

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

1. Find the domain and range of the following relations and determine if it is a function. If not, state why.

(a)  $\{(-9, -4), (9, -2), (5, 5), (-2, -2)\}$

(b)  $\{(-7, 0), (3, 6), (2, 2), (6, 6)\}$

(c)  $\{(-9, -7), (2, 9), (-2, -2), (9, 9)\}$

2. If  $f(x) = 8x + 6$ , find the following

(a)  $f(7)$

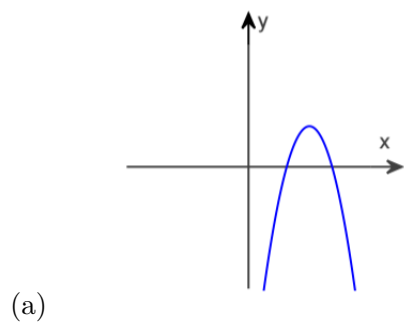
(b)  $f(x + 4)$

(c)  $f(-x)$

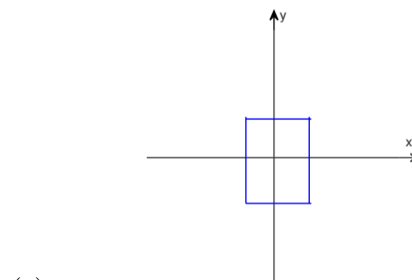
3. If  $f(x) = -4x^2 + 3x - 2$ , find the following

- (a)  $f(2)$
- (b)  $f(-1)$
- (c)  $f(x + 1)$

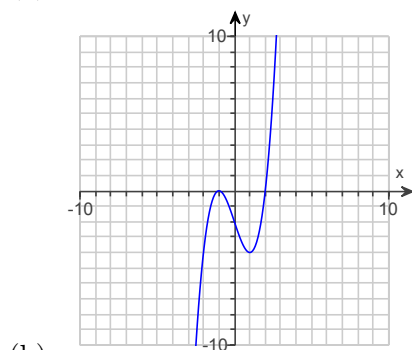
4. Use the vertical line test to determine if  $y$  is a function of  $x$  in the graph.



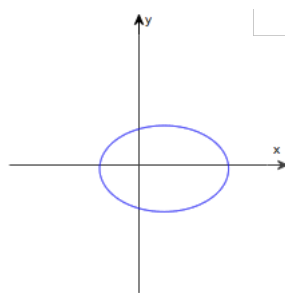
(a)



(c)

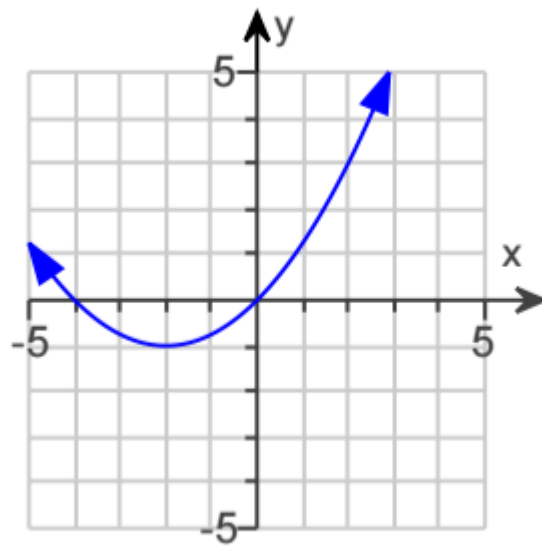


(b)



(d)

5. Consider the following graph.



- (a) Is this a function?
- (b) Determine the domain and range.
- (c) What is  $f(2)$  and  $f(-2)$ ?