

Graphs-rational functions

Date _____ Period _____

For each function, identify the points of discontinuity, holes, intercepts, horizontal asymptote, and domain. Then sketch the graph.

1) $f(x) = \frac{x+1}{-3x-12}$

2) $f(x) = \frac{x^2-4}{3x-9}$

3) $f(x) = \frac{1}{-3x^2+12}$

4) $f(x) = \frac{x^3-2x^2-8x}{x^3+5x^2+6x}$

5) $f(x) = \frac{-3x^2+6x+24}{x^2-x-12}$

6) $f(x) = \frac{-3x^2+3x+6}{x^2-9}$

$$7) f(x) = \frac{2x^2 - 14x + 24}{x^2 - 4x}$$

$$8) f(x) = \frac{x^3 - 3x^2 - 4x}{4x^2 - 16}$$