Name _____ Date _____ Class _____

LESSON 7-5

Practice C

Polynomials

Find the degree and number of terms of each polynomial.

1. $5t^5 + 60 + 3t^3$ _____

2. $9p + 31p^9 + 6p^2 - 42$ _____

3. $-50 + 4r - r^3 + r^2 - 4r^5$ _____

Simplify and write each polynomial in standard form. Then, give the leading coefficient.

4. $4g^3 + 8g - 4g^3 + 2g^2$ _____ _____

5. $13 - 5h^3 + h^2 - h$ _____ _____

6. $2(3x + 4) - 4x + 8x^2$ _____ _____

Classify each polynomial according to its degree and number of terms.

7. $6t^3 + 54t^4 - 1$ _____

8. $14 \cdot 3w^2 + w$ _____

9. $4(4s^2 - s) - 11 + s^7$ _____

Evaluate each polynomial for the given value.

10. $4m - 4 - 4m^3$ for $m = -2$ _____

11. $12y^7 - 6y^2 + 8y^3 - y$ for $y = -1$ _____

12. $-3a + a^3 - \frac{1}{3}a^2$ for $a = 3$ _____

13. A certain company's profit in dollars can be modeled with the polynomial $-\frac{1}{2}x^2 + 100x - 200$ where x is the number of items produced and sold.

    a. What is the profit if they produce and sell 10 of their products? _____

    b. What is the profit if they produce and sell 100 of their products? _____

    c. Evaluate the company's profit polynomial for $x = 0$. What does this number represent? _____