

## U2 Day 3 Introduction to Polynomials - HOMEWORK

Identify the leading coefficient (LC). Classify the polynomial by degree (*cubic*, etc.) and by number of terms (*binomial*, etc.)

1.  $12x^3$

2.  $5x - 2$

3.  $-4x^2 + 7x - 1$

LC:

Deg:

Terms:

4.  $5x^3z^2 - 2x$

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

6.  $x^2 + 5x + 2x^4 + x^3 - 2$

LC:

Deg:

Terms:

**Simplify. Write each answer in standard form. Show all your work.**

7.  $(3x^2 - 4x + 1) + (-x^2 + x - 9)$

8.  $(-8x^2 - 3x + 7) - (-x^3 + 6x^2 - 5)$

9.  $(-3 + 4n^2)(5 - 2n^2)$

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

11.  $(5x^2 + 4)(3x + 7)$

12.  $(x^2 + 1)(-3x^2 - 7)$

13.  $(m^2 + 3)(2m^3 + 5m^5 - 4)$

14.  $(x^2 - 4x + 5)(6x^2 + x - 1)$

Put the polynomial in standard form if necessary, then classify by degree and # of terms:

When the polynomial has more than one variable in a term, add all the exponents to get the degree.

	Degree?	Name?		Degree?	Name?
15. $3x^2 - 7x + 54$			16. $7$		
17. $16x^3y - 5xy + 17x$			18. $-5xy^2z$		
19. $4x^2 + 7x + 2$			20. $17y$		
21. $-3x^2 - 2x + 5$			22. $3m^5 - 7x + 3$		