

NAME \_\_\_\_\_

DATE \_\_\_\_\_

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



**independent practice**

**Simplify each expression.**

1.  $3r + 4r$  \_\_\_\_\_

2.  $12x - 15x$  \_\_\_\_\_

3.  $-a + 6m - 3a + 2m$  \_\_\_\_\_

4.  $29 - 8k + 16k$  \_\_\_\_\_

5.  $2t - t - 7t$  \_\_\_\_\_

6.  $5x^3y - 7zy^2 - 5x^3y + 7zy^2$  \_\_\_\_\_

7.  $7d + 5 - 6 + 4d$  \_\_\_\_\_

8.  $9b + 10 - b + 3y - 5$  \_\_\_\_\_

9.  $4 + 5q - q - 6.5$  \_\_\_\_\_

10.  $44f + (36f + 23f)$  \_\_\_\_\_

11.  $56a + 49 - 12a + 21$  \_\_\_\_\_

12.  $5j^2 - 6j + 2j^2$  \_\_\_\_\_

13.  $13xy^2 + 16x^2y - 7x^2y$  \_\_\_\_\_

14.  $7b + c - b + \frac{3}{5}c$  \_\_\_\_\_

15.  $4s + 16 + 5s$   
\_\_\_\_\_

16.  $-4 + 2m - 15y - 21y + 17m$   
\_\_\_\_\_

17.  $3 + m^3 - 6m^4 - 5n^2 + 8 - 2n^2$   
\_\_\_\_\_

18.  $18 + 37n + 22 - 44 + 120m - 4n + 69$   
\_\_\_\_\_

19.  $15 - (10a - 20)$   
\_\_\_\_\_

20.  $(40 - 20p) - (2p^2 + 6p)$   
\_\_\_\_\_

## Journal

1. Explain why  $4x^2y$  and  $4xy^2$  are not like terms.
2. Explain why  $4a^2 + 3a \neq 7a^3$ .
3. To simplify the polynomial  $6x + 3 + 4x + 2$ , we can write  $6x + 3 + 4x + 2 = 6x + 4x + 3 + 2 = 10x + 5$ . Name the property used to rewrite  $6x + 3 + 4x + 2$  as  $6x + 4x + 3 + 2$  and explain how it is used.
4. Explain the process used to add polynomials.
5. Explain the process used to subtract polynomials.

## Cumulative Review

Name the property shown in each of the following.

1.  $\frac{1}{2} \cdot 1 = 1 \cdot \frac{1}{2}$

\_\_\_\_\_

2.  $125x - 75 = 25(5x - 3)$

\_\_\_\_\_

3.  $0 = -3f + 3f$

\_\_\_\_\_

4.  $341x + (114x + 65) = (341x + 114x) + 65$

\_\_\_\_\_

Simplify each expression.

5.  $34y - 25y + 32y$

\_\_\_\_\_

6.  $5t(5s - 16)$

\_\_\_\_\_

7.  $35h^3 - 16t^2 + 24t^3 - 25h^3$

\_\_\_\_\_

8.  $9a + 3b - 3 - 4a + 7 - 8b + 16 - 12b$

\_\_\_\_\_

## Manipulative Problems

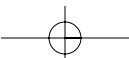
Simplify using Algebra Tiles to model each expression.

1.  $5x^2 + x^2 - 4x + 1 - 3$

\_\_\_\_\_

2.  $-x - 5x^2 + 1 - 2x^2 + x - 4$

\_\_\_\_\_



3.  $5x^2 + 2x - x^2 + 4x + 3 - 7$

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4.  $2 + 3x^2 - 4x - 5 + 2x - 3 + 4x^2 - x$

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5.  $3 - 2x + 3x^2 + 2x - 1 + 4 + 2x^2$

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