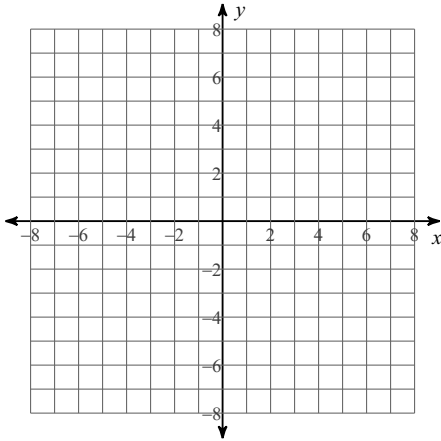


8.1 Practice

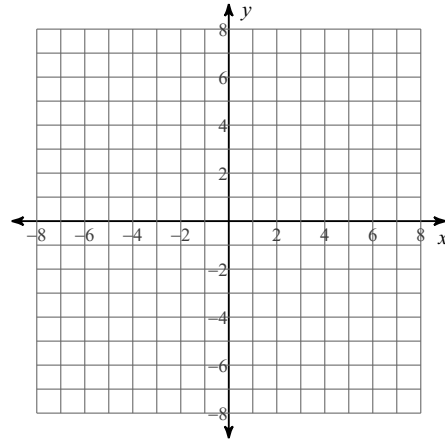
Date _____ Period _____

Identify the vertical asymptotes, horizontal asymptote, domain, and range of each. Then sketch the graph.

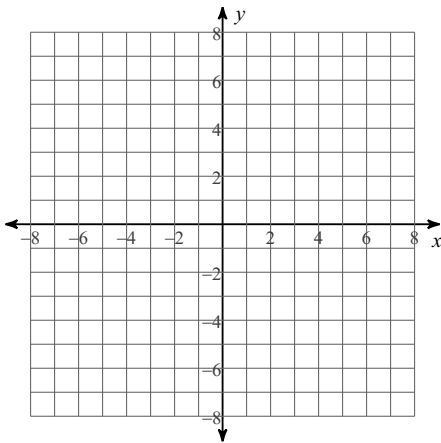
1) $f(x) = -\frac{2}{x+3} - 2$



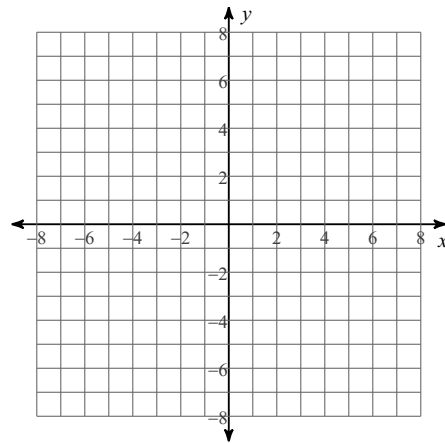
2) $f(x) = -\frac{3}{x-1}$



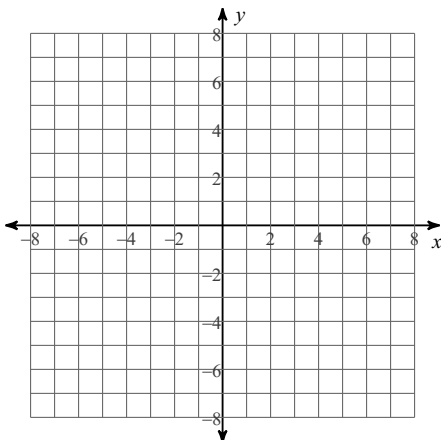
3) $f(x) = -\frac{4}{x} - 2$



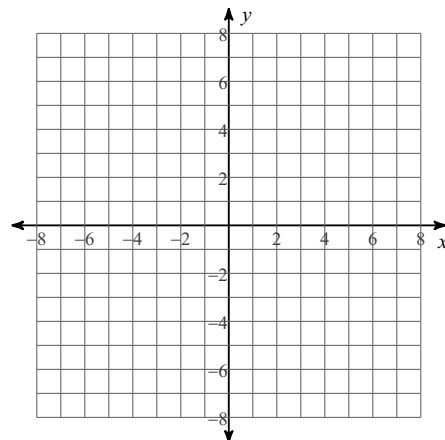
4) $f(x) = -\frac{2}{x+1} - 2$



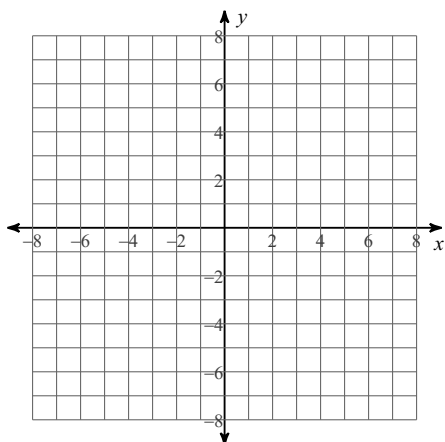
5) $f(x) = -\frac{1}{x+3}$



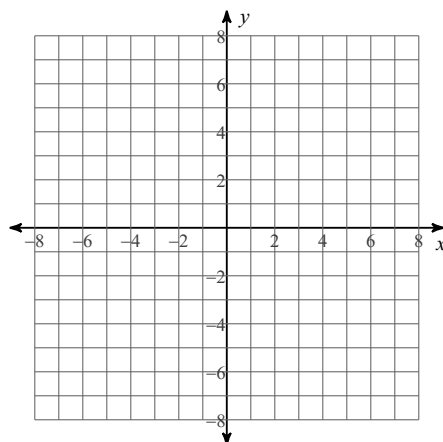
6) $f(x) = \frac{2}{x+1}$



$$7) f(x) = -\frac{2}{x} + 1$$

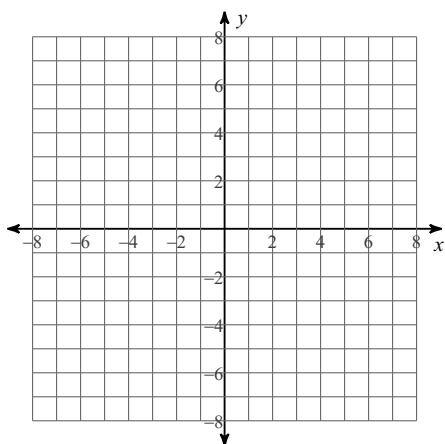


$$8) f(x) = \frac{4}{x} - 2$$

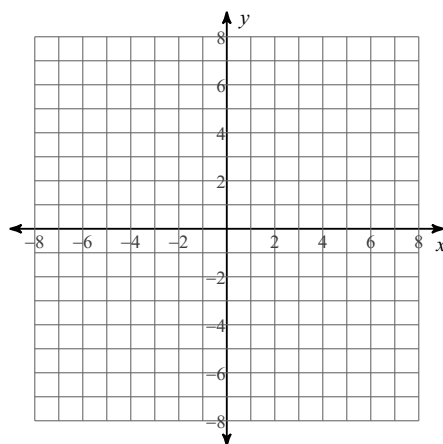


Identify the vertical asymptotes and horizontal asymptote of each. Then sketch the graph.

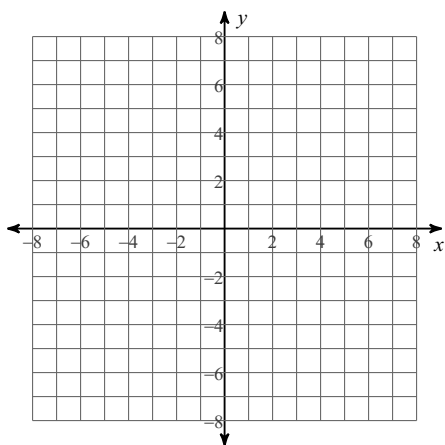
$$9) f(x) = \frac{3x - 12}{x - 3}$$



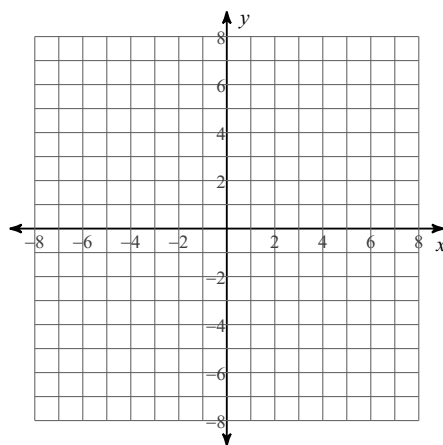
$$10) f(x) = \frac{-x + 1}{x - 3}$$



$$11) f(x) = \frac{-2x - 8}{x + 2}$$

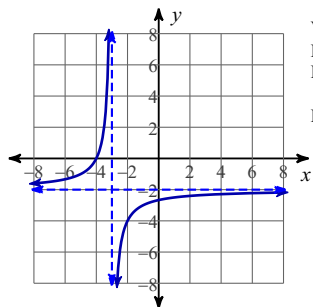


$$12) f(x) = \frac{x}{3x + 9}$$



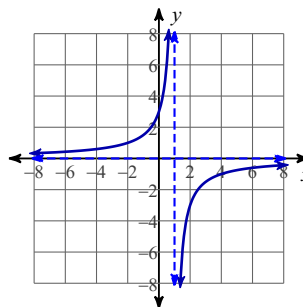
Answers to 8.1 Practice (ID: 1)

1)



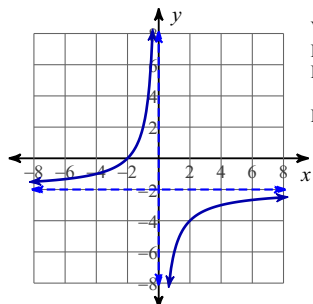
Vertical Asym.: $x = -3$
 Horz. Asym.: $y = -2$
 Domain:
 All reals except -3
 Range:
 All reals except -2

2)



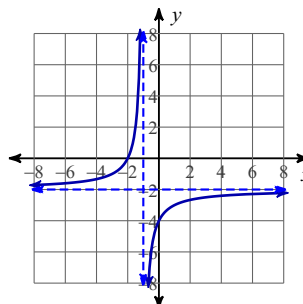
Vertical Asym.: $x = 1$
 Horz. Asym.: $y = 0$
 Domain:
 All reals except 1
 Range:
 All reals except 0

3)



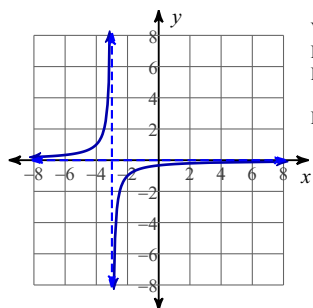
Vertical Asym.: $x = 0$
 Horz. Asym.: $y = -2$
 Domain:
 All reals except 0
 Range:
 All reals except -2

4)



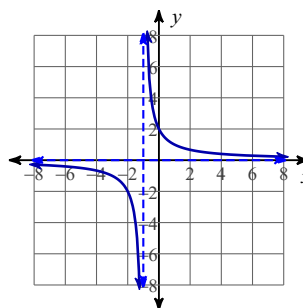
Vertical Asym.: $x = -1$
 Horz. Asym.: $y = -2$
 Domain:
 All reals except -1
 Range:
 All reals except -2

5)



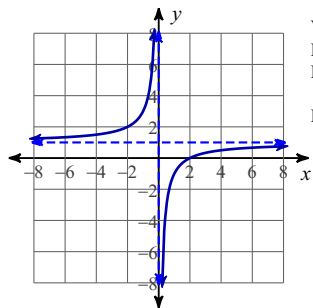
Vertical Asym.: $x = -3$
 Horz. Asym.: $y = 0$
 Domain:
 All reals except -3
 Range:
 All reals except 0

6)



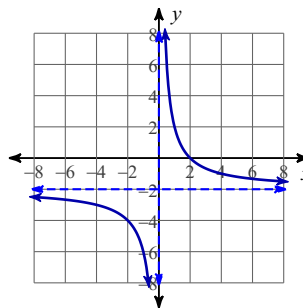
Vertical Asym.: $x = -1$
 Horz. Asym.: $y = 0$
 Domain:
 All reals except -1
 Range:
 All reals except 0

7)



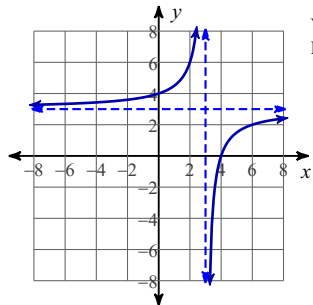
Vertical Asym.: $x = 0$
 Horz. Asym.: $y = 1$
 Domain:
 All reals except 0
 Range:
 All reals except 1

8)



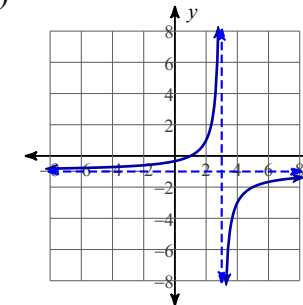
Vertical Asym.: $x = 0$
 Horz. Asym.: $y = -2$
 Domain:
 All reals except 0
 Range:
 All reals except -2

9)



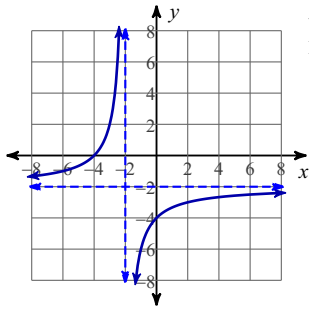
Vertical Asym.: $x = 3$
 Horz. Asym.: $y = 3$

10)



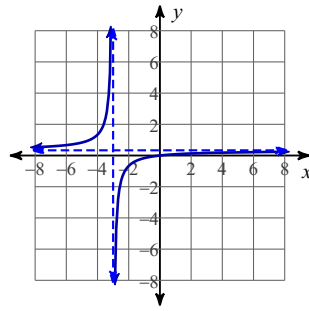
Vertical Asym.: $x = 3$
 Horz. Asym.: $y = -1$

11)



Vertical Asym.: $x = -2$
 Horz. Asym.: $y = -2$

12)



Vertical Asym.: $x = -3$
 Horz. Asym.: $y = \frac{1}{3}$