Alg 2A Hwk #39 Graphs of Rational Functions Spring 2017 Name:

For each Rational Function do the following:

a. Find all VA, if any

b. Final all HA, if any

c. Final all x-int and y-int, if any

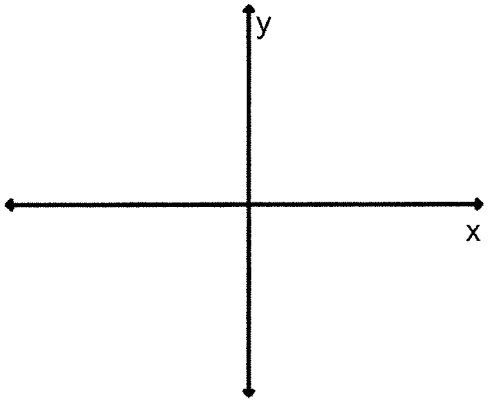
d. Make a sketch of the graph of the rational function showing the asymptotes as dashed lines, the intercepts, and the correct behavior around each asymptote. Label all intercepts and asymptotes with their values.

1. $y = \dfrac{x+3}{(x-4)(x+1)} = \dfrac{x+3}{x^2-3x-4}$

a. VA: b. HA:

c. x-int: y-int:

Graph:

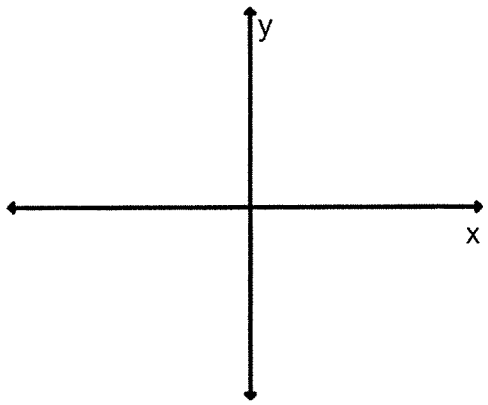


2. $y = \dfrac{(x+5)(x-2)}{(x+2)(x+7)} = \dfrac{x^2+3x-10}{x^2+9x+14}$

a. VA: b. HA:

c. x-int: y-int:

Graph:



3. $y = \dfrac{2(x+2)(x-2)}{(x+3)(x-3)} = \dfrac{2x^2-8}{x^2-9}$

a. VA: b. HA:

c. x-int: y-int:

Graph: