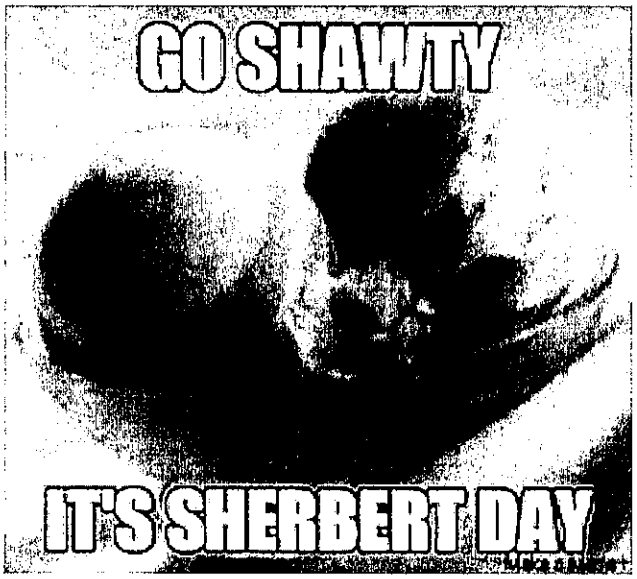
Name: _____

Hour: _____

Chapter 7B

Polynomials



Lesson 7-5: Polynomials

Vocabulary

Monomial: _____

_____

Example: Non-Example:

Polynomial: _____

_____

Example:

Standard Form of a Polynomial: _____

_____

Degree of a Polynomial: _____

_____

Leading Coefficient: _____

_____

Term: _____

_____

Polynomials with Multiple Variables

When a polynomial has multiple variables, the _____ is the term with the highest _____ of exponents.

Special Polynomials
Polynomials can be classified by their degree or by the number of terms.

Degree	Name
0	
1	
2	
3	
4	
5	
6 or more	

# of Terms	Name
1	
2	
3	
4 or more	

Practice

Find the degree of each monomial.

1. $4p^4q^3$

2. $7ed$

3. 3

4. Use the polynomial: $-3x^3 + 5x + 2x^4 - 6 + x^2$

   a. Write the polynomial in standard form.

   b. What is the degree of the polynomial?

   c. Identify the leading coefficient of the polynomial.

   d. Identify the number of terms in the polynomial.

Find the degree of the polynomial.

5. $\frac{1}{3}w^2z+\frac{1}{2}z^4-5$

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

Classify each polynomial according to its degree AND the number of terms.

7. $5n^3+4n$

8. $4y^6-5y^3+2y-9$

9. $-2x$

Lesson 7-6: Adding & Subtracting Polynomials

Practice

1. $15m^3 + 6m^2 + 2m^3$

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

3. $2x^2y - x^2y - x^2y$

4. $(2x^2 - x) + (x^2 + 3x - 1)$

5. $(2x^2 + 6) - (4x^2)$

6. $(a^4 - 2a) - (3a^4 - 3a + 1)$

7. $(11z^3 - 2z) - (z^3 - 5)$

8. $(20.2y^2 + 6y + 5) - (1.7y^2 - 8)$

Lesson 7-7: Multiplying Polynomials

Practice

1. $(5x^2)(4x^3)$

2. $(-3x^3y^2)(4xy^5)$

3. $\left(\frac{1}{2}a^3b\right)(a^2c^2)(6b^2)$

4. $4a\left(a^2b+2b^2\right)$

5. $2x^2y(3x-y)$

6. $(x+3)(x+2)$

7. $(x+5)^2$

8. $\left(3a^2-b\right)\left(a^2-2b\right)$