


Chapter 2 Review

Vocabulary Review

 Addition Property of Equality (p. 68)	Distributive Property (p. 89)	Multiplication Property of Equality (p. 68)
algebraic expression (p. 57)	Division Property of Equality (p. 69)	Subtraction Property of Equality (p. 68)
coefficient (p. 62)	inverse operations (p. 68)	variable (p. 57)
	like terms (p. 62)	

Choose the correct vocabulary term to complete each sentence.

1. A letter that represents a number is called a(n) (coefficient, variable).
2. If you subtract both sides of an equation by the same number so the two sides remain equal, you are using (inverse operations, the Subtraction Property of Equality).
3. A mathematical phrase with at least one variable in it is a(n) (algebraic expression, Addition Property of Equality).
4. Terms that have the same variable factors are (coefficients, like terms).
5. A number placed before another number or variable to indicate multiplication is a(n) (algebraic expression, coefficient).

Lesson 2-1

- To write and evaluate algebraic expressions

A **variable** is a letter that stands for a number. An **algebraic expression** is a mathematical phrase that uses variables, numbers, and operation symbols. To evaluate an expression, substitute a given value for each variable and then simplify.

Evaluate each expression for $n = 3$, $p = 5.5$, and $w = -2$.

6. $3n - 2w$ 7. $\frac{4n}{w}$ 8. $p + 4w$ 9. $7w - 2p$

Lesson 2-2

- To simplify algebraic expressions using properties of operations

You can use the properties of operations to order, group, and combine **like terms**. Sometimes an expression needs to be expanded before being simplified.

Simplify each expression.

10. $3x + 14 - x - 15$ 11. $-6.6z + 11 + 1.3 + 2z$
12. $\frac{5}{12}n + \frac{1}{2}n + \frac{1}{2}$ 13. $2(r + 5) - 2$
14. $-3 - 7(r + 0.9)$ 15. $\frac{1}{4}n + \frac{3}{4}(n + 4) - 1$

Lesson 2-3

- To solve equations by adding, subtracting, multiplying, or dividing

You can use the **Properties of Equality** of Addition, Subtraction, Multiplication, and Division to solve equations. Whatever you do to one side of the equation, you must do the same thing to the other side of the equation. To solve a one-step equation, use **inverse operations**.

Use inverse operations to solve each equation.

16. $y + 14 = 38$

17. $p - 12 = 72$

18. $\frac{m}{11} = 9$

19. $-7b = 84$

20. $x - 8 = 44$

21. $12h = 60$

22. $k - 14 = 29$

23. $\frac{n}{6} = -9$

24. A local band had a concert and made \$1,824 from tickets sales. If each ticket cost \$16, how many tickets did the band sell?

Lesson 2-4

- To write and evaluate expressions with two operations and to solve two-step equations using number sense

You can use number sense to solve two-step equations.

Solve each equation using number sense.

25. $4d + 7 = 11$

26. $2m - 21 = 3$

27. $-5y + 8 = 23$

28. **Savings** You save \$35 each week. You now have \$140. You plan to save enough money for a cruise that costs \$1,050. Write and solve an equation to find the number of weeks it will take to save for the cruise.

Lesson 2-5

- To solve two-step equations using inverse operations

You can also use inverse operations to solve two-step equations. Undo addition and subtraction; then undo multiplication and division.

Solve each equation.

29. $8r - 6 = 7$ 30. $\frac{x}{2} - 14 = 66$ 31. $5b + 0.5 = -4.75$

32. $3p + 19 = -12$ 33. $2.2t - 3 = 31.2$ 34. $9s - \frac{1}{3} = 3\frac{2}{3}$

35. Your plumber charged a fee of \$60 and an additional \$21.50 per hour for a repair visit. Your bill was \$124.50. How long was the plumber's repair visit?

Lesson 2-6

- To use the Distributive Property to solve two-step equations

You can simplify using the Distributive Property and then solve two-step equations.

Use the distributive property to solve each equation.

36. $-15(k + 1) = -4$ 37. $8(4.8 - c) = 22.4$ 38. $\frac{1}{4}(12 + d) = 13$

39. Marie buys a vest for \$38.79 and some 4-packs of socks. The socks sell for \$10.99. If Marie spends \$60.77, how many 4-packs of socks does she buy?

