

**Section 2.7 – Solving Rational Equations**

For each rational equation, solve for x. Make sure to watch for extraneous solutions!

1. 
$$\frac{1}{x-1} + 5 = \frac{11}{x-1}$$

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

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

4. 
$$\frac{3}{x+3} = \frac{5}{2x+6} + \frac{1}{x-2}$$

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

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

$$7. \frac{1}{x-4} - \frac{5}{x+2} = \frac{6}{x^2 - 2x - 8}$$

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