Process for SOLVING RATIONAL EQUATIONS

1) Write original problem HERE

2) Completely factor the denominators, and REWRITE the original problem with the denominators in factored form.

3) From the factored denominators, determine two things

* the LCD
* values that would make any of the rational expressions undefined

4) Multiple EVERY term on BOTH sides of the equation by the LCD (whether the term has a denominator or not). All denominators should cancel out at this point (if they don’t, you do not have the correct LCD)

5) Completely simplify each SIDE of the equation. This will usually involve some multiplication (sometimes FOIL) and combining of like terms.

6) Determine what kind of equation you now have. It will either be linear (highest degree = 1) or quadratic (highest degree = 2)

* If linear, solve by isolating the variable on one side of equation.
* If quadratic, set the equation equal to zero, factor the non-zero side, set each factor equal to zero, and solve.

7) CHECK your answer(s). You MUST check to ensure none of your values will make any of the expressions undefined (step 3). You should also check to make sure your values do make the equation true.

 LCD =

LCD=

 Undefined for values \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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