

# Solving Rational Equations

Directions: Solve each equation in your composition notebook. Check your solutions using the answer bank below.

1.  $\frac{9}{2} = \frac{7x-8}{x+1}$

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

3.  $\frac{1}{x} = \frac{5}{3x} - \frac{1}{6}$

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

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

6.  $\frac{2x^2}{x^2+5x} + \frac{1}{x} = \frac{5}{x^2+5x}$

7.  $\frac{7}{x-1} - \frac{5}{x} = \frac{11}{x^2-x}$

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

9.  $\frac{30}{x^2-9} = \frac{x}{x-3} + \frac{2}{x-3}$

10.  $\frac{x+1}{x^2+2x-15} = \frac{2x-6}{x+5} - \frac{1}{x-3}$

## Answer Bank

$x = -7$

$x = -3, 2$

$x = 5$

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

$x = -2, 8$

$x = 3$

$x = -8$

$x = 1, 6$

$x = 4$

$x = 9$

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# Independent Practice

$$1. \frac{3}{a-8} = \frac{7}{2a+1}$$

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

$$3. \frac{a+2}{5-a} = -\frac{6}{a-5}$$

$$4. \frac{a-8}{a} = \frac{3}{a+5}$$

$$5. w + \frac{16}{w} = 10$$

$$6. \frac{1}{3} + \frac{2}{k} = \frac{13}{3k}$$

$$7. \frac{5r}{r+1} = 4 - \frac{5}{r+1}$$

$$8. \frac{2}{c^2-4c} = \frac{1}{3c} + \frac{1}{3}$$