Algebra 2 Hwk #19 Sec 6-1 Notes Fall 2013 Name

Give the definition of each term.

1. Monomial:

Give four examples of a monomial:

2. Polynomial:

Give two examples of a polynomial:

3. a. The exponents of a polynomial must be what kind of numbers?

b. The coefficients of a polynomial must be what kind of numbers?

4. What does a polynomial in standard form look like?

5. The leading coefficient of a polynomial is

6. The degree of a polynomial is

7. Fill out these two tables by filling in the blanks.

Degree of Polynomial	Name by Degree
0	
1	
2	
3	

# of terms in polyhomial	Name by # of terms
1	
2	
3	

8. Is each of the below a polynomial? If not give a reason.

a) $y = \frac{3}{7}x^2 + 3x - 14x^4 + 4$

b) $y = 4x^{-2} + x^3 - \frac{8}{x}$

c) $y = 9\sqrt{x} + 3x^7 - x^{\frac{2}{3}}$

d) $y = 9^x + 10ix^4 - 15$

9. Write each polynomial in standard form and state the degree, leading coefficient, and its name by both the degree and number of terms.

a) $9x + 2 - x^2$

Standard Form:

Degree:

Leading Coefficient:

Name by Degree:

Name by # of terms:

b) $15x + 8x^3 - 9x$

Standard Form:

Degree:

Leading Coefficient:

Name by Degree

Name by # of terms:

10. State the degree of each polynomial.

Expanded Form:

a) $7x^2 + 12 - 13x^4 + 8x$

Degree:

b) $9x + 1$

Degree:

c) 6

Degree:

Factored Form:

a) $(x + 3)(2x - 1)(x + 6)$

Degree:

b) $(x - 7)^2(x + 1)(x - 5)^3$

Degree: