

## SOLVING RATIONAL EQUATIONS

Solve the rational equations. Check for extraneous solutions.

1.  $\frac{x}{3} = \frac{1}{6}$

8.  $\frac{x}{2} + \frac{3}{4} = \frac{2}{3}$

2.  $\frac{2}{x} = \frac{4}{6}$

9.  $\frac{2x}{9} + \frac{x}{3} = \frac{1}{6}$

3.  $\frac{1}{5} = \frac{x}{25}$

10.  $\frac{x+3}{4} + \frac{x}{6} = \frac{x}{6}$

4.  $\frac{x+4}{3} = \frac{x}{2}$

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

11.  $\frac{2-x}{3} + \frac{x}{2} = \frac{3x}{4}$

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

12.  $\frac{-5x+3}{5} + \frac{3x}{10} = \frac{1}{5}$

7.  $\frac{-5x+3}{5} + \frac{3x}{5} = \frac{1}{5}$

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] $\frac{x}{2x-1} - \frac{2}{2x+1} = \frac{x^2+20}{4x^2-1}$