Practice 1.1.1: Identifying Terms, Factors, and Coefficients

For problems 1 and 2, identify the terms, coefficients, constants, and factors of the given expressions.

1. $12a^3 + 16a + 4$

2. $21x^2 + 3x - 15x^2 + 9$

For problems 3 and 4, translate each verbal expression to an algebraic expression. Then, identify the terms, coefficients, and constants of the given expressions.

3. half the sum of x and y decreased by one-third y

4. the product of 5 and the cube of x, increased by the difference of 6 and x^3

5. Write an expression with 4 terms, containing the coefficients 3, 6, and 9.

continued

For problems 6–10, write an algebraic expression to describe each situation. Then, identify the terms, coefficients, constants, and factors.

6. Gavin agrees to buy a 6-month package deal of monthly gym passes, and in turn receives a 15% discount. Write an algebraic expression to represent the total cost of the monthly passes with the discount, if x represents the cost of each monthly pass.

7. Andre purchased 10 cans of tennis balls from an online store and received a 25% discount. Shipping cost $5.99. Write an algebraic expression to represent the total cost of the tennis balls with the shipping cost, if x represents the cost of each can.

8. Nadia and some friends went to a movie. Their total cost was $30.24, which included taxes of $2.24. Write an algebraic expression to represent the price of each movie ticket, not including taxes. Let x represent the number of Nadia's friends that went to the movies.

9. The area of a trapezoid can be found by multiplying the height of the trapezoid by half of the sum of $base_1$ and $base_2$.

10. The surface area of a cylinder with radius r and height h is twice the product of π and the square of the radius plus twice the product of π, the radius, and the height.