Lesson 1.3.5: Simplifying Rational Algebraic Expressions

Simplest Form: A rational algebraic expression is in the simplest form if the numerator and the denominator are relatively prime which means that they have no common factor except 1.

How to Simplify Rational Expressions:

1. Factor the numerator and denominator completely.
2. Divide any common factors.

Practice Exercises 1.3.5

Simplify the following rational expressions.

1. $\frac{4x+16}{2x}$
2. $\frac{x-5}{5-x}$
3. $\frac{3x^3+6x^2}{3x^2}$
4. $\frac{4x^2-4x+1}{2x-1}$
5. $\frac{x^2+5x+6}{x+3}$

Activity 1.3.5

Simplify the following rational expressions.

1. $\frac{x^2+3x}{x+3}$
2. $\frac{2x^2+8x}{2x}$
3. $\frac{x^2-16}{x-4}$
4. $\frac{x^3+64}{x^2-4x+16}$
5. $\frac{2x^2-9x-5}{x-5}$
6. $\frac{2x^2+4x}{x+2}$
7. $\frac{4x^3-8x^2}{4x^2}$
8. $\frac{4x^2-25}{2x-5}$
9. $\frac{8x^3-27}{4x^2+6x+9}$
10. $\frac{3x^2-12x+12}{x-2}$

Lesson 1.3.5: Simplifying Rational Algebraic Expressions
Simplest Form: A rational algebraic expression is in the simplest form if the numerator and the denominator are relatively prime which means that they have no common factor except 1.
How to Simplify Rational Expressions:
1. Factor the numerator and denominator completely.
2. Divide any common factors.
Practice Exercises 1.3.5
Simplify the following rational expressions.
1. $\frac{4x+16}{2x}$
2. $\frac{x-5}{5-x}$
3. $\frac{3x^3+6x^2}{3x^2}$
4. $\frac{4x^2-4x+1}{2x-1}$
5. $\frac{x^2+5x+6}{x+3}$
Activity 1.3.5
Simplify the following rational expressions.
1. $\frac{x^2+3x}{x+3}$
2. $\frac{2x^2+8x}{2x}$
3. $\frac{x^2-16}{x-4}$
4. $\frac{x^3+64}{x^2-4x+16}$
5. $\frac{2x^2-9x-5}{x-5}$
6. $\frac{2x^2+4x}{x+2}$
7. $\frac{4x^3-8x^2}{4x^2}$
8. $\frac{4x^2-25}{2x-5}$
9. $\frac{8x^3-27}{4x^2+6x+9}$
10. $\frac{3x^2-12x+12}{x-2}$

Lesson 1.3.5: Simplifying Rational Algebraic Expressions
Simplest Form: A rational algebraic expression is in the simplest form if the numerator and the denominator are relatively prime which means that they have no common factor except 1.
How to Simplify Rational Expressions:
1. Factor the numerator and denominator completely.
2. Divide any common factors.
Practice Exercises 1.3.5
Simplify the following rational expressions.
1. $\frac{4x+16}{2x}$
2. $\frac{x-5}{5-x}$
3. $\frac{3x^3+6x^2}{3x^2}$
4. $\frac{4x^2-4x+1}{2x-1}$
5. $\frac{x^2+5x+6}{x+3}$
Activity 1.3.5
Simplify the following rational expressions.
1. $\frac{x^2+3x}{x+3}$
2. $\frac{2x^2+8x}{2x}$
3. $\frac{x^2-16}{x-4}$
4. $\frac{x^3+64}{x^2-4x+16}$
5. $\frac{2x^2-9x-5}{x-5}$
6. $\frac{2x^2+4x}{x+2}$
7. $\frac{4x^3-8x^2}{4x^2}$
8. $\frac{4x^2-25}{2x-5}$
9. $\frac{8x^3-27}{4x^2+6x+9}$
10. $\frac{3x^2-12x+12}{x-2}$

Lesson 1.3.5: Simplifying Rational Algebraic Expressions
Simplest Form: A rational algebraic expression is in the simplest form if the numerator and the denominator are relatively prime which means that they have no common factor except 1.
How to Simplify Rational Expressions:
1. Factor the numerator and denominator completely.
2. Divide any common factors.
Practice Exercises 1.3.5
Simplify the following rational expressions.
1. $\frac{4x+16}{2x}$
2. $\frac{x-5}{5-x}$
3. $\frac{3x^3+6x^2}{3x^2}$
4. $\frac{4x^2-4x+1}{2x-1}$
5. $\frac{x^2+5x+6}{x+3}$
Activity 1.3.5
Simplify the following rational expressions.
1. $\frac{x^2+3x}{x+3}$
2. $\frac{2x^2+8x}{2x}$
3. $\frac{x^2-16}{x-4}$
4. $\frac{x^3+64}{x^2-4x+16}$
5. $\frac{2x^2-9x-5}{x-5}$
6. $\frac{2x^2+4x}{x+2}$
7. $\frac{4x^3-8x^2}{4x^2}$
8. $\frac{4x^2-25}{2x-5}$
9. $\frac{8x^3-27}{4x^2+6x+9}$
10. $\frac{3x^2-12x+12}{x-2}$