1. Use the six step procedure to sketch the graph of \( f(x) = \frac{1}{x^2 + 3x - 10} \)

(a) Find the domain.

(b) Factor and reduce, if possible.

(c) Find any \( x \)- and \( y \)-intercepts.

(d) Find any vertical asymptotes, and holes.

(e) Find the horizontal asymptote (if one exists). Analyze the end behavior.

(f) Make a sign chart, and plot additional points, as needed.

Sketch.
2. Use the six step procedure to sketch the graph of \( f(x) = \frac{x^2 + 8x + 15}{x^2 - 4x - 21} \)

(a) Find the domain.

(b) Factor and reduce, if possible.

(c) Find any \( x \)- and \( y \)- intercepts.

(d) Find any vertical asymptotes, and holes.

(e) Find the horizontal asymptote (if one exists). Analyze the end behavior.

(f) Make a sign chart, and plot additional points, as needed.

Sketch.