

Name _____
Date _____

Advanced Algebra
Unit 5: Polynomials Solving rational equations
Assignment #18

Solving Rational Equations – after simplifying, it's linear

$$\frac{2}{a-4} = \frac{4}{3a+1}$$

$$\frac{5}{m+3} = \frac{-5}{m-1}$$

$$\frac{3}{a-2} = \frac{-5}{a-10}$$

$$\frac{4}{y-2} + \frac{3}{y+2} = \frac{16}{y^2-4}$$

Solving Rational Equations – after simplifying, the quadratic terms drop out and it's linear

$$\frac{3y}{y^2-4} + \frac{1}{y-2} = \frac{2}{y+2}$$

$$\frac{5x}{10x+5} - 4 = \frac{3x-1}{2x+1}$$

$$\frac{x}{x-8} + \frac{6}{x-2} = \frac{x^2}{x^2-10x+16}$$

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

Solving Rational Equations – after simplifying, its quadratic term

All these quadratics in your
Final step factor very nicely

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

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

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

$$\frac{x+7}{x-1} + \frac{2x}{x+2} = \frac{2x+7}{x-1}$$

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

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

$$\frac{x+1}{x-3} + \frac{-2}{x} = \frac{-2x+8}{x-3}$$

$$\frac{4x+1}{x-5} + \frac{x+2}{x+1} = \frac{-x-9}{x-5}$$

$$\frac{x+1}{x+3} + \frac{4}{x+1} = \frac{-x-7}{x+3}$$

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

$$\frac{x+1}{x+3} + \frac{4}{x+1} = \frac{-x-9}{x-5}$$

Quadratic Formula

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$