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CHAPTER REVIEW

1.2 Evaluate and Simplify Algebraic Expressions

pp. 10–16

EXAMPLE

Simplify the expression.

$$\begin{aligned} 5(y - 4) - 3(2y - 9) &= 5y - 20 - 6y + 27 && \text{Distributive property} \\ &= (5y - 6y) + (-20 + 27) && \text{Group like terms.} \\ &= -y + 7 && \text{Combine like terms.} \end{aligned}$$

EXERCISES

Simplify the expression.

10. $25x + 14 - 17 - 6x$ 11. $6y + 12x - 12y - 9x$
 12. $6(n - 2) - 8n + 40$ 13. $5(2b + 3) + 8(b - 6)$
 14. $3g + 9g^2 - 12g^2 + g$ 15. $7t^4 + 7t^2 - 2t^2 - 9t^4$

16. **TAXI RATES** A New York City taxi charges \$2.50, plus \$.40 for each fifth of a mile if it is not delayed by traffic. Write an expression for the cost of the ride if you travel x miles in the taxi with no traffic delays.

EXAMPLES
3 and 4on pp. 11–12
for Exs. 10–16

1.3 Solve Linear Equations

pp. 18–24

EXAMPLE

Solve $-4(3x + 5) = -2(5 - x)$.

$$\begin{aligned} -4(3x + 5) &= -2(5 - x) && \text{Write original equation.} \\ -12x - 20 &= -10 + 2x && \text{Distributive property} \\ -20 &= -10 + 14x && \text{Add } 12x \text{ to each side.} \\ -10 &= 14x && \text{Add } 10 \text{ to each side.} \\ -\frac{5}{7} &= x && \text{Divide each side by } 14 \text{ and simplify.} \end{aligned}$$

EXERCISES

Solve the equation. Check your solution.

17. $24x + 16 = 12$ 18. $-6y + 15 = -9$
 19. $4(q - 5) = 16$ 20. $7m + 38 = -5m - 16$
 21. $48j + 25 = 12j - 11$ 22. $8(2n - 5) = 3(6n - 2)$

23. **SALES TAX** You buy a jacket, and the sales tax is 6%. The total cost is \$79.49. Find the cost of the jacket before the tax.

24. **FOOD SHOPPING** At a vegetable stand, you bought 3 pounds of peppers for \$4.50. Green peppers cost \$1 per pound and orange peppers cost \$4 per pound. Find how many pounds of each kind of pepper you bought.

EXAMPLES
1, 2, 3, and 4on pp. 18–20
for Exs. 17–24