This worksheet will not be graded.

1. Simplify the expression.

\[ \frac{1}{x} - \frac{1}{3} = \frac{1}{x} \]

Then, state the domain using interval notation.

2. Find all the x-intercepts of the graph of the equation \( y = x^2 - 5x + 8 \).

3. Solve for \( x \).

\[ y - y_1 = m(x - x_1) \]
4. Let \( g(x) = 3x^2 - 5x + 2 \). Find \( g(x - 1) \).

5. Solve the inequality. Write your answer using interval notation.

\[
\frac{x}{2} - 3 \leq \frac{x}{4} + 2
\]

6. Let \( f(x) = \frac{x + 1}{x + 2} \) and \( g(x) = \frac{1}{x} \). Find \( f \circ g \) and state the domain of \( f \circ g \) using interval notation.