

4.2 Practice A**In Exercises 1–3, find the sum.**

- $(-6x^2 + 3x - 7) + (10x^2 + 4x - 2)$
- $(10x^4 + 3x^2 - 5x + 4) + (7x^5 - 5x^4 + 2x - 9)$
- $(5x^4 + 3x^2 - 6x - 10) + (2x^3 - 7x^2 + 6x + 1)$

In Exercises 4–6, find the difference.

- $(4x^3 + 6x^2 - 9x + 1) - (8x^3 + 2x^2 - 5x - 1)$
- $(10x^4 - 4x^3 - 7x^2 + 5x + 9) - (2x^4 - 5x^3 - 4x^2 + 9x + 3)$
- $(7x^5 + 4x^3 - 2x^2 + 12x + 5) - (6x^4 - 9x^3 + x^2 - 3)$
- A city is planning a new sports park. The total area (in square feet) of the park is modeled by the expression $9x^2 + 4x - 5$. The area of the park designated for soccer fields is modeled by the expression $2x^2 - 5x + 3$. Write an expression that models the area of the park that is not designated for soccer fields.

In Exercises 8–11, find the product.

- $5x^2(3x^2 + 7x + 6)$
- $-2x^4(10x^3 - 9x^2 - 7x + 4)$
- $(8x^2 - 3x + 1)(-3x + 2)$
- $(-x - 6)(3x^2 + 2x + 9)$
- Describe and correct the error in performing the operation.

$$\times \quad -3x^2(4x^2 - 5x + 7) = -12x^4 - 15x^3 + 21x^2$$

In Exercises 13–16, find the product of the binomials.

- $(x - 1)(x + 4)(x - 3)$
- $(x - 6)(x - 9)(x + 2)$
- $(x + 3)(2x + 1)(2x - 3)$
- $(3x + 5)(x - 4)(4x + 1)$

In Exercises 17–19, find the product.

- $(x + 8)(x - 8)$
- $(y + 4)^2$
- $(2p - 3)^2$