Unit 2 Day 2 : More Fun with Algebra ; introduction to adding/subtracting

A ***polynomial*** is an algebraic expression with one or more terms.

Recall, that if a term has no variables, it is called a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

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| **Vocabulary** | **Meaning** | **Examples** |
| **polynomial** | an expression with one or more terms i.e. monomial or the sum of monomials |  |
| **monomial** | an expression with **one term**, i.e. a number or variable or the product of numbers and variables |  |
| **binomial** | a polynomial with **two** terms |  |
| **trinomial** | a polynomial with **three** terms |  |
| **degree** of a monomial | the sum of the exponents of its variable  Recall that when multiplying powers with same bases, we add the exponents  xa xb = x a+b | x ; degree is \_\_\_\_  3x ; degree is \_\_\_\_  2*x*2 ; degree is \_\_\_\_  5ab ; degree is \_\_\_\_  -8xy3z2 ; degree is \_\_\_\_ |
| **degree** of a polynomial in one variable | the highest power of a variable in any one term | x3 + x2 ; degree is \_\_\_\_  2a3 + a2 – 9a  ; degree is \_\_\_\_ |
| **degree** of a polynomial in two variables or more | The greatest sum of the exponents in any one term | 2abc ; degree is \_\_\_\_  2a2b2c ; degree is \_\_\_\_  a2b3 + abcd ; degree is \_\_\_\_ |

Adding and Subtracting Polynomials

If the question is addition, you can remove all brackets and find all the like terms and collect them as we saw yesterday.

However, if the question is subtraction, you must **change every sign** **in the second bracket before you remove the brackets.** (You are just multiplying by negative one.)

**Example 2: Add or Subtract.**

a) (4x2 + 5x – 10x3) + (7x – 5 + 3x2)

b) (3a – 4a3 + 5) – (7a2 + 6a3 – 9)