TOPIC: INTRO TO POLYNOMIALS

Intro to Polynomials

◆ **Polynomial:** Algebraic expression where variables have only _____ number exponents *(no negatives, no fractions)*

- ► **Monomial:** _____ term(s)
- ► **Binomial:** _____ term(s)
- ► **Trinomial:** _____ term(s)

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

EXAMPLE: Determine if the expression is a polynomial. If so, identify if it's a monomial, binomial, trinomial, or none.

(A) $\frac{3}{4}x + x^3$

Whole number exp? ☐
Number of terms? ___

[MONOMIAL | BINOMIAL | TRINOMIAL | NONE]

(B) $\frac{5}{y}$

Whole number exp? ☐
Number of terms? ___

[MONOMIAL | BINOMIAL | TRINOMIAL | NONE]

(C) $2x^3y^2$

Whole number exp? ☐
Number of terms? ___

[MONOMIAL | BINOMIAL | TRINOMIAL | NONE]

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Degree of Polynomials

New **Degree of Polynomials**

$$x^4 + 2y^3 + x^2y^3$$

Degree of Terms: _____
(Sum of all _____ on ALL variables)

Degree of Polynomial: _____
(_____ degree of all terms)

◆ The degree of a constant term is always ____.

EXAMPLE For each polynomial, determine the degree of each term and the whole polynomial.

(A) $5x + 7x^4 - x^2 + 17$

Degree of Terms: _____

Degree of Polynomial: ____

(B) $-4y + 18xy^2$

Degree of Terms: _____

Degree of Polynomial: ____

PRACTICE Determine the degree of each term.

(A) y^5

(B) $3b$

(C) -6

(D) $8p^4q^3$

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PRACTICE Determine the degree of each polynomial.

$(\boldsymbol{A})$ $15q - 21p^3$	$(\boldsymbol{B})$ $-x^4 + 2x^3 - 5x^5 - 8x$
$(\boldsymbol{C})$ $-3x^2 - 5x^2y^2 + y^3$	$(\boldsymbol{D})$ $a^2 + 2ab + b^2$