Facts to Know:
Suppose $a, b, c, d$ are nonzero real numbers,

1. Fractions:
   - Never divide by 0
   - \[ \frac{a+b}{c} = \frac{a}{c} + \frac{b}{c} \]
   - \[ \frac{1}{a} + \frac{1}{b} \neq \frac{1}{a+b} \]
   - Common denominator: \[ \frac{a}{b} + \frac{c}{d} = \]
   - \[ \frac{a}{b} = \frac{c}{d} \] is same as:

2. Linear equations:
   - Solving linear equations:
     - Equation of a line through the point $(x_0, y_0)$ with slope $m$ is:
Examples:

1. Simplify the expression \( \frac{4x}{(x + 2)^2 + \frac{x^2 + x}{x + 1}} \).

2. Find the intersection of the line \( y = 2x + 3 \) with the line \( y = -x + 4 \).