Solving Rational Equations-Answers Solve It- Clear, Factor, Cancel Handout

1. Solve
$$\frac{1}{x+10} = \frac{2}{x+4}$$
. $x = -16$

6. Solve
$$\frac{1}{x+4} + \frac{x}{x+5} = \frac{1}{x^2+9x+20}$$
. $x = -1$ ($x = -4$ is an extraneous solution)

2. Solve
$$\frac{1}{x+3} = \frac{x-1}{12}$$
. $x = -5$ and $x = 3$

7. Solve
$$\frac{2}{x} + \frac{4}{x^2} = 2$$
. $x = 2$ and $x = -1$

3. Solve
$$\frac{2}{x^2-1} + \frac{2}{x^2+x-2} = \frac{3}{x^2+3x+2}$$
.
 $x = -9$

8. Solve
$$\frac{7}{2x+2} = \frac{7}{x-3}$$
. $x = -5$

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

9. Solve
$$\frac{2}{(x+1)(x-2)} - 2 = \frac{2}{x-2}$$
.
 $x = \sqrt{2}$ and $x = -\sqrt{2}$

5. Solve
$$\frac{2}{x^2-1} + \frac{1}{x+1} = x - 1$$
.
 $x = 0$ and $x = 2$ ($x = -1$ is an extraneous solution)

10. Solve
$$\frac{x}{x+3} = \frac{x}{x^2-9}$$
. $x = 0$ and $x = 4$

©2013 Shmoop University, Inc. All rights reserved. For classroom use only. Want to print this out for your classroom? Go for it. All other reproduction and distribution is prohibited.