Pre-Calculus 12 Graphing Rational Functions

Sketch the graph of each rational function. Label the x-intercept(s), y-intercept(s), equation of horizontal asymptote, equation of vertical asymptote(s), if they exist.

a) $f(x) = \frac{-1}{x-4}$

b) $f(x) = \frac{3x}{x+2}$

c) $f(x) = \frac{x+2}{x-3}$

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

e) $f(x) = \frac{x^2}{x^2-1}$

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

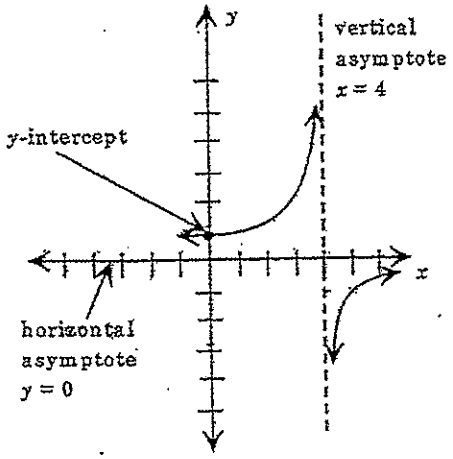
Graphs with Holes and/or Vertical Asymptotes

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

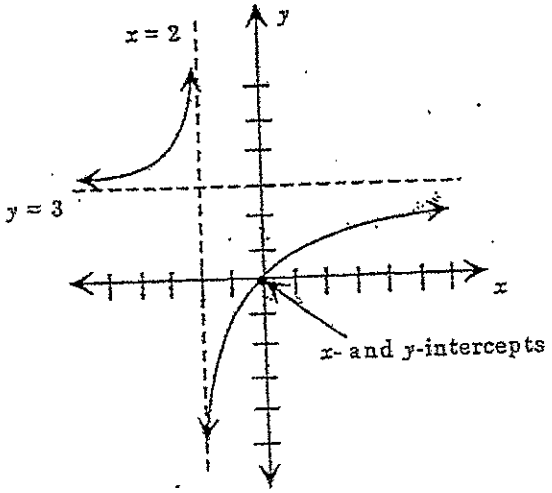
h) $f(x) = \frac{x+1}{x^2-1}$

Answers

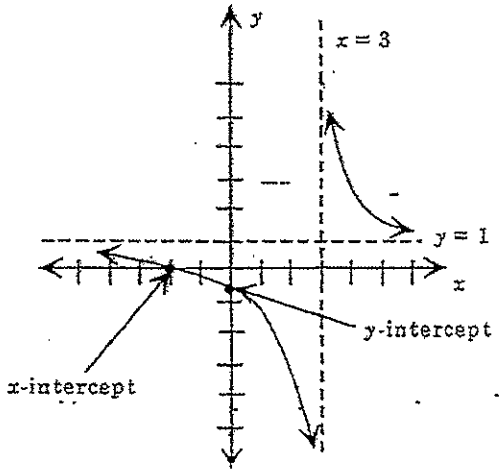
a)



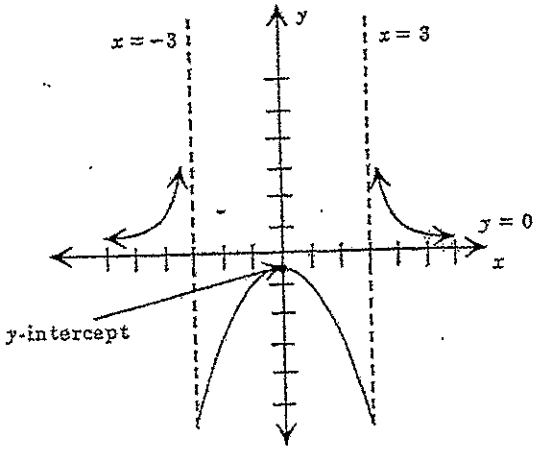
b)



c)



d)



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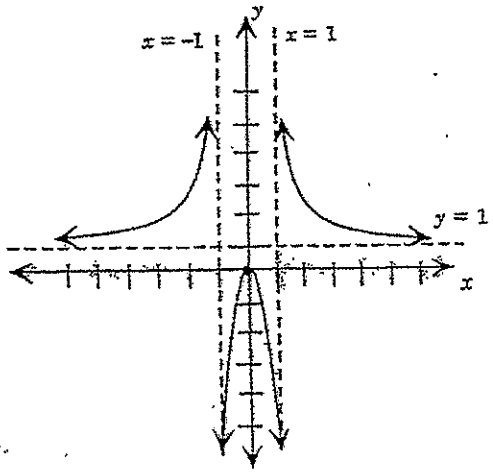

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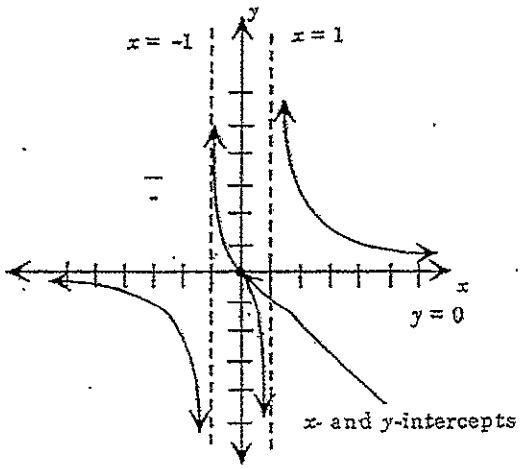
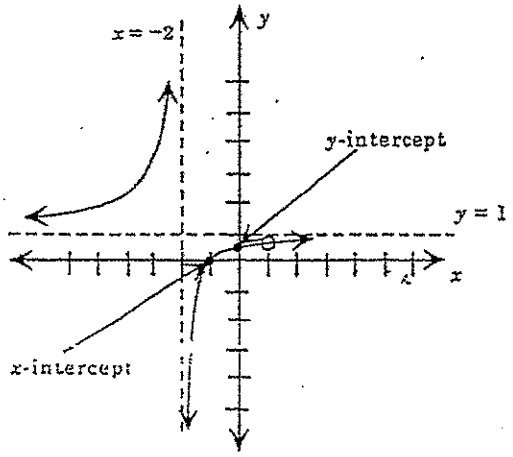


g)



h)