Polynomial Function

Polynomial: a special kind of algebraic expression where each term is a constant, a variable, or a product of constants and variables raised to whole number exponents

An algebraic expression is not a polynomial when there are square roots of variables, negative powers, and variables in the denominator of any fraction.

Polynomial Function: a function defined

by

$$p(x) = a_n x^n + a_{n-1} x^{n-1} + a_{n-2} x^{n-2} + \ldots + a_1 x + a_0$$

where n is a positive integer

Degree of a Polynomial Function: the largest power of x that appears in the polynomial

Leading Coefficient: the first nonzero coefficient when a polynomial function is arranged in descending order

Polynomial Function	**Degree**
Zero Function	None
Constant Function	0
Linear Function	1
Quadratic Function	2
Cubic Function	3
Quartic Function	4
Quintic Function	5
n^{th} degree Polynomial Function	n