

**Types of Algebraic Expression**

Bottom of Form

Types of algebraic expressions may further be distinguished in the following four categories.

They are: monomial, binomial, trinomial, polynomial.

**1.**Monomial: An algebraic expression which consists of one non-zero term only is called a monomial.

Examples of monomials:

**a** is a monomial in one variable a.

**10ab2** is a monomial in two variables a and b.  
**5m2n** is a monomial in two variables m and n.  
**2b** is a monomial in one variable b.  
**2ax/3y** is a monomial in three variables a, x and y.

**2.**Binomial: An algebraic expression which consists of two non-zero terms is called a binomial.

Examples of binomials:

**m + n** is a binomial in two variables m and n.

**a2 + 2b** is a binomial in two variables a and b.  
  
**5x3 – 9y2** is a binomial in two variables x and y.  
  
**b3/2 + c/3** is a binomial in two variables b and c.  
  
**5m2n2 + 1/7** is a binomial in two variables m and n.

**3.** Trinomial: An algebraic expression of three non-zero terms only is called a trinomial.

Examples of trinomial:

**x + y + z** is a trinomial in three variables x, y and z.

**2a2 + 5a + 7** is a trinomial in one variables a.  
  
**xy + x + 2y2** is a trinomial in two variables x and y.  
  
**-7m5 + n3 – 3m2n2** is a trinomial in two variables m and n.  
  
**5abc – 7ab + 9ac** is a trinomial in three variables a, b and c.  
  
**x2/3 + ay – 6bz** is a trinomial in five variables a, b, x, y and z.

**2.**Polynomial: An algebraic expression which consists of one, two or more terms is called a polynomial.

Examples of polynomials:

**2a + 5b** is a polynomial of two terms in two variables a and b.

**3xy + 5x + 1** is a polynomial of three terms in two variables x and y.

**3y4 + 2y3 + 7y2 - 9y + 3/5** is a polynomial of five terms in two variables x and y.  
  
**m + 5mn – 7m2n + nm2 + 9** is a polynomial of four terms in two variables m and n.  
  
**3 + 7x5 + 4x2** is a polynomial of three terms in one variable x.  
  
**3 + 5x2 - 4x2y + 5xy2** is a polynomial of three terms in two variables x and y.  
  
**x + 5yz – 7z + 11** is a polynomial of four terms in three variables x, y and z.  
  
**1 + 2p + 3p2 + 4p3 + 5p4 + 6p5 + 7p6** is a polynomial of seven terms in one variable p.