Math Virtual Learning

Algebra 2/Honors Algebra 2

April 21, 2020

Lesson: April 21, 2020

Objective/Learning Target:
Students will practice simplifying rational expressions.

Let's Get Started:
Get out a sheet of paper and simplify the following expression.

$$\frac{b^2 + b - 30}{3b^2 + 18b}$$

Watch Video:
Using the same sheet of paper, watch the video **Simplifying Rational Expressions** and take notes over the 6 examples shown.

Steps to Remember:

1. Always start by factoring the numerator and then the denominator.

2. Next, cancel out any common factors that you see on both the top and the bottom of the fraction.

3. Write your answer in simplified form.

Simplify Rational Expressions Practice:

On your own sheet of paper, simplify the following practice problems.

1. $\dfrac{2x+6}{4x-12}$

2. $\dfrac{x^2+9x+20}{2x+8}$

3. $\dfrac{6x+24}{x^2+7x+12}$

4. $\dfrac{3x+18}{x^2+6x}$

5. $\dfrac{3x-12}{3x^2-12x}$

6. $\dfrac{x^2-5x+6}{x^2+2x-15}$

Simplifying Radical Expressions Answer Key:

Once you have completed the problems, check your answers here.

1. $\dfrac{2x+6}{4x-12}$

$= \dfrac{2(x+3)}{4(x-3)}$

$= \dfrac{(x+3)}{2(x-3)}$

2. $\dfrac{x^2+9x+20}{2x+8}$

$= \dfrac{(x+4)(x+5)}{2(x+4)}$

$= \dfrac{x+5}{2}$

3. $\dfrac{6x+24}{x^2+7x+12}$

$= \dfrac{6(x+4)}{(x+3)(x+4)}$

$= \dfrac{6}{x+3}$

4. $\dfrac{3x+18}{x^2+6x}$

$= \dfrac{3(x+6)}{x(x+6)}$

$= \dfrac{3}{x}$

5. $\dfrac{3x-12}{3x^2-12x}$

$= \dfrac{3(x-4)}{3x(x-4)}$

$= \dfrac{1}{x}$

6. $\dfrac{x^2-5x+6}{x^2+2x-15}$

$= \dfrac{(x-2)(x-3)}{(x+5)(x-3)}$

$= \dfrac{x-2}{x+5}$

Additional Practice:

Click on the links below to get additional practice and to check your understanding.

Simplify Rational Expressions (part 1) - video

Simplify Rational Expressions (part 2) - video

Simplify Rational Expressions (part 3) - video

Simplifying Rational Expressions Practice - worksheet and answers