When we talk about rational expressions, we must discuss the potential of **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**.

These are the values of "x" that can cause **\_\_\_\_\_\_\_\_\_\_\_** in the denominator…

regardless of the ability to simplify.

To find these values, \_\_\_\_\_\_\_\_\_\_\_\_\_ the denominator and set each factor \_\_\_\_\_\_\_\_\_\_\_\_\_\_ to zero and \_\_\_\_\_\_\_\_\_\_\_\_.

Find excluded values \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ you simplify!

**Example:** Find the excluded values for the rational expression and then simplify.



Steps to Solving Rational Equations

1.) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ each of the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

2.) \_\_\_\_\_\_\_\_\_\_\_\_\_ each numerator by its \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ factors.

\***Use the table to help you determine.**

3.) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ out the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_ using the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

4.) Check for \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ solutions.

\*If a solution causes zero in the denominator, we call the solution EXTRANEOUS.

\*If all of the solutions are extraneous, the equation has \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Example: Solve.**





