/22K	/6A	/2C	/6T	Total	/36

Name: _____ Date: _____

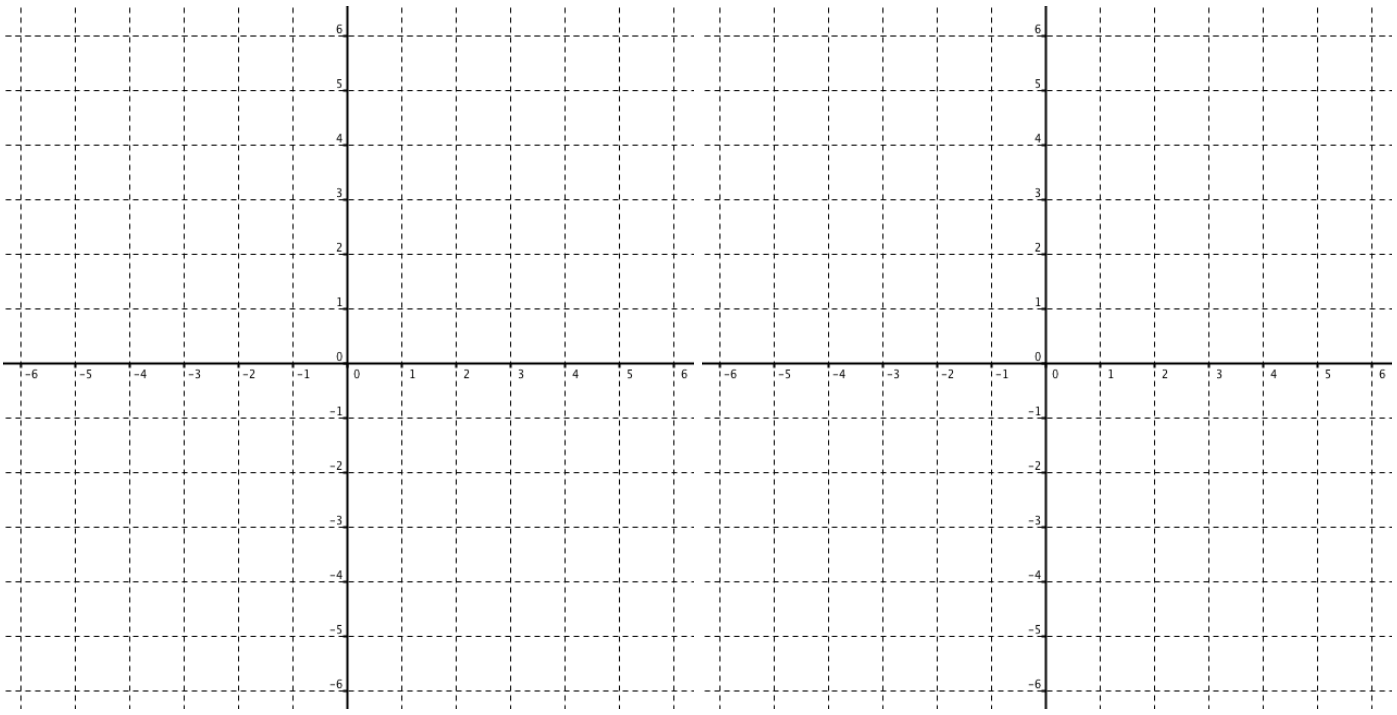
MCR3U Quiz: 1.4, 2.1 – 2.6 Reciprocal functions, rational and radical expressions

/3 K

/3 T

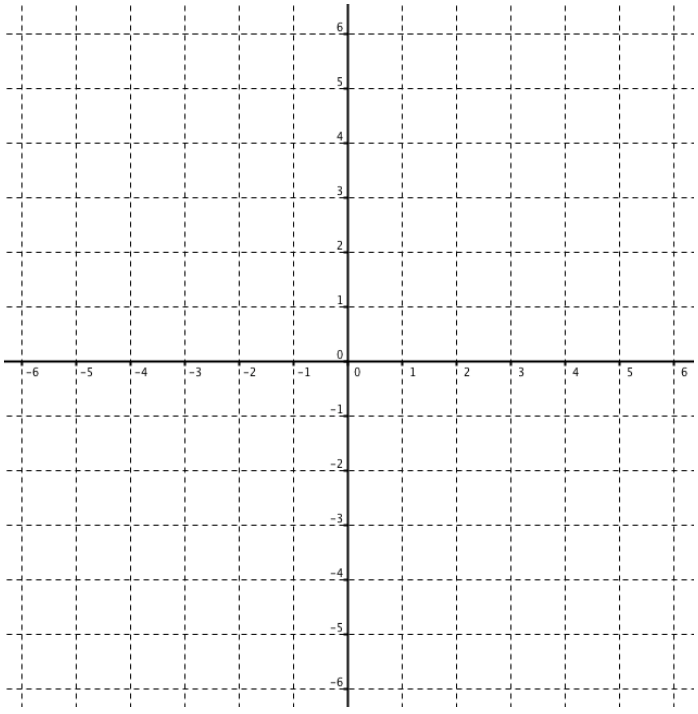
1. Graph each of the following functions. Mark all points in the domain and range of the grid provided.

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



/3 T

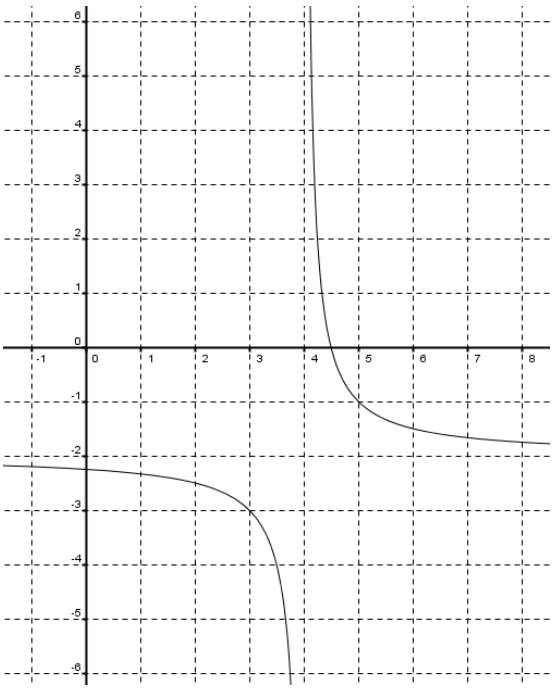
2. Graph the reciprocal of the linear function $y=2x-6$.



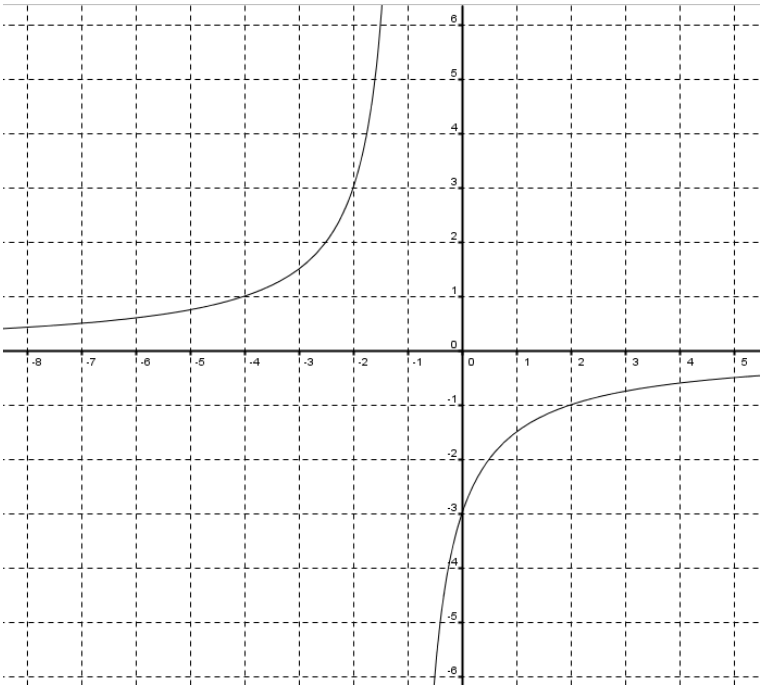
/5
K

3. Determine equations for the functions shown in the graphs below.

a)



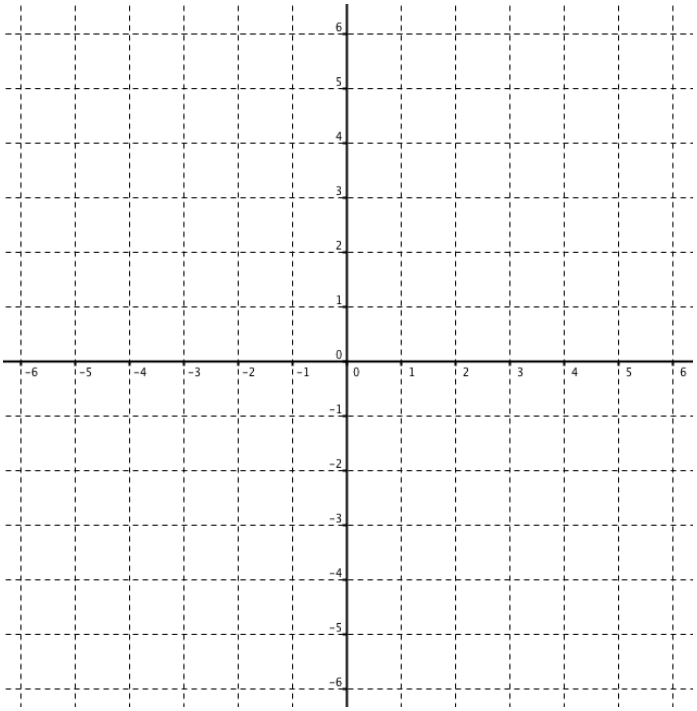
b)



/6
A

4. Simplify the following rational function. State all restrictions and graph the function.

$$y = \frac{4(x+1)}{x^2+4x+3}$$



/8
K

5. Simplify the following rational expressions.

a) $\frac{12x+24}{x^2+3x-10} \div \frac{4}{x+5}$

b) $\frac{3}{x+5} - \frac{2}{x+4}$

/2
K

6. Simplify the following radical expressions.

a) $2\sqrt{25}+3$

b) $\sqrt{60}$

/4
K

7. Expand and simplify the following radical expression: $(5+\sqrt{3})(4-\sqrt{12})$

/2
C

8. Describe or correct the error in each of the following statements.

a) $5\sqrt{3} = \sqrt{15}$

b) $\frac{x^2+x-12}{x^2+5x+6} = \frac{x-12}{5x+6}$