MCR3U Chapter 2 Test

K /17	T /6	C /8	A /13	Total / 44

Name: _____ Date: _____

/2 K

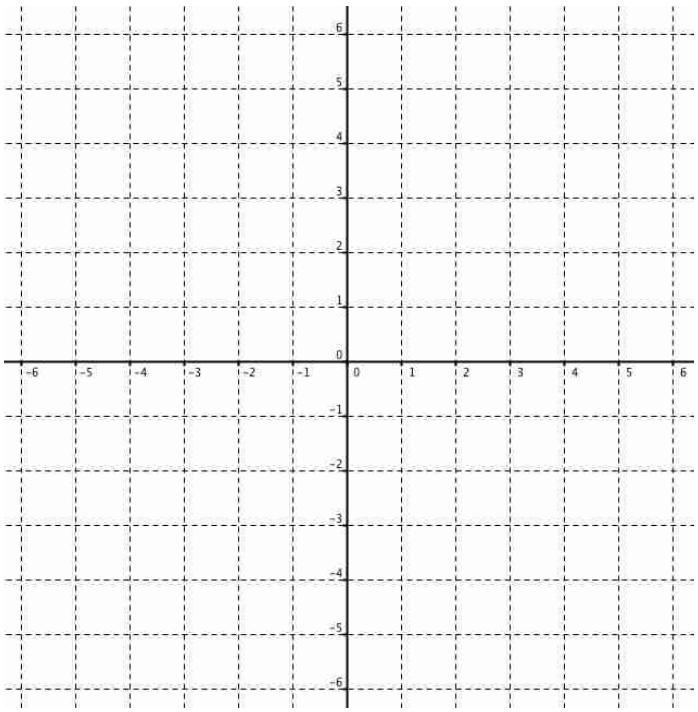
1. Determine the equation of the inverse, $f^{-1}(x)$, of the function $f(x)=\frac{9}{5}(x+32)$

/3 K

2. Determine the equation of the inverse, $m^{-1}(x)$, of the function $m(x)=2x^2-4x-6$

/3 A

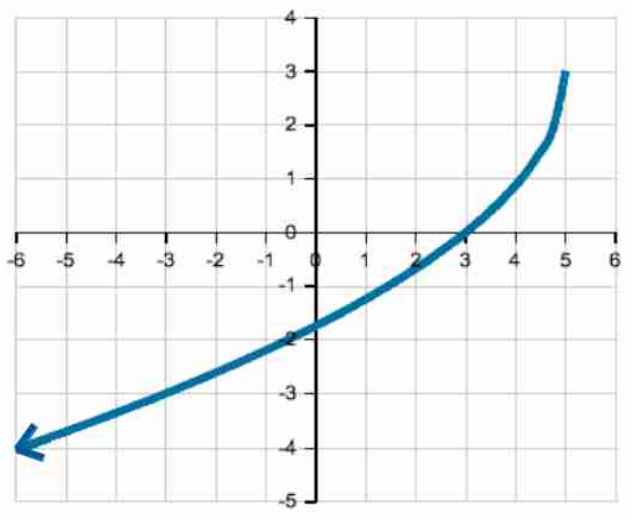
3. Give the graph of the inverse, $g^{-1}(x)$ of the function $g(x)=(x+2)^2-1$



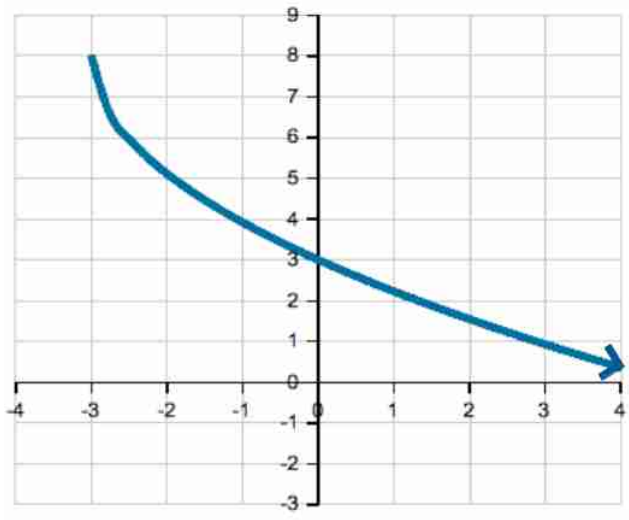
/4
A

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

a)



b)



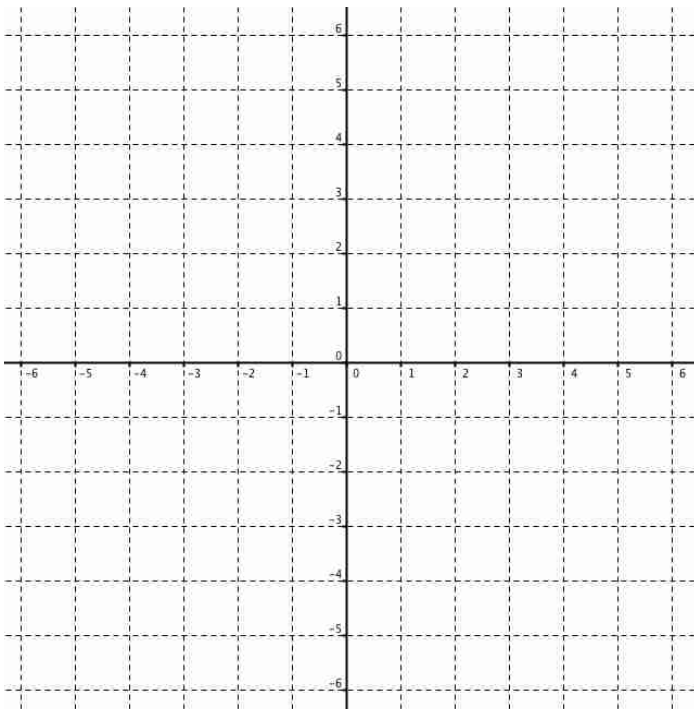
/4
C

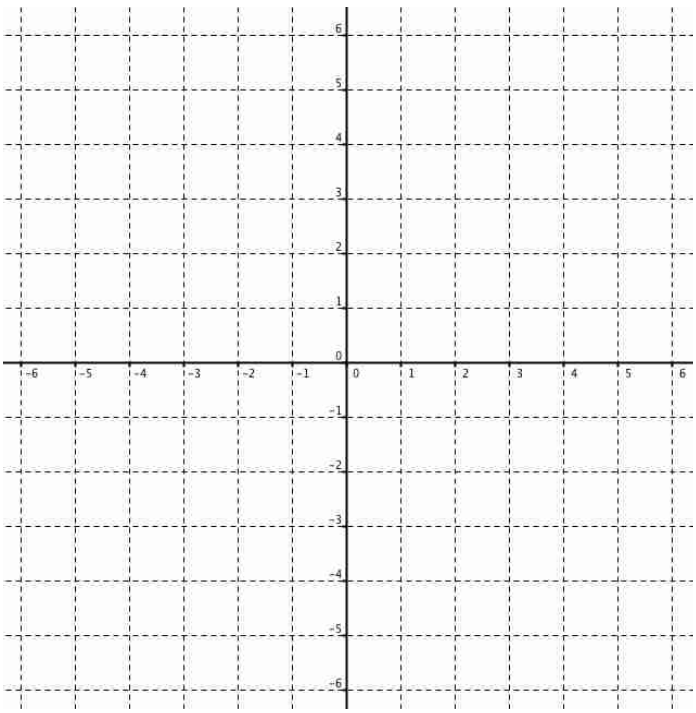
/1
T

5. Graph each of the following functions. Mark all points in the domain and range of the grids provided.

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

$$f(x)=3\sqrt{6-x}-6$$





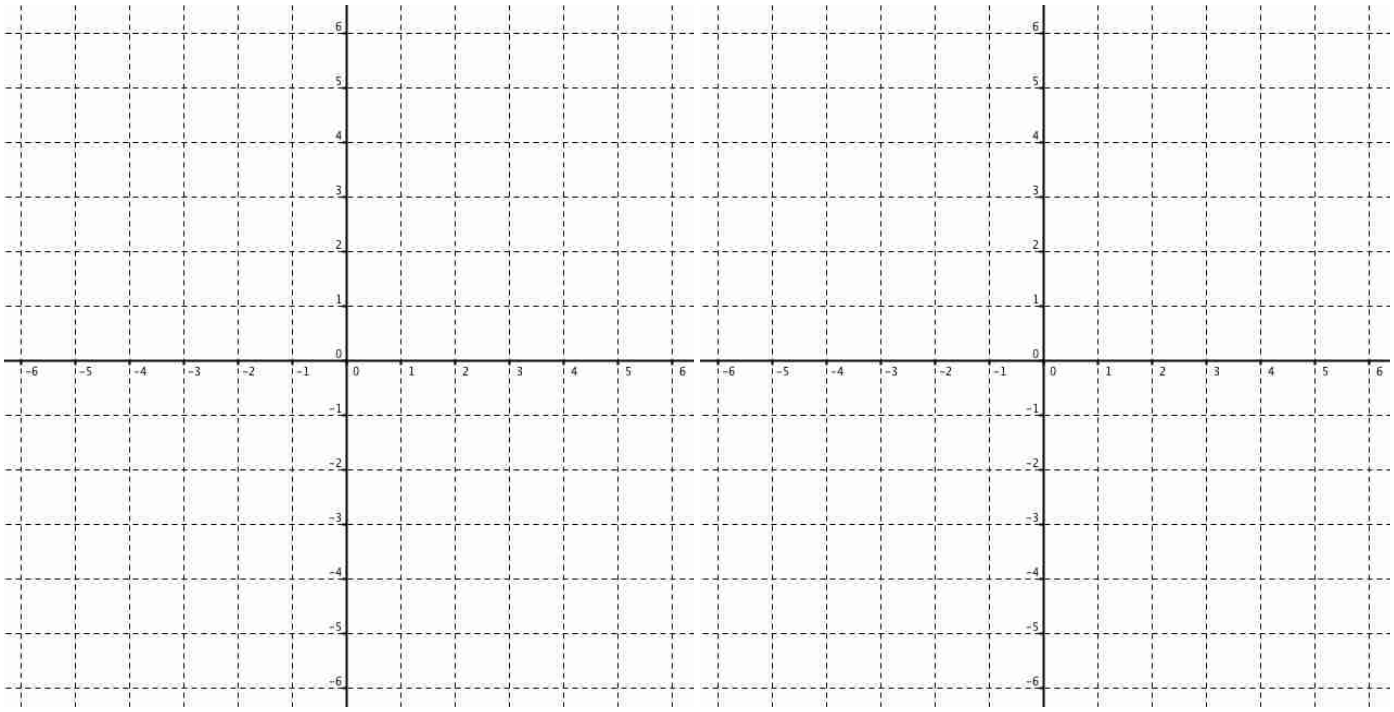
/4
C

/2
T

6. Graph each of the following functions accurately on the grids provided.

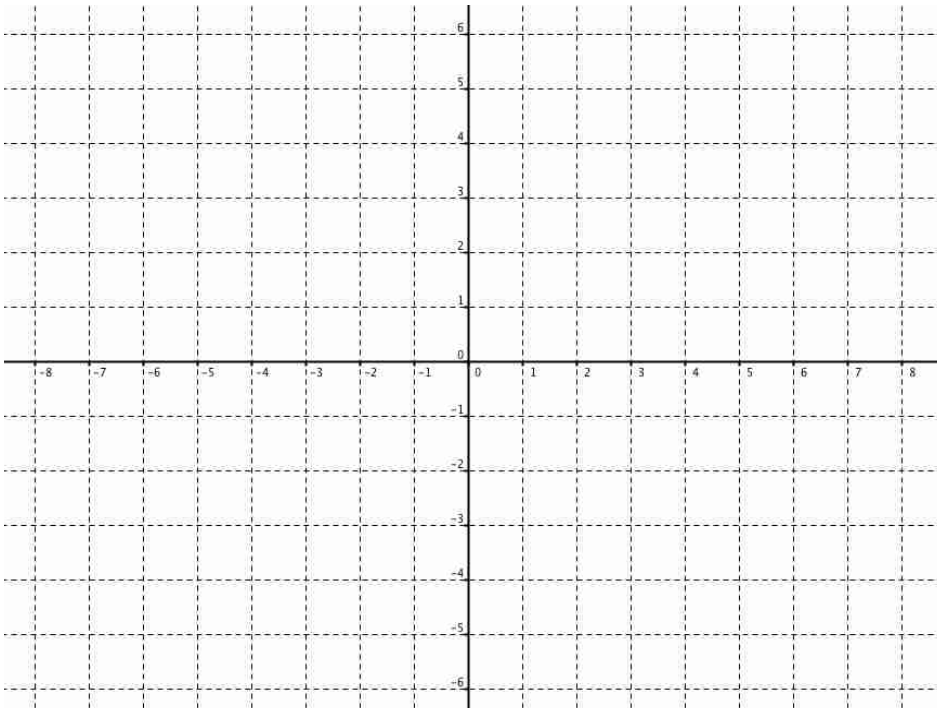
$$f(x)=\frac{-3}{x+1}$$

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



/3
T

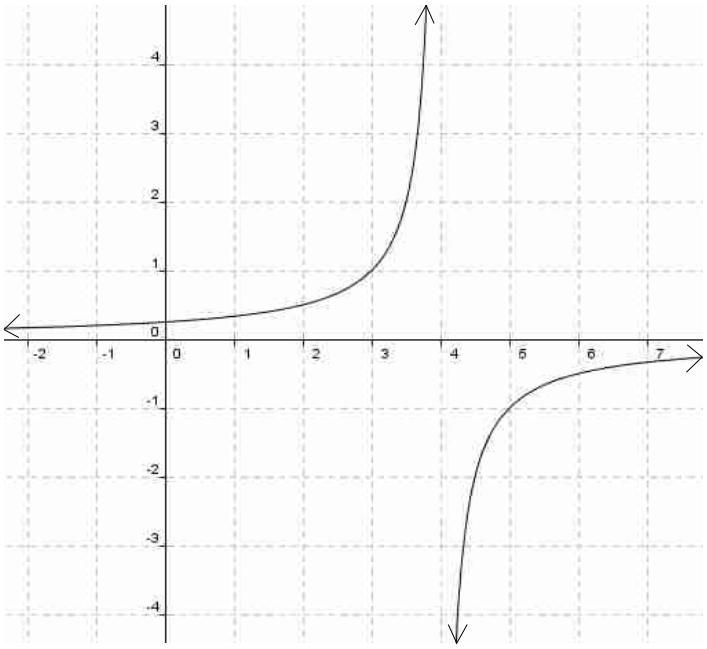
7. Graph the reciprocal of the linear function $y=2x-2$



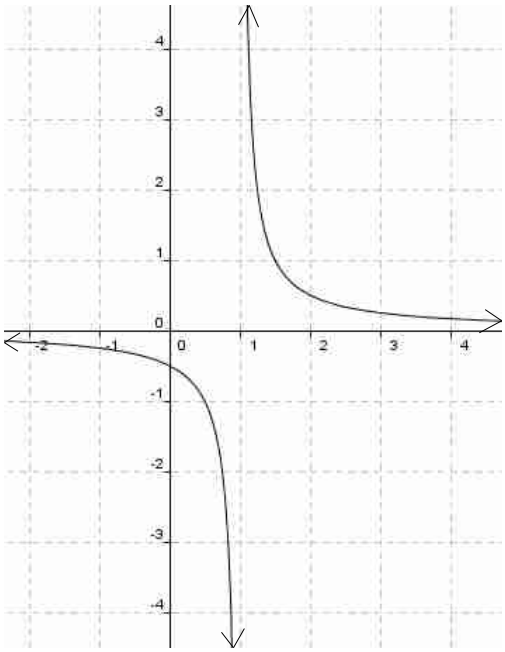
/4
K

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

a)



b)



/6
A

9. Simplify the following functions and state restrictions.

a) $f(x)=\dfrac{2x-6}{x^2-6x+9}$

b) $f(x)=\dfrac{2x^2-5x-12}{x+3}$

/8
K

10. Simplify the following rational expressions. State all restrictions.

a) $f(x)=\dfrac{x+3}{x^2-4x-21}\div\dfrac{x}{x-7}$ [dividing]

b) $f(x)=\dfrac{x}{x+2}-\dfrac{2}{x}$