Answer Key · Lesson 8.3: Multiplying Binomials and Polynomials

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

Key

1. $x^2 + 11x + 30$

Multiply: $(x + 6)(x + 5)$.

2. $x^2 - 9x + 20$

Multiply: $(x - 5)(x - 4)$.

3. $x^2 - 36$

Multiply: $(x + 6)(x - 6)$.

4. $x^2 + 3x - 54$

1. Distribute: $-54 + 9x - 6x + x^2$
2. Combine like terms: $x^2 + 3x - 54$

Multiply: $(x + 9)(x - 6)$.

5. $10x^2 - 9x - 40$

1. Distribute: $-40 + 16x - 25x + 10x^2$
2. Combine like terms: $10x^2 - 9x - 40$

Multiply: $(5x + 8)(2x - 5)$.

6. $9x^2 + 12x + 3$

1. Distribute: $3 + 9x + 3x + 9x^2$
2. Combine like terms: $9x^2 + 12x + 3$

Multiply: $(3x + 3)(3x + 1)$.

7. $2x^2 + 17x - 9$

1. Distribute: $-9 - x + 18x + 2x^2$
2. Combine like terms: $2x^2 + 17x - 9$

Multiply: $(2x - 1)(x + 9)$.

8. $3x^3 - 3x^2 + 15x - 42$

1. Distribute: $-42 - 6x - 6x^2 + 21x + 3x^2 + 3x^3$
2. Combine like terms: $3x^3 - 3x^2 + 15x - 42$

Multiply: $(3x - 6)(x^2 + x + 7)$.

9. $x^3 + 4x^2 + 6x + 3$

1. Distribute: $3 + x^2 + 3x + 3x + x^3 + 3x^2$
2. Combine like terms: $x^3 + 4x^2 + 6x + 3$

Multiply: $(x + 1)(x^2 + 3x + 3)$.

10. $5x^3 + 12x^2 + 31x - 24$

1. Distribute: $-24 - 3x^2 - 9x + 40x + 5x^3 + 15x^2$
2. Combine like terms: $5x^3 + 12x^2 + 31x - 24$

Multiply: $(5x - 3)(x^2 + 3x + 8)$.