CHAPTER 3 Polynomials
3.4 Communicate With Algebra
Classifying Polynomials

Example:

a) Consider the polynomial $4y - 5z^2$. Classify the polynomial by the number of terms it has and by its degree.

b) Consider the polynomial $2a^2b + 5ab^2 - 3a^2b^2$. Classify the polynomial by the number of terms it has and by its degree.

Solution:

a) There are two terms. This is a binomial.

The last term has the highest sum of exponents of 2. This is a second degree polynomial.

b) There are three terms. This is a trinomial.

The last term has the highest sum of exponents of 2 + 2 = 4. This is a fourth degree polynomial.

Practice:

1. Consider the polynomial $4xy - 5yz + 2xz - 3wx$. Classify the polynomial by the number of terms it has and by its degree.

2. Consider the polynomial $7r^3s^2 - 4r^2s$. Classify the polynomial by the number of terms it has and by its degree.

Answers:

1. four-term polynomial, degree 2 (or second)

2. binomial, degree 5