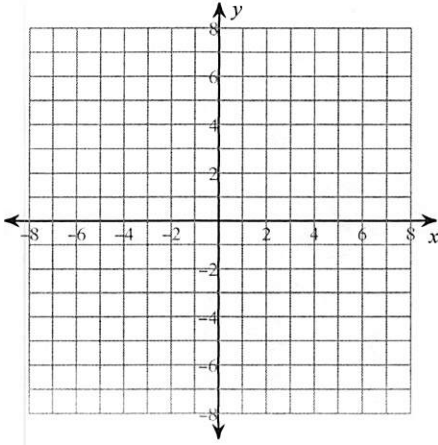


Section 7.3

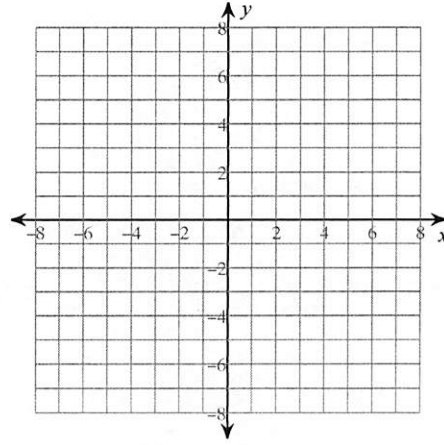
Date _____ Period _____

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

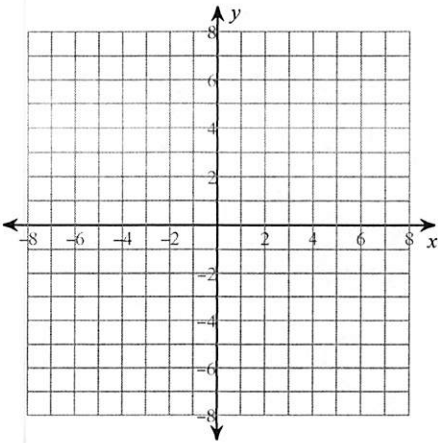
1) $f(x) = \frac{2}{x+1}$



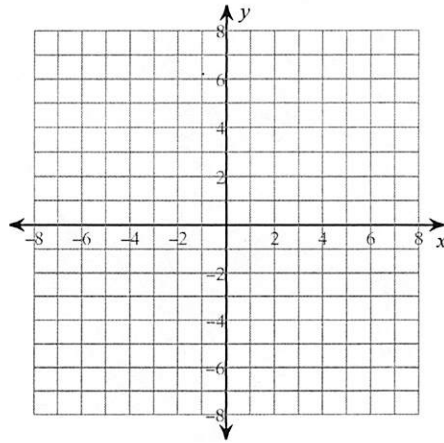
2) $f(x) = \frac{1}{x+3} + 2$



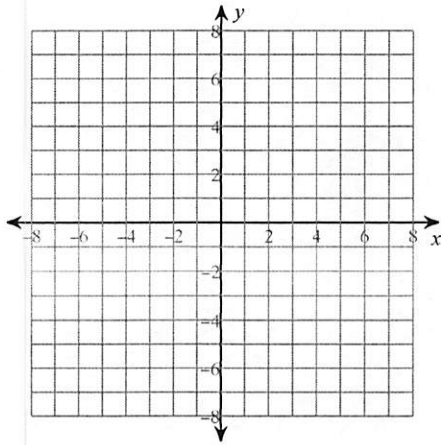
3) $f(x) = -\frac{2}{x} - 2$



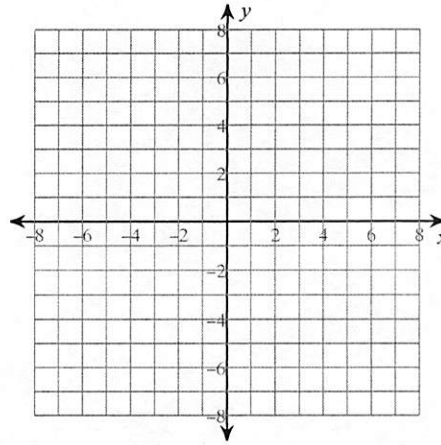
4) $f(x) = \frac{3}{x}$



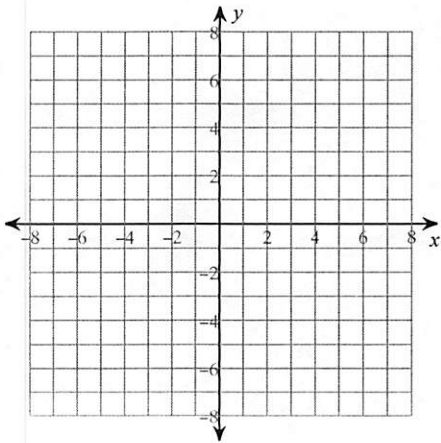
$$5) f(x) = \frac{2}{x-3} - 1$$



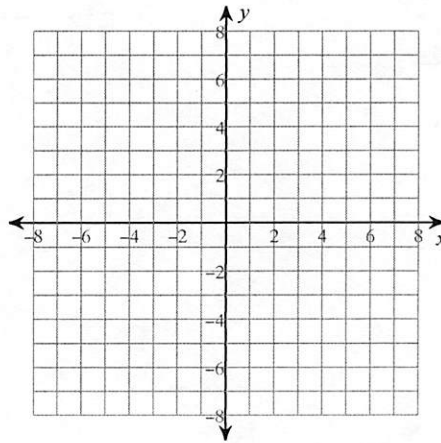
$$6) f(x) = \frac{1}{x-3} + 1$$



$$7) f(x) = \frac{3}{x+2}$$



$$8) f(x) = -\frac{1}{x-4} + 1$$



Review Sections 7.1-7.3

Simplify each expression.

1) $\frac{v+3}{v-2} \div \frac{5v+35}{v-2}$

2) $\frac{k^2-5k+4}{k-2} \cdot \frac{1}{k-4}$

3) $\frac{r^2+2r-3}{r+8} \cdot \frac{r+8}{r^2-2r+1}$

4) $\frac{n-8}{n-4} \div \frac{n-5}{n^2-9n+20}$

5) $\frac{\frac{3}{4}}{\frac{16}{x} - \frac{3}{x}}$

6) $\frac{\frac{1}{x} + \frac{x}{8}}{\frac{1}{4}}$

7) $\frac{7x+4y}{8y^3} - \frac{x-4y}{8y^3}$

8) $\frac{3}{2} + \frac{2y}{2xy}$

9) $\frac{2}{2x+12} - \frac{5x}{x+6}$

10) $\frac{2}{n+2} + \frac{3}{n-2}$

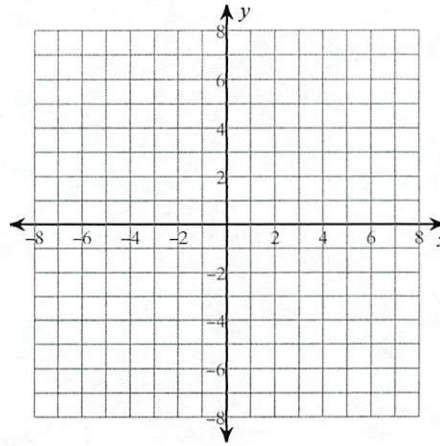
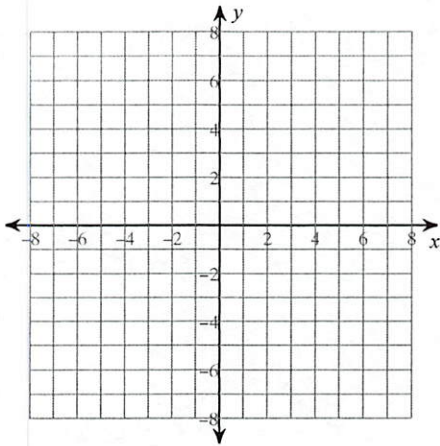
$$11) \frac{6}{v^2 + 4v - 12} + \frac{5}{v + 6}$$

$$12) \frac{2}{n^2 - 9} - \frac{3}{n^2 - 7n + 12}$$

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

$$13) f(x) = \frac{2}{x + 1} + 3$$

$$14) f(x) = \frac{3}{x} - 1$$



$$15) f(x) = -\frac{1}{x + 4} + 2$$

$$16) f(x) = \frac{4}{x + 2} - 2$$

