Name_____ Date_____ Period_____

SOLVING RATIONAL EQUATIONS WORKSHEET

Steps:
1) Determine values that are eliminated from the domain.
2) Factor the denominator of each fraction and find the LCD.
3) Eliminate all fractions by multiply ALL terms by the LCD.
4) Solve the resulting equation.
5) Check for extraneous solutions.

Use cross multiplication to solve the rational equations.

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

2) $\frac{x+3}{x-2}=\frac{x+4}{x-5}$

3) $\frac{2}{x}=\frac{x}{5x+12}$

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

Solve.

5) $\frac{1}{n^2}+\frac{1}{n}=\frac{1}{2n^2}$

6) $\frac{p+5}{p^2+p}=\frac{1}{p^2+p}-\frac{p-6}{p+1}$

7) $\frac{2}{x^2-1}-\frac{1}{x-1}=\frac{1}{2}$

8) $\frac{5}{x-2}=7-\frac{10}{x+2}$

9) $\frac{3}{x-5}-\frac{20}{x^2-25}=\frac{2}{x+5}$

10) $\frac{2}{3x^2+12x}+\frac{8}{2x}$

11) $\frac{2}{x+3}-\frac{6x}{2x+1}$

12) $\frac{2x}{3x+3}-\frac{2}{x+5}$

13) $\frac{x}{x+3}-\frac{3}{x+2}-\frac{1}{x^2+5x+6}$

14) $\frac{2x}{x^2-4}\div\frac{4}{x^2-4x+4}+\frac{12}{x^2-4}\cdot\frac{2-x}{3}$