

**Lesson 8.2 Worksheet**

Name: \_\_\_\_\_

**Find the vertical and horizontal asymptotes of the graph of the function.**

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

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

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

vert. asymp: \_\_\_\_\_ vert. asymp: \_\_\_\_\_ vert. asymp: \_\_\_\_\_

horiz. asymp: \_\_\_\_\_ horiz. asymp: \_\_\_\_\_ horiz. asymp: \_\_\_\_\_

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

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

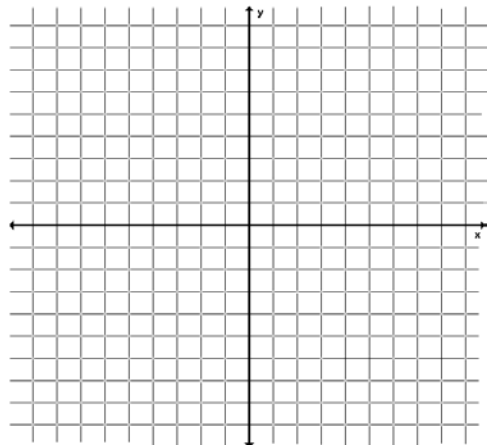
6.)  $f(x) = \frac{6x-1}{3x+6}$

vert. asymp: \_\_\_\_\_ vert. asymp: \_\_\_\_\_ vert. asymp: \_\_\_\_\_

horiz. asymp: \_\_\_\_\_ horiz. asymp: \_\_\_\_\_ horiz. asymp: \_\_\_\_\_

**Graph the function. Identify the graph's asymptotes and the function's domain and range.**

7.)  $y = -\frac{0.5}{x} + 2$

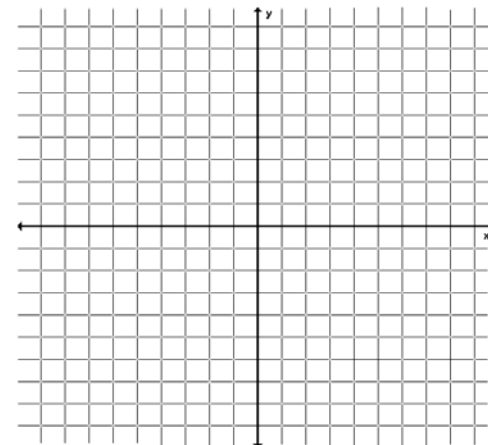


asymptotes: \_\_\_\_\_

domain: \_\_\_\_\_

range: \_\_\_\_\_

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

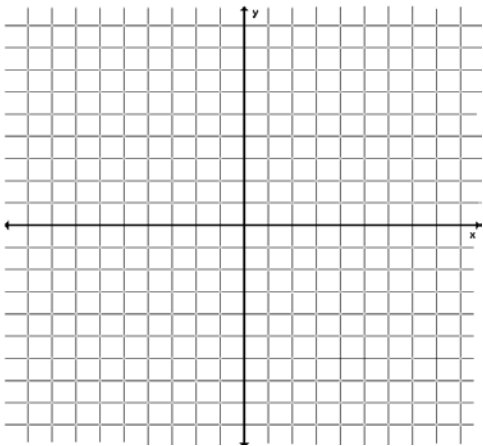


asymptotes: \_\_\_\_\_

domain: \_\_\_\_\_

range: \_\_\_\_\_

$$9.) y = \frac{x + 4}{x - 3}$$

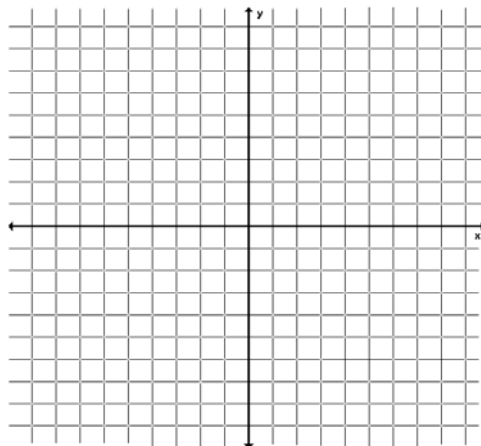


asymptotes: \_\_\_\_\_

domain: \_\_\_\_\_

range: \_\_\_\_\_

$$10.) f(x) = \frac{4x}{2x - 1}$$

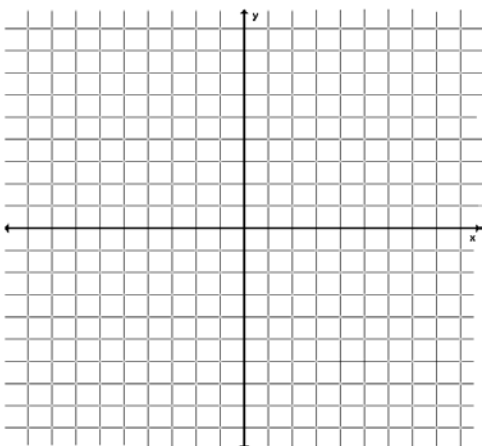


asymptotes: \_\_\_\_\_

domain: \_\_\_\_\_

range: \_\_\_\_\_

$$11.) y = \frac{8x + 3}{2x - 6}$$

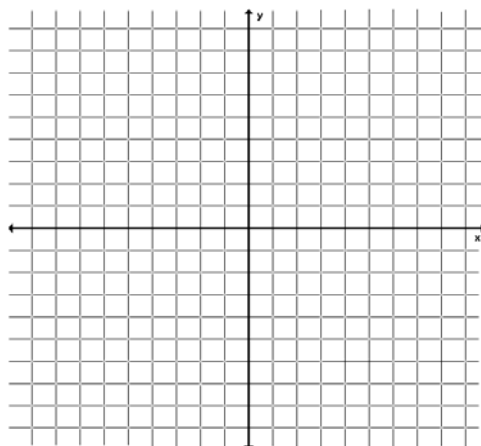


asymptotes: \_\_\_\_\_

domain: \_\_\_\_\_

range: \_\_\_\_\_

$$12.) f(x) = \frac{-3}{x - 4} - 1$$



asymptotes: \_\_\_\_\_

domain: \_\_\_\_\_

range: \_\_\_\_\_