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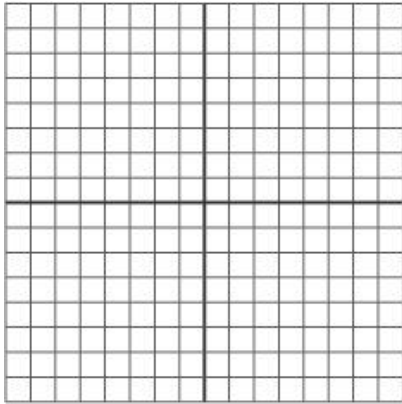
2. $f(x) = \frac{3x}{x^2-9}$       VA: _____    HA: _____

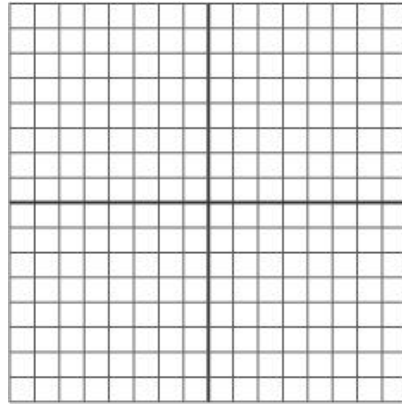3. $f(x) = \frac{2x^2}{x^2-3x-4}$       VA: _____    HA: _____

4. $f(x) = \frac{x^5}{x^2+4x+4}$       VA: _____    HA: _____

Graph the following functions:
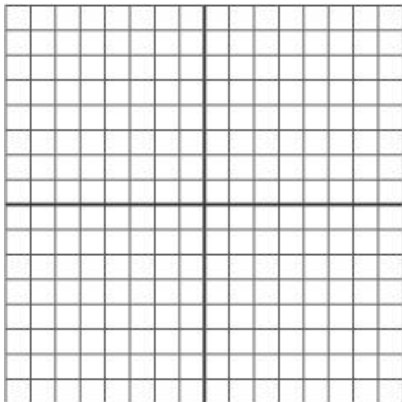
5. $f(x) = \frac{2}{x-4}$                     6. $f(x) = \frac{-3x}{x+2}$

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