Name _____ Date _____ Class _____

SKILL 57

Skills Readiness

Combine Like Terms

Definition: An algebraic term is a number, a variable, or the product of numbers and variables. *Like terms* are those terms that have exactly the same variable factor. For example, $2x$ and $7x$ are like terms because they both have the variable factor, x.

Combining like terms means adding or subtracting them. To combine like terms:

- Step 1: Reorder the terms so that like terms are together.
- Step 2: Add (or subtract) the coefficients of the like terms. If a variable does not have a coefficient, it is understood to be 1.

Example 1	$7x - 5 + 2x + 15$	Example 2	$6 + 2a - 8b + 4a - 11$
Reorder:	$7x + 2x - 5 + 15$	Reorder:	$6 - 11 + 2a + 4a - 8b$
Add:	$7x + 2x = (7 + 2)x = 9x$	Subtract:	$6 - 11 = -5$
Add:	$-5 + 15 = 10$	Add:	$2a + 4a = (2 + 4)a = 6a$
		Single term:	$-8b$
Answer:	$9x + 10$	Answer:	$-5 + 6a - 8b$

Practice on Your Own

Simplify each expression by combining like terms.

1. $2x + 10x$ _____

2. $9m + (-5m)$ _____

3. $6a^2 + a^2$ _____

4. $-10t + 3t$ _____

5. $14b + (-17b)$ _____

6. $12d^2 - 4d^2$ _____

7. $6x - 7x$ _____

8. $-5f + 5f$ _____

9. $8.2h + 2.8h$ _____

10. $4y - 9 - 13y$ _____

11. $3 + 6x + 7 + 4x$ _____

12. $2 + 4u - 7 + 3u + 10 - 12u$ _____

13. $9y - 2x + 4y + 11x - 3x$ _____

14. $16j + 8 - 9j - 4 - 7j$ _____

Check

Simplify each expression by combining like terms.

15. $9x + x$ _____

16. $-5c + 2c$ _____

17. $a^2 - 4a^2$ _____

18. $11.5z - 3.1z$ _____

19. $22m + 16 - m - 5 - 11m$ _____

20. $7q + 3r - 2r + q - 6r$ _____