Name _____ Date _____ Class _____

SKILL 63

Skills Readiness

Simplify Polynomial Expressions

To simplify a polynomials expression:

- Step 1: Remove all parentheses by using the Distributive Property (if needed).
- Step 2: Identify and combine like terms.

Example: Simplify $2x(x + 6) + x^2 - 10x$.

$= 2x(x + 6) + x^2 - 10x$	
$= 2x(x) + 2x(6) + x^2 - 10x$	Use the Distributive Property.
$= 2x^2 + 12x + x^2 - 10x$	Multiply using properties of exponents.
$= 3x^2 + 2x$	Combine like terms.

Practice on Your Own

Simplify each expression.

1. $12m + 7n - 9n$

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2. $4x - y - 6x + 9y$

_____

3. $7p - 3q + 4(2p + q)$

_____

4. $5(d - 2e) + 3(5d + 4e)$

_____

5. $24t^2 + 5t - 15t + t$

_____

6. $2r^2s - rs + 5rs^2 - r^2s + 7rs$

_____

7. $5(7f^2 - 3f + 1) - 20f^2 + 10f$

_____

8. $p^2(3p - 5) + p(7p + 8)$

_____

9. $18g^2(1 - 2g) - 5g^2 + 10g^3$

_____

10. $jk(3j^2 + 5k) + j^2(2jk + 4)$

_____

Check

Simplify each expression.

11. $2x - 7x + 5y$

_____

12. $9a + 14b + b - 7a$

_____

13. $20g - 14h + 6(g + 2h)$

_____

14. $9u^3 - 4u^2 + 5u - u^3 - 10u - 3u^2$

_____

15. $10(2p^2 - p - 1) + 7p^2 - 3$

_____

16. $2c(9 - 5c) + 6(c^2 - c)$

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