MATH 90: Q4P1.doc; 2/26/2010 NAME_____
Positive exponents only.

1: Simplify this expression (do NOT evaluate): $10 \cdot 10^{10} \cdot \frac{1}{10^2}$

2: Simplify this expression : $\frac{(5+x)^7}{(5+x)^2 x^0}$

3: Remove parenthesis and express using positive exponents: $\left(\frac{x^2}{-2}\right)^3$

4: Evaluate this expression: $3^0 - 3^1 + 3^2 - 3^3$

5: Simplify this expression : $\left(a^2 b^3\right)^2 \left(a^3 b\right)^3$

MATH 90, Q4P2.doc (4.2) NAME_____
2/26/2010

1:Rewrite the following polynomial in proper order: $x^2 - 6 + x^6 - 6x^3$

Polynomial in proper order:_____

2: Now, for the expression in problem 1 above, identify the terms, the coefficients of each term , the degree of each term and, finally, state the degree of the polynomial. Write the terms in descending order.

TERM	COEFFICIENT	DEGREE	DEG OF POLY

3:Evaluate the following polynomial for x = 4: $2x^2 - 3x + 6 + x^0$

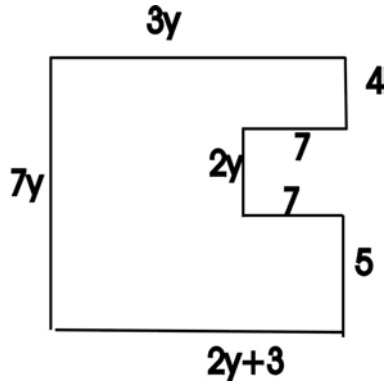
4: Combine like terms and write in proper order: $2x^2 - 6x + 3x + 4x^2 + 2x^3 - 3$

Q4P3.doc; 4.3 NAME_____
3/6/2010

1: Add these polynomials: $(7+4x-5x^2+6x^3)+(2+x+6x^2-4x^3)$

2: Subtract: $\left(4x^2+7x^3-7\right)-\left(5x^2-7x+2\right)$

3: Find a polynomial for the perimeter of this figure



4: Simplify (remove parens): $-(-4x^4+6x^2+\frac{3}{4}x-8)$

Q4P4.doc NAME_____

1. MULTIPLY $\left(4x^3\right)9x$

2. MULTIPLY $x^2\left(x^3+1\right)$

3. MULTIPLY: $(x+5)(x-2)$

4. MULTIPLY AND CHECK: $\left(\frac{1}{4}x+2\right)\left(\frac{3}{4}x-1\right)$

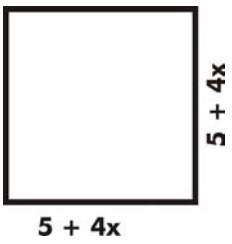
5. MULTIPLY AND CHECK: $\left(x^2-x+5\right)(x+1)$

1: Multiply (special product) $(a+9)(a-9)$

2: Multiply (special product) $\left(x+\frac{1}{4}\right)\left(x-\frac{1}{4}\right)$

3: Multiply (special product) $\left(7X^3+1\right)^2$

4. Find the area of this square:



1. Evaluate for x=2;y=3 $\left(2x^2y+1\right)^2$

2. Identify the coefficient and degree of each term then find the degree of the polynomial

$$x^3y-2xy+3x^2-5$$

Term	degree	coefficient	Deg of polynomial
x^3y			
$-2xy$			
$3x^2$			
-5			

3. Simplify by combining like terms.

$(5R^2-4RT-T^2)+(-6R^2-5RT-T^2)+(-5R^2+4RT-T^2)$

4. Multiply $\left(M^3N+8\right)\left(M^3N-6\right)$

Q4P7.doc NAME_____

Perform the indicated division in each of the following problems

1. $\left(18x^3 - 24x^2 + 6x\right) \div (6x)$

2. $\left(45x^{8k} + 30x^{6k} - 60x^{4k}\right) \div \left(3x^{2k}\right)$

3. $\left(x^2 - x - 42\right) \div \left(x - 7\right)$

4. $\left(x^3 - x^2 + x - 1\right) \div \left(x - 1\right)$

Q4P8-EXP.doc NAME_____

PROBS 1 AND 2: EXPRESS USING POSITIVE EXPONENTS

1: 7^{-2}

2: $\left(\frac{3}{5}\right)^{-2}$

PROBS 3 AND 4: EXPRESS USING NEGATIVE EXPONENTS

3: $\frac{1}{6^2}$

4: $\frac{1}{m}$

PROBS 5, 6 AND 7: SIMPLIFY. DO NOT USE NEGATIVE EXPONENTS IN THE ANSWER.

5: $\left(a^{-2}\right)^9$

6: $\frac{y^{-7}}{y^{-3}}$

7: $\frac{3y^4}{s^{-2}y^{-4}}$

Q4P8-SCI.doc NAME_____

PROBS 1 AND 2: CONVERT TO SCIENTIFIC NOTATION

1: 490,000

2: 0.00583

PROBS 3 AND 4: PERFORM THE INDICATED OPERATION AND LEAVE IN SCIENTIFIC NOTATION FORM.

3: $\dfrac{8.5 \bullet 10^{8}}{3.4 \bullet 10^{-5}}$

4: $\left(4 \bullet 10^{7}\right)\left(3.4 \bullet 10^{5}\right)$

5: The speed of light is 186,000 miles per second. How many miles will light travel in one day? Use scientific notation to compute and leave answer in scientific notation.