SOL Review Topic 2: Rational Expressions and Equations

Simplifying Rational Expressions

Factor and Reduce!

1) 

Multiplying and Dividing Rational Expressions

2)  3)

Adding and Subtracting Rational Expressions

YOU NEED A COMMON DENOMINATOR WHENEVER YOU ARE ADDING OR SUBTRACTING FRACTIONS!

Do not cancel on top and bottom! Get a common denominator & then add or subtract the numerators.

4)  5) 

Solving Rational Equations

Multiply both sides of the equation by the LCD then cancel the fractions and simplify.

6)  7) 

Mixed Practice Simplifying and Adding and Subtracting Rational Expressions

8)  9) 

10)  11) 

EXTRA NOTES AND EXAMPLES:

Simplifying Rational Expressions

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

Example:

Multiplying and Dividing Rational Expressions

1.) Factor all numerators and denominators (GCF, Unfoil (trinomials), Diff. of Squares,etc)

2.) Divide out common factors (reduce).

Example 1-Multiplying:

Ex. 

Example 2-Dividing: Change all division problems to multiplication- ‘flip and multiply’! Then follow steps above.

Ex. 

Adding/Subtracting with Unlike Denominators

Multiply the numerator and denominator by what is missing from the factors of your LCD (also called the Least Common Denominator).

Ex  LCD is 6. 

Complex Fractions

Find the LCD for each set of fractions. Then flip and multiply.

Ex. 

Rational Equations

**Step 1**: Multiply each term of the equation by the LCD. **Step 2**: List the values that must be **excluded** from the solution. **Step 3**: Solve for the variable. Check your solution in the ORIGINAL equation!

Ex.  LCD is (*p* - 1)(*p* + 2)



MORE PRACTICE C:



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