LESSON 8.1 **Practice B**

For use with the lesson "Add and Subtract Polynomials"

Write the polynomial so that the exponents decrease from left to right. Identify the degree and leading coefficient of the polynomial.

1. $4n^5$

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

3. $6y^3 - 2y^2 + 4y^4 - 5$

Tell whether the expression is a polynomial. If it is a polynomial, find its degree and classify it by the number of its terms. Otherwise, tell why it is not a polynomial.

4. 10^x

5. $-6n^2 - n^3 + 4$

6. $w^{-3} + 5$

Find the sum or difference.

7. $(3z^2 + z - 4) + (2z^2 + 2z - 3)$

8. $(8c^2 - 4c + 1) + (-3c^2 + c + 5)$

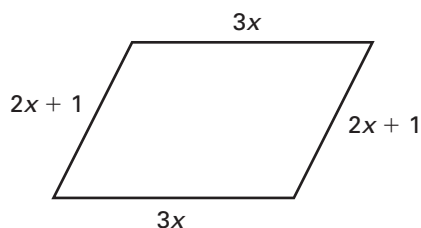**9.** $(2x^2 + 5x - 1) + (x^2 - 5x + 7)$

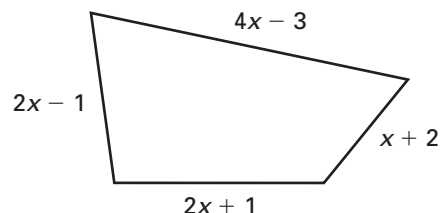**10.** $(10b^2 - 3b + 2) - (4b^2 + 5b + 1)$

11. $(-4m^2 + 3m - 1) - (m + 2)$

12. $(3m + 4) - (2m^2 - 6m + 5)$

Write a polynomial that represents the perimeter of the figure.
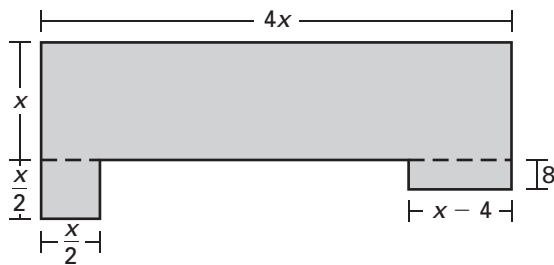
13.

14.

15. Floor Plan The first floor of a home has the floor plan shown. Find the area of the first floor.

16. Profit For 1995 through 2005, the revenue R (in dollars) and the cost C (in dollars) of producing a product can be modeled by

$$R = \frac{1}{4}t^2 + \frac{21}{4}t + 400 \quad \text{and} \quad C = \frac{1}{12}t^2 + \frac{13}{4}t + 200$$

where t is the number of years since 1995. Write an equation for the profit earned from 1995 to 2005. (*Hint:* Profit = Revenue − Cost)