RATIONAL EQUATIONS

- There are two types of rational equations:
    1. Equations that are formed of exactly two fractions and nothing else.
       The fastest way to solve this type of an equation is to multiply across the equal sign.
       However, it is sometimes useful to factor the expressions and determine if any common factors can be canceled out.

    2. Equations that are not of the first type.
       To solve these equations:
       - Factor and simplify if possible.
       - Identify the common denominator.
       - Express all fractions over the common denominator.
       - Rewrite the new equations without the denominator.
       - Solve.

Solving Rational Equations is always done in 4 distinct steps:
1. Solve = find the proposed solution(s).
2. Check = show that LS=RS. Using the original equation, substitute one proposed solution at the time. Do not move numbers left to right and right to left.
3. Verify = identify all restrictions using the original expressions in factored form. Show that the proposed solution follows the restrictions.
4. Clearly state whether the given solution is valid or extraneous.