

**UNIT 1 • RELATIONSHIPS BETWEEN QUANTITIES AND EXPRESSIONS****Lesson 3: Interpreting Formulas and Expressions****Practice 1.3.1: Identifying Terms, Factors, and Coefficients****B**

For problems 1–3, simplify each expression if possible, and then list the terms of the simplified expression. Identify the constant term and the factors and coefficients of non-constant terms.

1.  $8x^2 - 3x + 6x^2 + 5x - 9$

2.  $5(2x + 4) + 3x$

3.  $\frac{4x^3}{5} + 9x$

For problems 4 and 5, translate each verbal expression into an algebraic expression. Then, list the terms of the given expressions, and identify the constant term and the factors and coefficients of non-constant terms.

4. 4 more than the quotient of  $x$  squared and 35. the sum of  $x$  to the sixth power and 3 times  $x$ 

For problem 6, write an expression that has the given terms and coefficients.

6. Write an expression with 5 terms, containing the coefficients 12, 15, 18, and 21.

**continued**

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For problems 7–10, write an algebraic expression to describe each situation, and then list the terms of the expressions. Identify the constant term and the factors and coefficients of non-constant terms.

7. Colin bought 2 theater tickets and paid a service charge of 5% for buying them from a ticket broker. Write an algebraic expression to represent the total cost of the tickets. Let  $x$  represent the cost of each ticket.
  
8. Eddie purchased 4 packages of light bulbs and received a 15% discount. He also paid \$4.85 in taxes on his purchase. Write an algebraic expression to represent the total amount Eddie paid. Let  $x$  represent the cost of each package purchased.
  
9. The perimeter of a rectangle is found by finding the sum of all the sides. Write an algebraic expression to represent the perimeter of a rectangle with length  $x$  meters and width 4 meters shorter.
  
10. Write an algebraic expression that represents  $\frac{5}{9}$  of the difference of a given Fahrenheit temperature and 32.