

## LESSON

**Practice B****6-1****Polynomials**

Identify the degree of each monomial.

1.  $6x^2$

2.  $3p^3m^4$

3.  $2x^8y^3$

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

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

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

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Add or subtract. Write your answer in standard form.

6.  $(2x^2 - 2x + 6) + (11x^3 - x^2 - 2 + 5x)$

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

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

9.  $(12x^2 + x) - (6 - 9x^2 + x^7 - 8x)$

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

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

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

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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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