

## Solving Rational Equations

Solve the following rational equations. Do not forget to check for extraneous solutions. Give exact answers.

1.  $\frac{14}{x-3} = -2$

2.  $\frac{9}{4a+2} = \frac{1}{2}$

3.  $\frac{4}{x-3} = \frac{7}{x+2}$

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

5.  $\frac{4}{x} = \frac{x}{9}$

6.  $\frac{5}{8-4r} = \frac{3}{r^2-2r}$

$$7. \frac{3x+6}{x^2-4} = \frac{5x+25}{x^2+5x}$$

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

$$9. \frac{12}{m^2+7m} = \frac{7}{m^2-3m}$$

$$10. \frac{x}{3x+4} = \frac{1}{x}$$