LEARNING AS ONE NATION
Expanded Project

Math 10_21

JHS LEARNING ACTIVITY

Name: _____ **Grade/Score:** _____
Grade and Section: _____ **Date:** _____

Subject *(Check or choose from below.)*

- ☐ Religion/Values Education
- ☐ Natural Sciences
- ☐ Araling Panlipunan
- ☐ Filipino
- ☐ English
- ☐ Math
- ☐ TLE / ICT
- ☐ MAPEH
- ☐ HGP _____

Type of Activity *(Check or choose from below.)*

- ☐ Concept Notes
- ☐ Skills: Exercise / Drill
- ☐ Performance Task
- ☐ Illustration
- ☐ Formal Theme
- ☐ Informal Theme
- ☐ Others: _____

Activity Title: Polynomial Equations I

Learning Target: To identify polynomial equations

References: (Author, Title, Pages)
F. B. Orines, et al., Next Century Mathematics, p.114
DepEd Mathematics 10 – TG , p. 48
V. J. A. Dublin, CVIF Learning Activities

An **equation involving only polynomial expressions** is referred to as a **polynomial equation**. We define this formally as follows:

Polynomial Equation

A polynomial equation of degree ***n*** in one variable x is an equation that can be written in the form $\boldsymbol{a_n x^n + a_{n-1} x^{(n-1)} + \ldots + a_2 x^2 + a_1 x + a_0 = 0}$ where the coefficients, $\boldsymbol{a_n, a_{n-1}, \ldots, a_0}$ are real numbers.

Examples of polynomial equations:

$x + \frac{1}{4} = 0$ - Linear Equation

$x^2 - 2.5x - 8 = 0$ - Quadratic Equation

$2x^3 - 3x^2 - 18x - 0.8 = 0$ - Cubic Equation

Conditions to satisfy to have a polynomial equation:

1. It should not have a variable in the denominator.
2. Variables should not have a negative exponent.
3. Variables should not have a fractional exponent.

Exercises:

1. In the defining polynomial equation above, what is the power of the variable with coefficient $\boldsymbol{a_1}$?
2. Determine whether the given expression is a polynomial or not. On the blank write **P** if it is a polynomial and write **N** if it is not a polynomial expression.

____ a) $4\sqrt{x}$

____ b) $2x + 0.4$

____ c) $x^4 - 4x^2 + 9$

____ d) $x^{-3} + \frac{1}{2}x^2 + 8$

____ e) 100

____ f) $\frac{2}{x} + 5$