Section P.3 Polynomials and Special Products

Objective: In this lesson you learned how to identify polynomials and how to add, subtract, and multiply polynomials.

I. Polynomials (Page 25)

Polynomials with one term are called ____________.
Polynomials with two terms are called ____________.
Polynomials with three terms are called ____________.

In standard form, a polynomial in \( x \) is written with . . .

For polynomials in more than one variable, the degree of a term is . . .
For polynomials in more than one variable, the degree of the polynomial is . . .

Example 1: Write the polynomial \( 1 - 6y - 5y^3 + 4y^2 \) in standard form.

II. Operations with Polynomials (Pages 26–27)

Like terms are terms that have . . .

To add or subtract polynomials, . . .

To find the product of two polynomials, . . .
Example 2:  (a) Subtract:  \((5x^3 - 9x + 4) - (2x^3 + 5x^2 - 12x + 4)\)
(b) Multiply: \((3x - 2)(x^2 + 2x - 1)\)

III. Special Products  (Pages 27–28)

Complete each of the special products below.

**Sum and Difference of Same Terms**
\((u + v)(u - v)\)

**Square of a Binomial**
\((u + v)^2\)
\((u - v)^2\)

**Cube of a Binomial**
\((u + v)^3\)
\((u - v)^3\)

Example 3:  Find \((3x - 4)^2\)

IV. Applications of Polynomials  (Page 29)

Describe a real life situation in which it is necessary to add or subtract polynomials to solve a problem.

Additional notes

Homework Assignment

Page(s)
Exercises