

MORE PRACTICE – Rational Functions

State the values of any vertical asymptotes, horizontal asymptotes in the graph of the equation of the rational function.

1. $f(x) = \frac{3}{x+4}$ VA: -4 HA: 0

2. $f(x) = \frac{3x}{x^2-9} = \frac{3x}{(x+3)(x-3)}$ VA: 3, -3 HA: 0

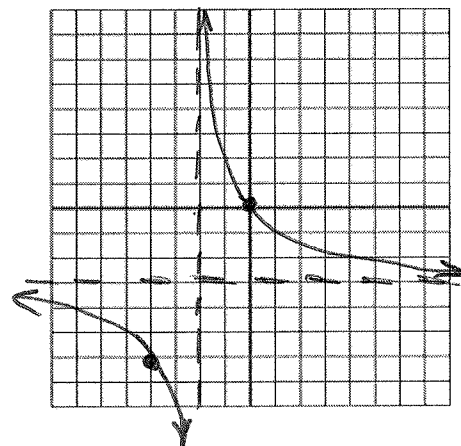
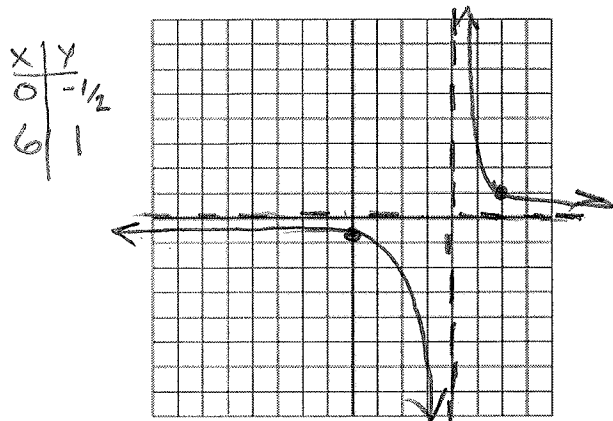
3. $f(x) = \frac{2x^2}{x^2-3x-4} = \frac{2x^2}{(x-4)(x+1)}$ VA: 4, -1 HA: 2

4. $f(x) = \frac{x^5}{x^2+4x+4} = \frac{x^5}{(x+2)^2}$ VA: -2 HA: NONE

Graph the following functions:

5. $f(x) = \frac{2}{x-4}$ VA: 4 HA: 0

6. $f(x) = \frac{-3x}{x+2}$ VA: -2 HA: -3



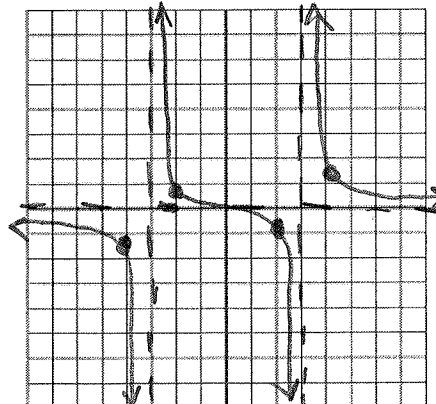
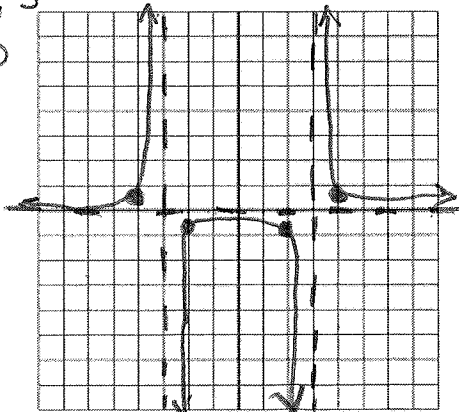
7. $f(x) = \frac{2}{x^2-9} = \frac{2}{(x-3)(x+3)}$

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

VA: 3, -3
HA: 0

VA: 3, -3
HA: 0

x	y
-4	2/7
-2	-2/5
2	-2/5
4	2/7



x	y
-4	-8/7
-2	4/5
2	-4/5
4	8/7