PAP Algebra 2

Polynomials

polynomials

21, 23, 24

(21) $\frac{5x^2y^1}{20x^1y^{-1}}$

$\frac{1xy^2}{4}$

$\frac{xy^2}{4}$

(23) $\frac{xy^9}{y^{-3}} \cdot \frac{y}{x^5}$

$\frac{x^1y^{10}}{x^5y^{-3}}$

$\frac{y^{13}}{x^4}$

(24) $\frac{y^{10}}{2x^5} \cdot \frac{20x^8}{xy^4}$

$\frac{20x^8y^{10}}{2x^6y^4}$

$10x^2y^6$

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Classifying Polynomials

by NUMBER OF TERMS:

- 1 term—monomial $2x^3$
- 2 terms—binomial $x+5$
- 3 terms—trinomial x^3+3x-7
- 4+ terms—polynomial with x terms

by DEGREE:

- 0—constant 5
- 1—linear $2x-1$
- 2—quadratic x^2-3x+9
- 3—cubic x^3+1
- 4—quartic x^4-2x^3+3x-7
- 5—quintic x^5
- 6+—x^{th} degree

for monomials: sum of the exponents of the variables

for polynomials: largest exponent

classifying polynomials

Identify the degree of each monomial.

a^3b^5 → 8

$9x^2y^1z^3$ → 6

7 → 0

Rewrite each polynomial in standard form. Then identify the leading coefficient, degree, and number of terms. Classify the polynomial.

x^2+5x^3-4

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

LC: 5 Terms: 3

D: 3 Trinomial

Cubic

$-12x+6x^3+8x^4-36+2x^2$

$8x^4+6x^3+2x^2-12x-36$

LC: 8 Terms: 5

D: 4 Poly w/ 5 terms

Quartic

examples

Add or subtract. Write the answer in standard form.

$(2x^3+9-x)+(5x^2+4+7x+x^3)$

$3x^3+5x^2+6x+13$

$(3-4x^2)+(x^2-6x+1)$

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

examples

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Conclusion

1. How do we find the degree of a polynomial? Exponents
2. How do we always write a polynomial? High exp to Lowest exp
3. How do you add or subtract polynomials? Like terms
4. Questions???

Assignment

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