Worksheet #6 - Rational Equations

1. Solve the equation \( \frac{1}{x} = 4x \). (Hint: First multiply both sides by \( x \) to get an equivalent, but simpler, equation.) Then plug your answers into the original equation to verify that they are really solutions.

2. Solve the equation \( \frac{2}{x+1} = x \) and verify that your answers are really solutions.

3. Solve the equation \( \frac{2}{x+1} = \frac{1}{x} \) and verify that your answer is a solution.
4 Solve the equation \( \frac{x}{x+2} = \frac{1}{x} \).

5 Solve the equation \( \frac{x^2}{x+2} = x \).

6 Solve the equation \( \frac{2}{x} - \frac{1}{x+1} = \frac{x}{x+1} \).

7 Solve the equation \( \frac{1}{x+1} + \frac{x}{x^2-1} = 1 \).