

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.

Course Number

Instructor

Date

Important Vocabulary

Define each term or concept.

Polynomial

Degree

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.

What you should learn

How to write polynomials 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, . . .

What you should learn

How to add, subtract, and multiply 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

$$(u + v)(u - v) \text{ a } \underline{\hspace{4cm}}$$

Square of a Binomial

$$(u + v)^2 \text{ a } \underline{\hspace{4cm}}$$

$$(u - v)^2 \text{ a } \underline{\hspace{4cm}}$$

Cube of a Binomial

$$(u + v)^3 \text{ a } \underline{\hspace{4cm}}$$

$$(u - v)^3 \text{ a } \underline{\hspace{4cm}}$$

- 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.

What you should learn

How to use special products to multiply polynomials

What you should learn

How to use polynomials to solve real-life problems

Additional notes

Homework Assignment

Page(s)

Exercises