Answer Key · Lesson 8.4: Special Products

School Launch · Algebra I · Unit 8 · Worksheet A · for the parent

Key

1. $16x^2 - 9$

Use a special-product pattern to multiply: $(4x + 3)(4x - 3)$.

2. $x^2 - 14x + 49$

Use a special-product pattern to multiply: $(x - 7)^2$.

3. $x^2 - 10x + 25$

Use a special-product pattern to multiply: $(x - 5)^2$.

4. $4x^2 - 9$

1. Distribute: $(-9) + (-6x) + (6x) + (4x^2)$
2. Combine like terms: $4x^2 - 9$

Use a special-product pattern to multiply: $(2x + 3)(2x - 3)$.

5. $9x^2 - 42x + 49$

1. Distribute: $(9x^2 - 42x + 49)$
2. Combine like terms: $9x^2 - 42x + 49$

Use a special-product pattern to multiply: $(3x - 7)^2$.

6. $9x^2 + 12x + 4$

1. Distribute: $(9x^2 + 12x + 4)$
2. Combine like terms: $9x^2 + 12x + 4$

Use a special-product pattern to multiply: $(3x + 2)^2$.

7. $4x^2 - 81$

1. Distribute: $(-81) + (-18x) + (18x) + (4x^2)$
2. Combine like terms: $4x^2 - 81$

Use a special-product pattern to multiply: $(2x + 9)(2x - 9)$.

8. $9x^2 - 12xy + 4y^2$

1. Distribute: $(9x^2 - 12xy + 4y^2)$
2. Combine like terms: $9x^2 - 12xy + 4y^2$

Use a special-product pattern to multiply: $(3x - 2y)^2$.

9. $25x^3 - 5x^2 + 5x - 1$

1. Distribute: $(-1) + (5x) + (-5x^2) + (25x^3)$
2. Combine like terms: $25x^3 - 5x^2 + 5x - 1$

Use a special-product pattern to multiply: $(5x^2 + 1)(5x - 1)$.

10. $x^3 - 4x^2 + 4x - 16$

1. Distribute: $(-16) + (-4x^2) + (4x) + (x^3)$
2. Combine like terms: $x^3 - 4x^2 + 4x - 16$

Use a special-product pattern to multiply: $(x^2 + 4)(x - 4)$.