

Polynomials

Terms having [algebraic expression] many terms are called polynomials.

Types

- i. **LINEAR POLYNOMIAL** A polynomial of degree 1 is called linear polynomial.
Eg: $2y + \sqrt{2}$, $2m - 3$
- ii. **QUADRATIC POLYNOMIAL** A polynomial of degree 2 is called quadratic polynomial.
Eg: $3x^2 - 7$, $y - y^2 + 6$
- iii. **CUBIC POLYNOMIAL** A polynomial of degree 3 is called cubic polynomial.
Eg: $5m^3 - 8$, $4n^3 + 3n^2 - 6n + 4$

Type of polynomials	General form and conditions	Highest degree	No. of zeroes
i. LINEAR POLYNOMIAL	$ax + b$ $a \neq 0$; b is constant	1	One
ii. QUADRATIC POLYNOMIAL	$ax^2 + bx + c$ $a, b \neq 0$, $a, b, c \in \text{Real nos.}$	2	Two
iii. CUBIC POLYNOMIAL	$ax^3 + bx^2 + cx + d$ $a, b, c, d \neq 0$, $a, b, c, d \in \mathbb{R}$	3	Three