Adv Alg

Name_____
Date_____Pd___

SOLVING RATIONAL EQUATIONS

Solve the rational equations. Check for extraneous solutions.

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

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

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

4. $\frac{x+4}{3}=\frac{x}{2}$ CD: 6

5. $\frac{x+4}{3}+\frac{x}{3}=\frac{x}{2}$ CD: 6

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

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

8. $\frac{x}{2}+\frac{3}{4}=\frac{2}{3}$ CD: 12

9. $\frac{2x}{9}+\frac{x}{3}=\frac{1}{6}$ CD: 18

10. $\frac{x+3}{4}+\frac{x}{6}=\frac{x}{6}$ CD: 12

11. $\frac{2-x}{3}+\frac{x}{2}=\frac{3x}{4}$ CD: 12

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

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] $\frac{x}{4}=\frac{9}{4x}$ CD: $4x$	5] $2=\frac{x+2}{x-3}$	9] $\frac{x^2+3}{7x}=\frac{x+1}{6}$ CD: $42x$
2] $\frac{x}{4}=\frac{x+2}{2}$ CD: 4	6] $\frac{x}{2x+1}=\frac{2x}{x+2}$ CD: $(2x+1)(x+2)$	10] $\frac{2}{x^2-x}=\frac{1}{x-1}$ $x^2-x=x(x-1)$ CD: $x(x-1)$
3] $\frac{4}{x}+1=\frac{2x+2}{x}$ CD: x	7] $\frac{9}{x}-1=\frac{3}{x}+2$ CD: x	11] $\frac{x^2}{3x-1}+2=\frac{2(x-3)}{3x-1}$ CD: $(3x-1)$
4] $\frac{2x}{x-2}+\frac{1}{x+2}=\frac{10}{x^2-4}$ $x^2-4=(x+2)(x-2)$ CD: $(x+2)(x-2)$	8] $\frac{x}{x-1}-\frac{1}{x-2}=\frac{2x-5}{x^2-3x+2}$ CD: $(x-1)(x-2)$	12] $\frac{x}{2x-1}-\frac{2}{2x+1}=\frac{x^2+20}{4x^2-1}$ $4x^2-1=(2x+1)(2x-1)$ CD: $(2x+1)(2x-1)$