Inspiring Greatness

INDEPENDENCE SCHOOL DISTRICT

Math Virtual Learning

College Prep Algebra

April 30, 2020

College Prep Algebra
Lesson: April 30, 2020

Objective/Learning Target:
How to divide rational expressions and write the quotient in simplest form.

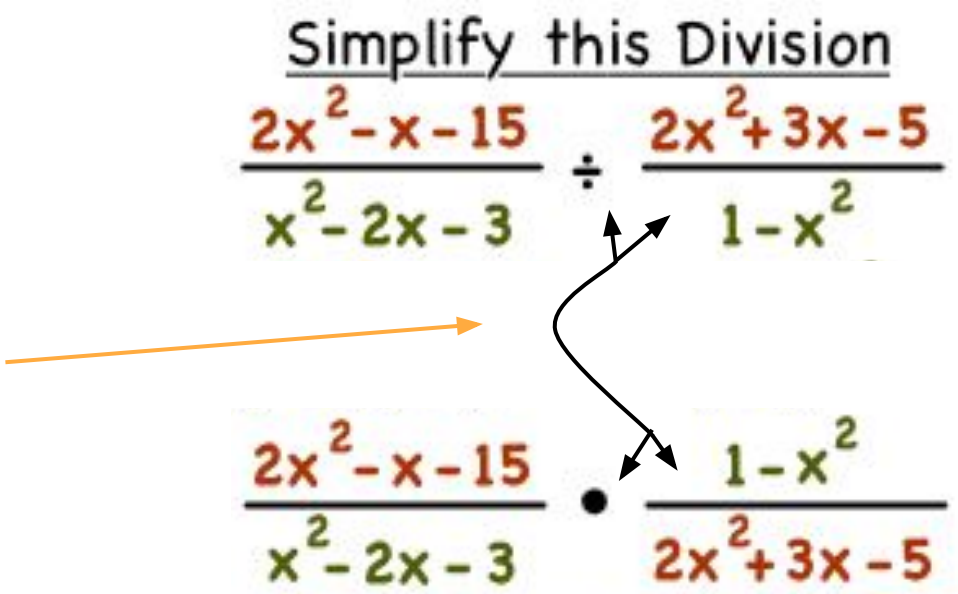
Let's Get Started:
Here's an example of a Rational Expression.

Yep! It is a fraction.
And it will have an algebraic numerator and denominator.

Today, we are going to focus on dividing and simplifying the rational expression.

Lesson:

When dividing fractions, you have been taught to keep the first fraction and then <u>multiply by the reciprocal of the second fraction.</u>



If you would like to know why we multiply by the reciprocal of the second fraction, please scroll to the last page to watch a video that wonderfully explains why.

Lesson:

On 4/29, you learned to multiply a rational expression by factoring and then canceling common factors from the numerator and the denominator.

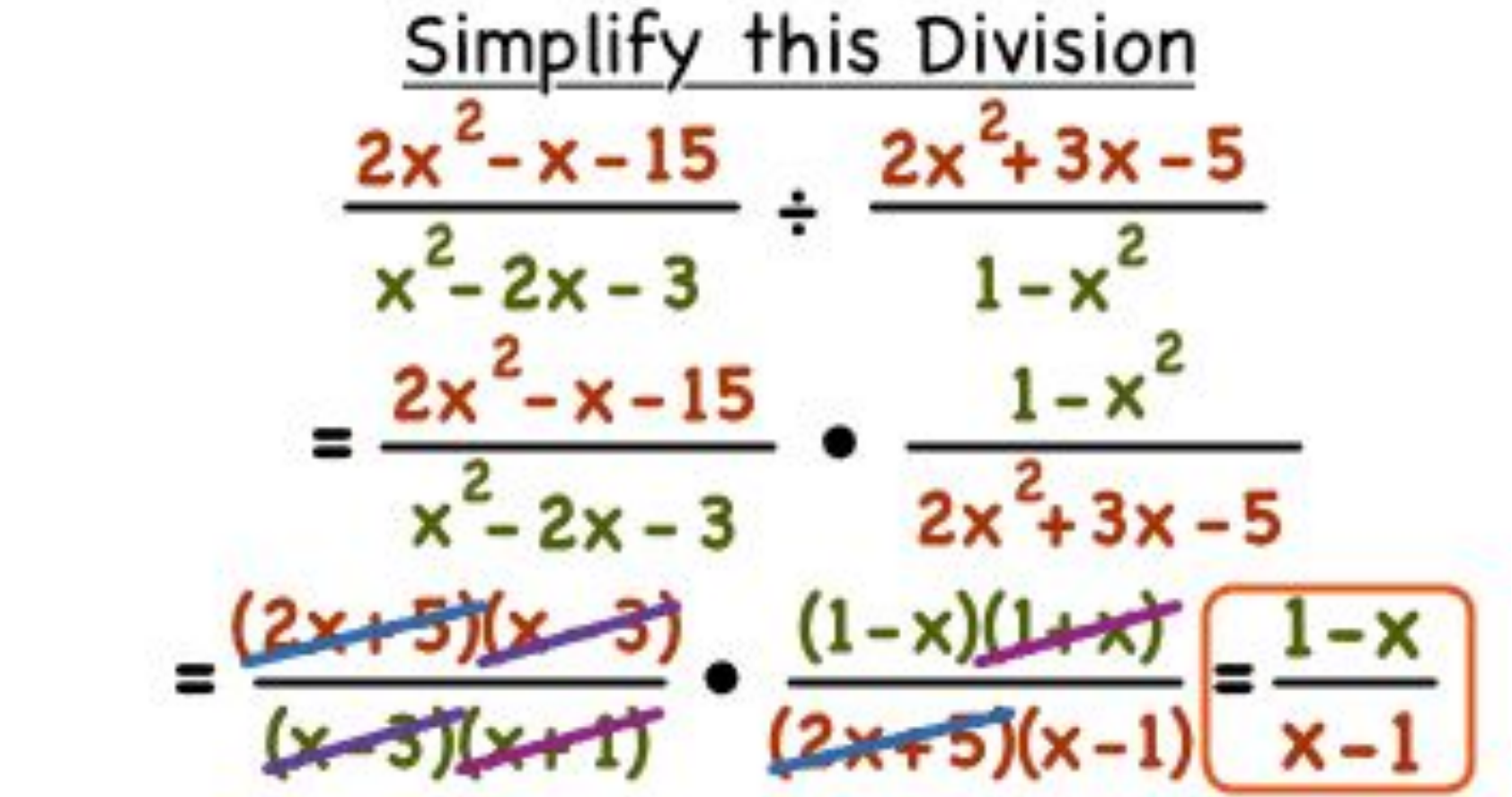
$$\frac{2x^2-x-15}{x^2-2x-3} \cdot \frac{1-x^2}{2x^2+3x-5}$$

$$\frac{(2x+5)(x-3)}{(x-3)(x+1)} \cdot \frac{(1-x)(1+x)}{(2x+5)(x-1)}$$

Finish by multiplying across the numerators and then the denominators.

$$= \frac{1-x}{x-1}$$

Lesson: Here is the complete process of the problem.

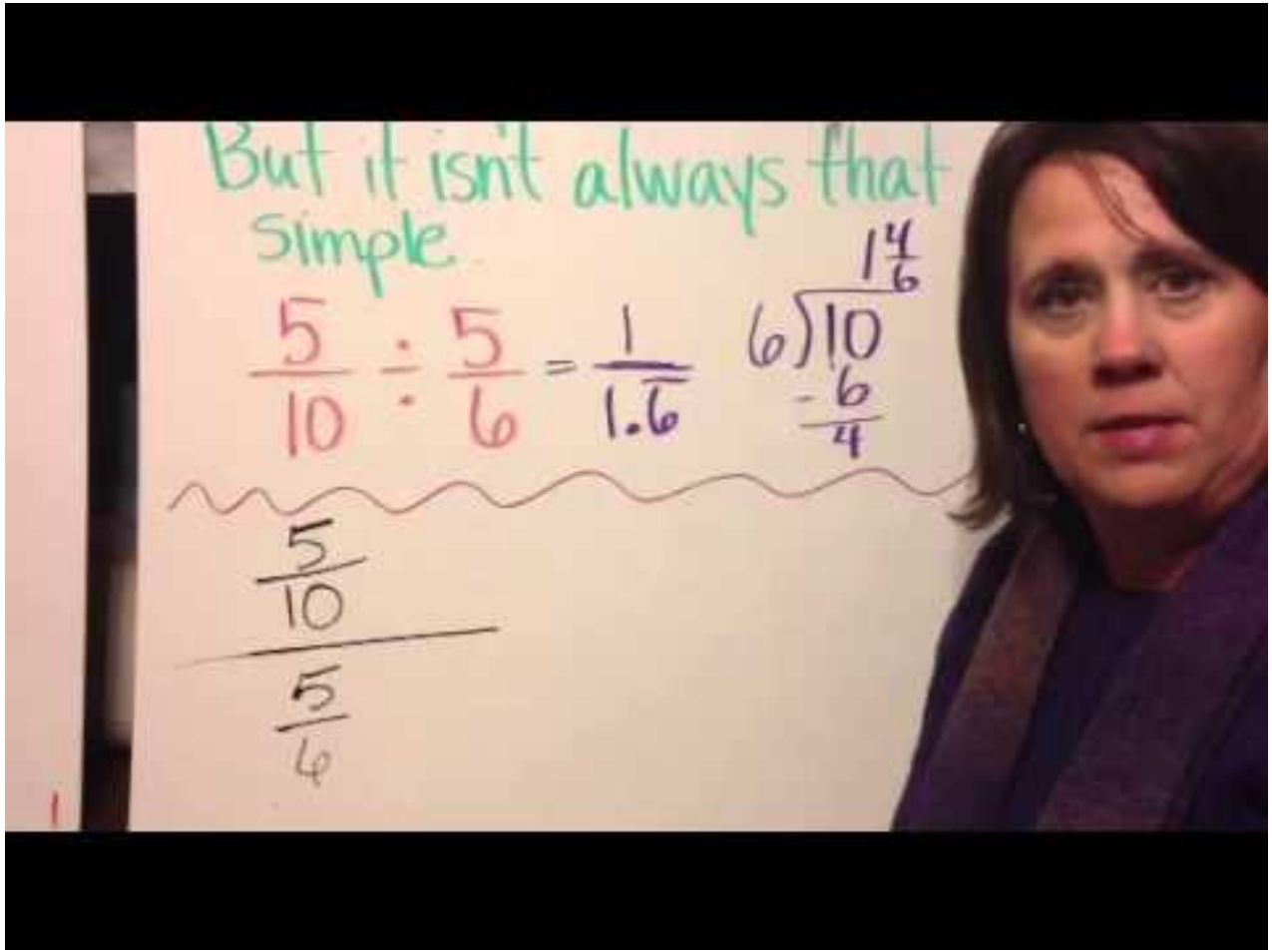


Practice

Multiplying Rational Expressions
DO #15-26
Problems and Answers

Even more practice

Dividing Rational Expressions with Answers.
(Only do the ones that show Division)


But it isn't always that simple.
5/10 ÷ 5/6 = 1/1.6
1 4/6
6)10
-6
4
5/10
5/6