if each solution is less than, greater than, or equal to 10.

41. $x + 0.6 = 15$

42. $999 = x + 990$

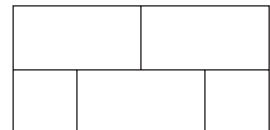
43. $10x = 15$

44. $1 = 0.1x$

45. $x + 32 = 40$

46. $5x = 50$

47. **Stretch Your Thinking** How many different rectangles are in the figure at the right?





Test Prep

Multiple Choice

48. What is the solution of $n + 62 = 100$?
A. 100 B. 62 C. 38 D. 26
49. What is the solution of $18 = 54 - x$?
F. 72 G. 54 H. 36 I. 18
50. What is the solution of $60 \div n = 4$?
A. 12 B. 15 C. 64 D. 240
51. What is the solution of $5f = 140$?
F. 5 G. 28 H. 140 I. 700
52. What is the solution of $c \div 4 = 12$?
A. 3 B. 8 C. 48 D. 124
53. Which equation has the solution 22?
F. $2(44) = s$ G. $2s = 44$ H. $2 \div s = 44$ I. $2 = 44s$



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Mixed Review

Lesson 2-1

Algebra Write the next three terms in each number pattern.

54. 100, 97, 94, 91, ...

55. 4, 12, 36, 108, ...

56. **Algebra** Write the first six terms in the pattern. *Start with 3.2 and multiply by 5 repeatedly.*

Lesson 1-10

Find the value of each expression.

57. $7 \times 8 + 4$

58. $2.2 + 3.1 \times 7$

59. $9.6 \div 2.4 \times 4$