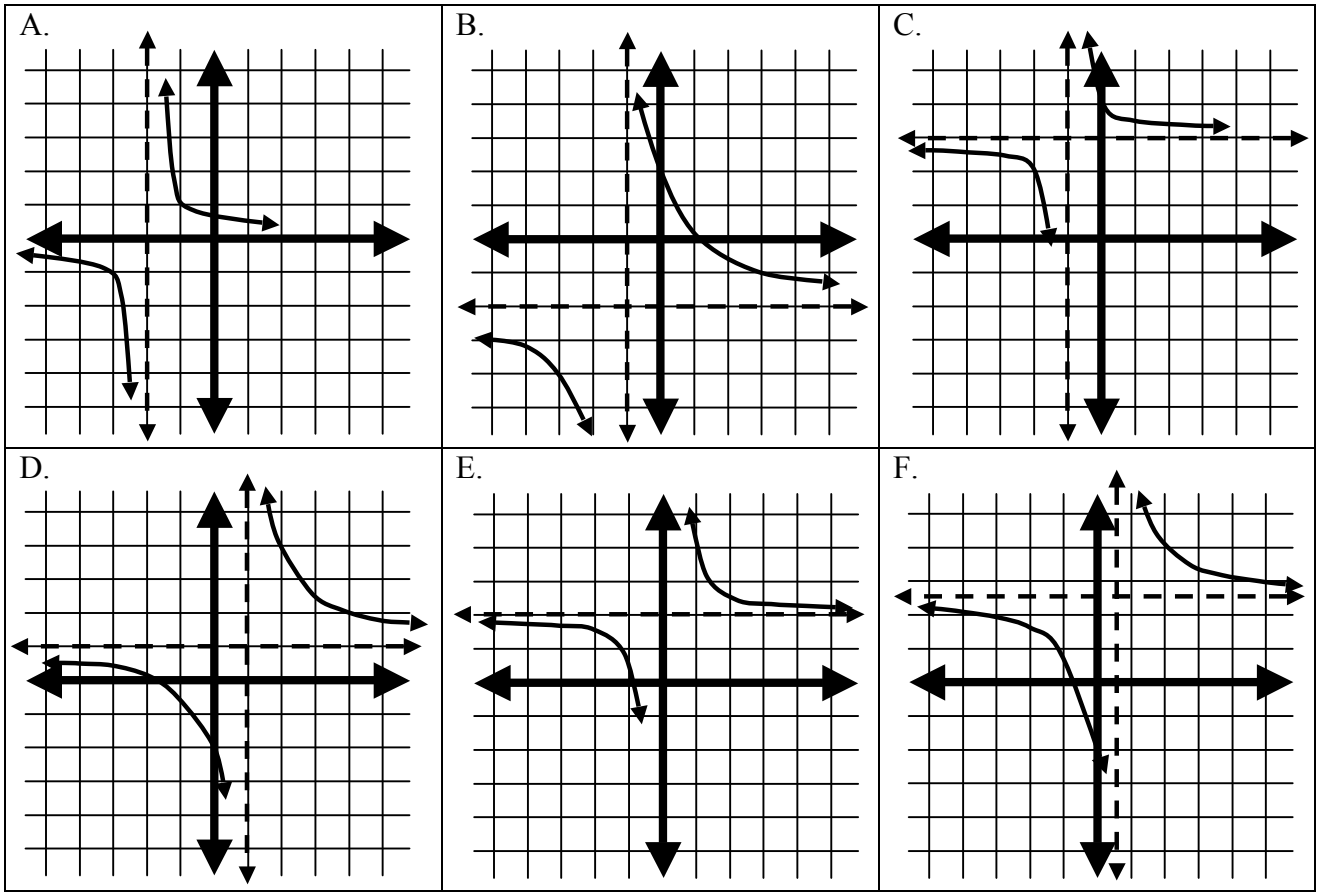
Graphing Rational Functions

Algebra 2 – 8.2/8.3 Worksheet

Match the function with its graph.

_____1. $f(x) = \frac{4}{x+1} - 2$ _____2. $f(x) = \frac{5x+2}{2x-1}$ _____3. $f(x) = \frac{x+2}{x-1}$

_____4. $f(x) = \frac{3x+4}{x+1}$ _____5. $f(x) = \frac{1}{x} + 2$ _____6. $f(x) = \frac{1}{x+2}$



Find the vertical asymptotes, horizontal asymptote, domain and range of the following functions.

7. $f(x) = \frac{12}{x+7} - 8$ 8. $f(x) = \frac{-3x+2}{-4x-7}$ 9. $f(x) = \frac{x-1}{x+5}$

Vert.Asymp.:_____ Vert.Asymp.:_____ Vert.Asymp.:_____

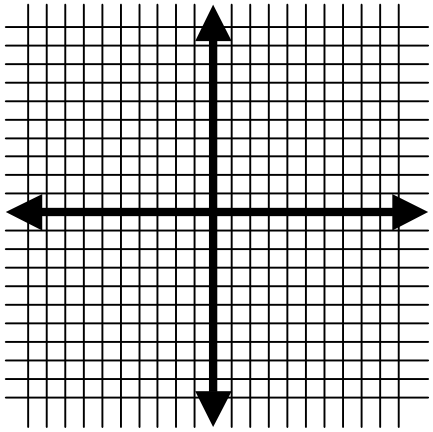
Horiz. Asymp:_____ Horiz. Asymp:_____ Horiz. Asymp:_____

Domain:_____ Domain:_____ Domain:_____

Range:_____ Range:_____ Range:_____

Graph the functions. State the vertical/horizontal asymptotes, domain and range.

10. $f(x) = \dfrac{3}{x+6} + 2$

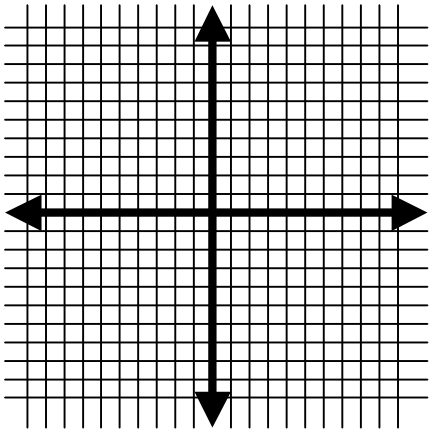


Vertical Asymptote(s):_____

Horizontal Asymptote:_____

Domain:_____ Range:_____

11. $f(x) = \dfrac{-2}{x-5} - 1$

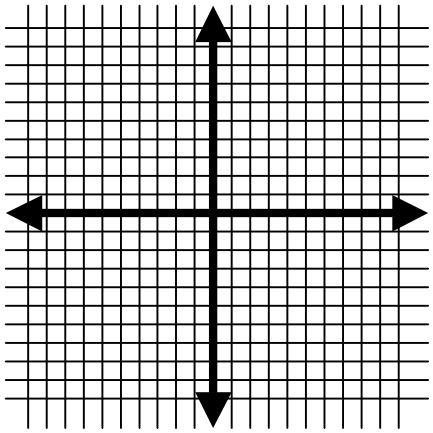


Vertical Asymptote(s):_____

Horizontal Asymptote:_____

Domain:_____ Range:_____

12. $f(x) = \dfrac{6x+12}{2x-3}$

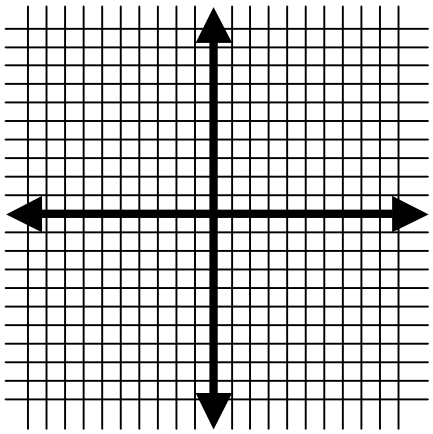


Vertical Asymptote(s):_____

Horizontal Asymptote:_____

Domain:_____ Range:_____

13. $f(x) = \dfrac{8x+3}{2x-6}$



Vertical Asymptote(s):_____

Horizontal Asymptote:_____

Domain:_____ Range:_____