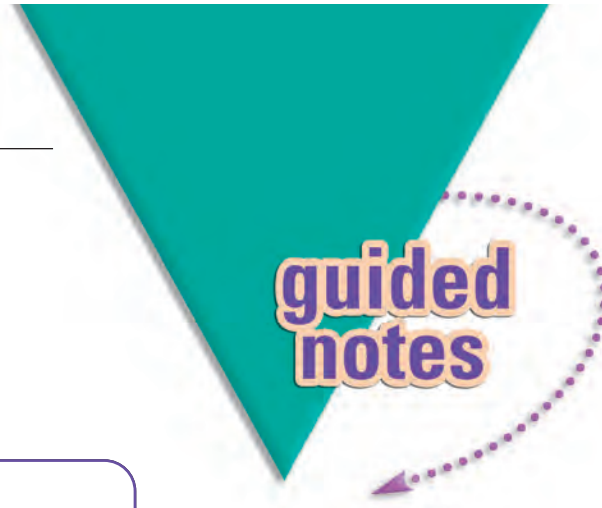


NAME \_\_\_\_\_

**Module 2** Writing and Simplifying Algebraic Expressions  
**Lesson 4** Combining Like Terms



guided  
notes

### Lesson Objectives

- Recognize like terms.
- Use like terms to simplify expressions.
- Add and subtract polynomials both vertically and horizontally.

A **term** \_\_\_\_\_ is a number, a variable, or a product of numbers and variables.

A **coefficient** \_\_\_\_\_ is the numerical factor of a term.

**Like terms** \_\_\_\_\_ are terms whose variable factors are exactly the same.

To combine like terms, combine the **coefficients** \_\_\_\_\_.

1 Simplify:  $3a + 5a + 6b - 3b$   **$8a + 3b$**  \_\_\_\_\_

In the expression,  $2ab^2 + 3a^2b + 4a^2b$ , the terms that have exactly the same variable factors are  **$3a^2b + 4a^2b$**  \_\_\_\_\_.

The expression  $2ab^2 + 3a^2b + 4a^2b$  simplifies to  **$2ab^2 + 7a^2b$**  \_\_\_\_\_.

2 Identify like terms:  $3x, 2xy, -3x, -y, 4xy, 2y$

**$3x$  and  $-3x$ ,  $-y$  and  $2y$ ,  $2xy$  and  $4xy$**  \_\_\_\_\_

Like terms are terms that contain the same variables with corresponding variables having the same **exponent** \_\_\_\_\_.

3 Identify like terms:  $2x^2y^3, 4x^3y^2, 3x^3y^2$

**$4x^3y^2$  and  $3x^3y^2$**  \_\_\_\_\_

A **polynomial** \_\_\_\_\_ is a monomial, or the sum of monomials.

A **monomial** \_\_\_\_\_ is an expression that consists of just one term.

Polynomials can be added and subtracted vertically.

When problems are arranged vertically, similar terms are in the

**same columns** \_\_\_\_\_.

When subtracting polynomials, **add** \_\_\_\_\_ the opposite of each term of the **second** \_\_\_\_\_ polynomial to the first polynomial.

4 Subtract:  $(x^2 - 5x + 6) - (x^2 - 5x - 6)$  **12** \_\_\_\_\_