1. Factor the polynomial: (5 points)

\[ x^2 + 5x + 6 \]

2. Factor the polynomial: (5 points)

\[ x^2 + 11x + 30 \]
3. Simplify the given rational function, and state its domain:

\[
\frac{x^2 + 2x}{x^2 - 4}
\]