

Name:

Period:

Date:

Practice Worksheet: Solving Rational Equations

Solve each equation and check for extraneous solutions. You must show work and your answers must be correct to get credit.

Level 1	Level 2	Level 3
1] $\frac{x}{4} = \frac{9}{4x}$	5] $2 = \frac{x+2}{x-3}$	9] $\frac{x^2+3}{7x} = \frac{x+1}{6}$
2] $\frac{x}{4} = \frac{x+2}{2}$	6] $\frac{x}{2x+1} = \frac{2x}{x+2}$	10] $\frac{2}{x^2-x} = \frac{1}{x-1}$
3] $\frac{4}{x} + 1 = \frac{2x+2}{x}$	7] $\frac{9}{x} - 1 = \frac{3}{x} + 2$	11] $\frac{x^2}{3x-1} + 2 = \frac{2(x-3)}{3x-1}$
4] $\frac{2x}{x-2} + \frac{1}{x+2} = \frac{10}{x^2-4}$	8] $\frac{x}{x-1} - \frac{1}{x-2} = \frac{2x-5}{x^2-3x+2}$	12] $\frac{x}{2x-1} - \frac{2}{2x+1} = \frac{x^2+20}{4x^2-1}$

Level 4	Level 5 (Extra Credit)
13] $\frac{3x}{x+1} = \frac{12}{x^2-1} + 2$	16] $\frac{x^2}{x+3} + \frac{9(x-2)}{x+3} = 3$
14] $\frac{x}{x-2} = \frac{4}{x^2-8x+12} - \frac{1}{x-6}$	17] $\frac{x-3}{2x+1} + \frac{4x}{3x+5} = \frac{7x^2+12x-20}{6x^2+13x+5}$
15] $\frac{\frac{1}{x+1}}{\frac{1}{2} + \frac{x}{x+1}} = \frac{1}{5}$	18] $\frac{\frac{4}{x-2} + 2}{\frac{6}{x} - \frac{3}{x-2}} = 12$