

CHAPTER
12

Extra Practice

Skills

● **Lesson 12-1** Simplify each polynomial.

1. $3x - 5 + 23x - 9$

2. $-x^2 + 2x^2 - 6x + 3 - 2$

3. $x^2 - 5x + 3x + 4$

4. $-4 + x - 13x + 10 - 5 + 20x$

5. Write and simplify the polynomial represented by the model below.



● **Lesson 12-2** Add or subtract.

6. $(2x^2 - x + 1) - (4x^2 - 3)$

7. $(3x + 2) + (2x^2 + 5x - 7)$

8. $(5x^2 + 2x - 10) + (-3x^2 - 2)$

9. $(x^2 + 6x + 4) - (4x - 9)$

● **Lesson 12-3** Write each expression using a single exponent.

10. $4^8 \cdot 4^{10}$

11. $(-9)^2 \cdot (-9)^4$

12. $3.2^8 \cdot 3.2^3$

13. $7^t \cdot 7^{3t}$

Multiply. Write each product in scientific notation.

14. $(3 \times 10^4)(2 \times 10^{12})$

15. $(5 \times 10^9)(7 \times 10^3)$

16. $(1 \times 10^3)(2.6 \times 10^8)$

17. $(7 \times 10^2)(8 \times 10^{10})$

● **Lesson 12-4** Simplify each expression.

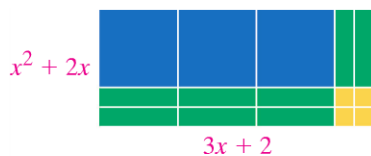
18. $(-4x^2)(3x^4)$

19. $(6x)(-2x)$

20. $4x^2(2x - 7)$

21. $-6x(x^2 - 5)$

22. Use the area model below to find the product.



● **Lesson 12-5** Write each expression using a single exponent.

23. $\frac{4^7}{4^5}$

24. $\frac{8.1^{15}}{8.1^{12}}$

25. $\frac{(-654)^{20}}{(-654)^1}$

26. $\frac{2^{3x}}{2^x}$