**Solving Rational Equations**

**SOLVING A RATIONAL EQUATION**

1. Find the LCD of all the rational expressions in the equation
2. Multiply both sides by the LCD
3. Solve the resulting equation (in the numerator)
4. You must check your solutions and throw out any that make the denominator zero.
* We call these **extraneous solutions**

**EX #1) Solve.**

1. $\frac{4}{x}-\frac{7}{3x}=\frac{2}{5}$b) $\frac{5}{2x-1}-\frac{7}{3x+2}=\frac{9}{6x^{2}+x-2}$
2.  $\frac{6}{2x-4}+\frac{4}{x-2}=\frac{1}{x^{2}-4}$d)

**EX #2) Solve.**

1. $\frac{x}{x+4}=3-\frac{4}{x+4}$b)$x+\frac{6}{x-3}=\frac{2x}{x-3}$

c) $\frac{2x}{x-1}+\frac{1}{x-3}=\frac{-5}{x-3}$d)

**SOLVE. Be sure to check for any extraneous solutions.**











Answers: 1) 1 2) 6 3) 22/3 4) 7 5) 1/3 6) 1 7) 4, -10 8) 7, -1 9) 18/5 10) 14/3 11) 7, -3 12) -2