1) What is the degree of $ 5xy^{4}z$?

2) $\left(2x^{2}-4+5x\right)-\left(-x^{2}+8x\right)-2\left(9x+1+3x^{2}\right)$

**Add or Subtract. Write the polynomial in standard form. Identify the leading coefficient, degree, and number of terms. Name the polynomial**

$3) \left(2x^{4}-6x^{2}+8\right)-(-5x^{4}+2x^{2}-12)$ $4) \left(-3x^{3}-7x^{5}-3\right)+(5x^{2}+3x^{3}+7x^{5})$

Standard Form: Standard Form:

Leading Coefficient: Leading Coefficient:

Degree: Degree:

Number of Terms: Number of Terms:

Name: Name:

**Multiply the following polynomials.**

$5) -2x^{3}(x-3)(4x+1)$ $6) (x^{2}+xy-6y^{2})(y^{2}+3x)$

7) $a^{2}b\left(2a^{3}b-5ab^{4}\right)$ 8) $-\left(7x-x^{2}+6\right)\left(3x+5\right)^{2}$

**Expand the expressions.**

$9) (2x-3)^{5}$ $10) (4x+5y)^{3}$

$11)$ A trick coin is designed to land heads up with a probability of 80%. You flip the coin 7 times. What is the probability of getting 6 or 7 heads?

$12)$ A 20 question test is given in your English class. The test only contains true/false questions. What is the probability that you get exactly 16 questions correct?

$13)$ 7 out of every 10 students at Buford High School hoped to have a snow day today. Suppose you survey the students in your math class (16 students). What is the probability that at least 4 of these wanted a snow day?

Factor completely.

14)  15) 

16)  17) 

18)  19) $-x^{6}-7x^{3}+8$

Divide using the method of your choice.

20)  21) 

22) $\left(9x^{3}-70x^{2}+103x-49\right)÷(9x-7)$ 23) $\left(5x^{5}-2x^{4}+x^{3}-7x^{2}-6x+9\right)÷\left(x+1\right)$