



6.6 Solving Rational Equations

Need To Know



- Review Process for Solving Equations
- Apply to Equations of Rational Expressions



Review Process to Solve

Solve for x:

$$\frac{4}{5} - \frac{2}{3} = \frac{x}{9}$$

Recall Steps to Solve

Simplify (See 2.2)

1. Clear fractions
2. Clear parentheses
3. Clear like terms

Use Add Property

1. Get variable on one side
2. Get constant terms on the other side

Use Multiplication Property

1. Get unknown by itself

Check



Solving Rational Equations

Solve for x:

$$x + \frac{6}{x} = -7$$

Solve Rational Equations

List any restrictions

Simplify

Clear fractions by multiplying everything by the LCD/1

Solve New Equation

Check



Solving Rational Equations

Solve for x:

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

Solve Rational Equations

List any restrictions

Simplify

Clear fractions by multiplying everything by the LCD/1

Solve New Equation

Check



Solving Rational Equations

Solve for x:

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

Solve Rational Equations

List any restrictions

Simplify

Clear fractions by multiplying everything by the LCD/1

Solve New Equation

Check



Solving Rational Equations

Solve for x:

$$\frac{2}{t - 9} = \frac{t - 7}{t - 9}$$

Solve Rational Equations

List any restrictions

Simplify

Clear fractions by multiplying everything by the LCD/1

Solve New Equation

Check

end