

Section P.4 Rational Expressions

Objective: In this lesson you learned how to determine the domains of algebraic expressions and simplify rational expressions.

Course Number

Instructor

Date

Important Vocabulary

Define each term or concept.

Domain

Equivalent

Rational expression

Complex fractions

I. Domain of an Algebraic Expression (Page 37)

The domain of any polynomial function is . . .

The domain of a square root expression excludes . . .

The domain of a rational expression excludes . . .

What you should learn

How to find domains of algebraic expressions

II. Simplifying Rational Expressions (Pages 37–38)

A fraction is in simplest form if . . .

To simplify a rational expression, . . .

To make sure that the simplified expression is equivalent to the original rational expression, you must . . .

What you should learn

How to simplify rational expressions

Example 1: Write the rational expression in simplest form.

$$\frac{x^2 + 3x - 28}{2x + 14}$$

III. Operations with Rational Expressions (Pages 39–40)

To divide two rational expressions . . .

To add or subtract rational expressions, . . .

What you should learn

How to add, subtract, multiply, and divide rational expressions

Example 2: Perform the operation and simplify: $\frac{4w}{w+1} + \frac{w+1}{w-1}$

IV. Complex Fractions (Pages 41–43)

To simplify a complex fraction, . . .

What you should learn

How to simplify complex fractions

To simplify a rational expression involving negative exponents,

. . .

Homework Assignment

Page(s)

Exercises