

Section 4.3 Partial Fractions

Objective: In this lesson you learned how to recognize and find partial fraction decompositions of rational expressions.

Course Number

Instructor

Date

Important Vocabulary

Define each term or concept.

Partial fraction**Partial fraction decomposition****I. Introduction** (Page 342)

Suppose the rational expression $N(x)/D(x)$ is an improper fraction. Before the expression can be decomposed into partial fractions, you must . . .

What you should learn
How to recognize partial fraction decompositions of rational expressions

To decompose a proper rational expression into partial fractions, completely factor the denominator into factors of the form _____ and _____, where _____ is irreducible.

Describe how to deal with both linear factors and quadratic factors in the next step of a partial fraction decomposition.

II. Partial Fraction Decomposition (Pages 343–347)

To find the **basic equation** of a partial fraction decomposition, . . .

What you should learn
How to find partial
fraction decompositions
of rational expressions

After finding the basic equation, the next step is . . .

To check a partial fraction decomposition, . . .

Example 1: Write the form of the partial fraction decomposition for $\frac{x-4}{x^2-8x+12}$.

Example 2: Write the form of the partial fraction decomposition for $\frac{2x+1}{x^3-3x^2+x-3}$.

Example 3: Solve the basic equation $5x+3 = A(x-1) + B(x+3)$ for A and B .

Homework Assignment

Page(s)

Exercises