Name _____ Date _____

LESSON 9.1

Practice B

For use with pages 554–560

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

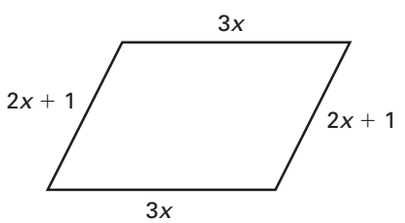
10. $(10b^2 - 3b + 2) - (4b^2 + 5b + 1)$

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

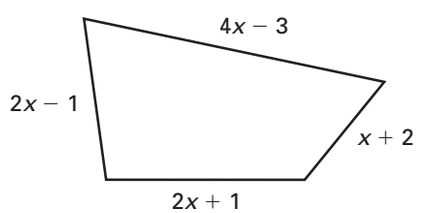
12. $(3m + 4) - (2m^2 - 6m + 5)$

Write a polynomial that represents the perimeter of the figure.

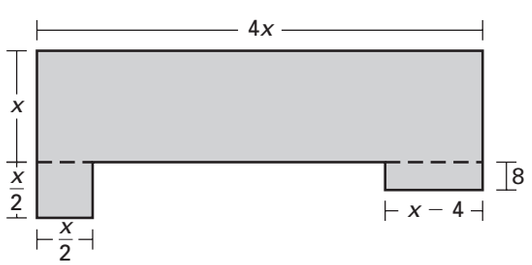
13.



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)