

Polynomials #2 Notes

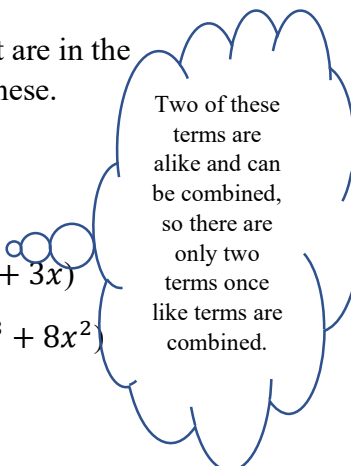
We will classify polynomials in one of three ways based on the number of terms that are in the polynomial. There are more than just these three ways, but we will concentrate on these.

Terms are pieces of an expression or equation that are separated by addition.

Monomial – A monomial has one term (Examples: $9x$ $14x^2y^2z$ 2)

Binomial – A binomial has two terms (Examples: $9x + 2$ $6y + 4x$ $7x + 4y + 3x$)

Trinomial – A trinomial has three terms (Examples: $2x^2 + 2x + 5$ $5x + 3x^3 + 8x^2$)



Two of these terms are alike and can be combined, so there are only two terms once like terms are combined.

Example 1: identify polynomials by # of terms and degree

$$12x - 4$$

There are 2 terms, so this is a binomial.

The degree of this polynomial is 1.

Example 2: identify polynomials by # of terms and degree

$$n^3$$

There is one term in this polynomial, so it is a monomial.

The degree of this polynomial is 3.

Example 3: identify polynomials by # of terms and degree

$$3x^3 - 2x + 1$$

There are three terms in this polynomial, so it is a trinomial.

The degree of this polynomial is 3.

Example 4: identify polynomials by # of terms and degree

$$x$$

There is one term in this polynomial, so it is a monomial.

The degree of this polynomial is 1.

Example 5: identify polynomials by # of terms and degree

$$-3y^2 - 2y + 4y - 1$$

It looks like there are four terms in this polynomial. However, the middle two terms can be combined together so that the polynomial is $-3y^2 + 2y - 1$. So, there are actually three terms in this polynomial, so it is a trinomial.

The degree of this polynomial is 2.