1. \( f(x) = \frac{x}{3x - 6} \)

(a) Find the domain of \( f \).

(b) Identify any vertical asymptotes of the graph of \( y = f(x) \).

(c) Identify any holes in the graph.

(d) Find the horizontal asymptote, if it exists.

(e) Graph the function using a graphing utility and describe the behavior near the asymptotes.
2. \( f(x) = \frac{x^2 - x - 12}{x^2 + x - 6} \)

(a) Find the domain of \( f \).

(b) Identify any vertical asymptotes of the graph of \( y = f(x) \).

(c) Identify any holes in the graph.

(d) Find the horizontal asymptote, if it exists.

(e) Graph the function using a graphing utility and describe the behavior near the asymptotes.