

LESSON
5-2

Multiplying Polynomial Expressions

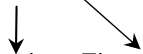
Reteach

Use the Distributive Property to multiply binomial and polynomial expressions.

Examples

Multiply $(x + 3)(x - 7)$.

$$(x + 3)(x - 7)$$



$$x(x - 7) + 3(x - 7)$$

Distribute.

$$(x)x - (x)7 + (3)x - (3)7$$

Distribute again.

$$x^2 - 7x + 3x - 21$$

Multiply.

$$x^2 - 4x - 21$$

Combine like terms.

Multiply $(x + 5)(x^2 + 3x + 4)$.

$$(x + 5)(x^2 + 3x + 4)$$

$$x(x^2 + 3x + 4) + 5(x^2 + 3x + 4)$$

Distribute.

$$(x)x^2 + (x)3x + (x)4 + (5)x^2 + (5)3x + (5)4$$

Distribute again.

$$x^3 + 3x^2 + 4x + 5x^2 + 15x + 20$$

Multiply.

$$x^3 + 8x^2 + 19x + 20$$

Combine like terms.

Fill in the blanks below. Then finish multiplying.

1. $(x + 4)(x - 5)$

2. $(x - 2)(x + 8)$

3. $(x - 3)(x - 6)$

___ $(x - 5)$ + ___ $(x - 5)$

___ $(x + 8)$ - ___ $(x + 8)$

___ $(x - 6)$ - ___ $(x - 6)$

Multiply.

4. $(x - 2)(x - 3)$

5. $(x - 7)(x + 7)$

6. $(x + 2)(x + 1)$

Fill in the blanks below. Then finish multiplying.

7. $(x + 3)(2x^2 + 4x + 8)$

8. $(x + 2)(6x^2 + 4x + 5)$

___ $(2x^2 + 4x + 8)$ + ___ $(2x^2 + 4x + 8)$

___ $(6x^2 + 4x + 5)$ + ___ $(6x^2 + 4x + 5)$
