**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**5has degree \_\_\_ | **LINEAR**y = 2x +5 has degree \_\_\_ | **QUADRATIC**y = x2has degree \_\_\_ | **CUBIC**y = x3has 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

 $f\left(x\right)+g\left(x\right)=$

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

$$f\left(x\right)-g\left(x\right)=$$

**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

$f\left(x\right)=2x and g\left(x\right)=5x^{2}+7x$

$$f\left(x\right).g\left(x\right)=$$

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

 = x2 +5x + 6

$$f\left(x\right)=2x-1 and g\left(x\right)=5x+7$$

$$f\left(x\right).g\left(x\right)=$$

**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.