**TYPES of POLYNOMIALS**

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| **MONOMIAL**  \_\_\_ TERM | **BINOMIAL**  \_\_\_ TERMS | **TRINOMIAL**  \_\_\_ TERMS | **POLYNOMIAL**  \_\_\_ TERMS |

**DEGREE of POLYNOMIALS**

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| **DEGREE of a TERM**  The \_\_\_\_\_\_ of the exponents of the variables.  **Ex:** What is the degree of:  a) x3 b) x3y4? | **DEGREE of a POLYNOMIAL**  The \_\_\_\_\_\_\_\_\_\_ degree of its terms.  **Ex:** What is the degree of x3y4 + x7y? |

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| **CONSTANT**  5  has degree \_\_\_ | **LINEAR**  y = 2x +5  has degree \_\_\_ | **QUADRATIC**  y = x2  has degree \_\_\_ | **CUBIC**  y = x3  has degree \_\_\_\_ |

**OPERATIONS of POLYNOMIALS**

**1) ADDING POLYNOMIALS**  
Note: When adding or subtracting, we collect “\_\_\_\_\_\_\_\_\_\_\_\_\_”  
**Ex**: ***f* (x)** = 5x2 + 10x – 2 and ***g* (x)** = x2 + 6

**2) SUBTRACTING POLYNOMIALS   
Ex**: ***f* (x)** = 5x2 + 10x – 2 and ***g* (x)** = - x2 - 6

**3) MULTIPLYING POLYNOMIALS**

**Note:** The term from outside the brackets will multiply each term inside the bracket.

**Ex 1**: Using the distributive property: 5(x + 6) = 5x + 5(6) = 5x + 30

**Ex 2:** Using the distributive property: (x + 2)(x + 3) = (x)(x) + (x)(3) + (2)(x) + (2)(3)

= x2 +5x + 6

**4) SQUARING a BINOMIAL (a + b)2 = a2 + 2ab + b2**

**Ex: *f* (x) =** x + 2 ***f* (x) 2** =

**Thinking:**  Find an expression for the volume of a cube with side length 2x + 1.