Name _____ Date _____ Class _____

LESSON 6-1

Practice B

Polynomials

Identify the degree of each monomial.

1. $6x^2$ **2.** $3p^3m^4$ **3.** $2x^8y^3$

_____ _____ _____

Rewrite each polynomial in standard form. Then identify the leading coefficient, degree, and number of terms. Name the polynomial.

4. $6 + 7x - 4x^3 + x^2$

_____

5. $x^2 - 3 + 2x^5 + 7x^4 - 12x$

_____

Add or subtract. Write your answer in standard form.

6. $(2x^2 - 2x + 6) + (11x^3 - x^2 - 2 + 5x)$ **7.** $\left(x^2 - 8\right) - (3x^3 + 6x - 4 + 9x^2)$

_____ _____

8. $(5x^4 + x^2) + (7 + 9x^2 - 2x^4 + x^3)$ **9.** $(12x^2 + x) - (6 - 9x^2 + x^7 - 8x)$

_____ _____

Graph each polynomial function on a calculator. Describe the graph, and identify the number of real zeros.

10. $f(x) = x^3 + 2x^2 - 3$

_____

_____

11. $f(x) = x^4 - 5x^2 + 1$

_____

_____

Solve.

12. The height, h, in feet, of a baseball after being struck by a bat can be approximated by $h(t) = -16t^2 + 100t + 5$, where t is measured in seconds.

a. Evaluate $h(t)$ for $t = 3$ and $t = 5$. _____

b. Describe what the values of the function from part a represent.

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