Name Period

Sec1H

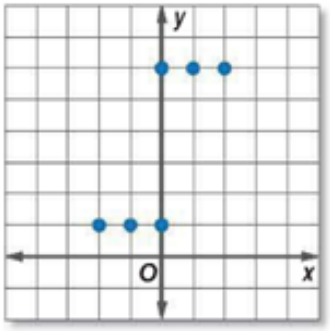
HW 4-1
Domain & Range, Function Notation

List out the domain and range in set notation, and state whether or not the relation is a function.

1. $\{(3,2),(4,5),(5,4),(2,4)\}$

List out the domain and range in set notation, and state whether or not the relation is a function.

2.



3. Create a mapping for #2

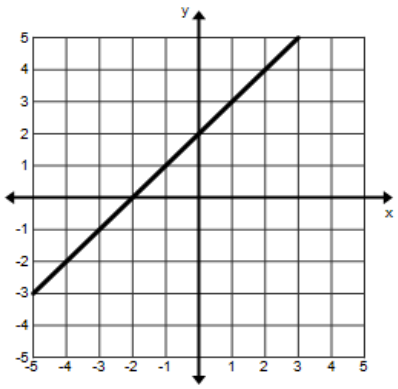
4. Given the table below, what is f(-2)

x	$f(x)$
-2	6
-1	4
0	0
1	-2

5. Given the table below, what is f(-1)

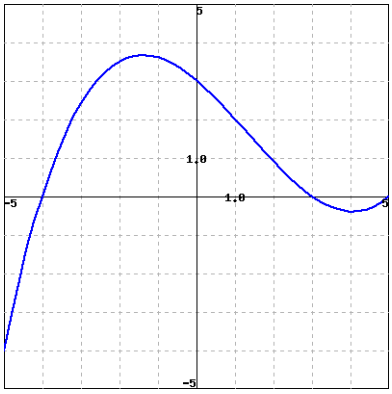
x	$f(x)$
-2	0
-1	9
0	4
1	-1

6. Given the graph below, what is $f(1)$?

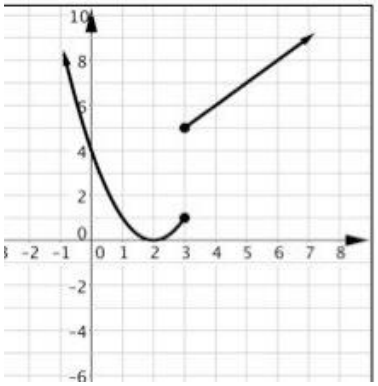


Determine whether the graph represents a function. If no, explain where it fails.

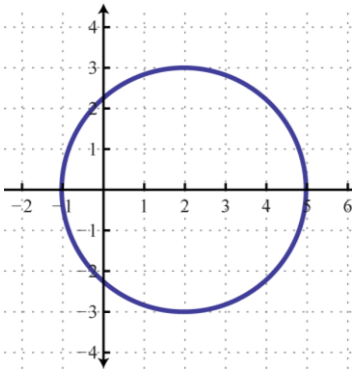
7.



8.



9.



Use $f(x) = 2x^2 - 4$ and $g(x) = 5x + 12$ to answer each of the following.

10. $f(4) =$

11. $g(-100) =$

12. $f(-3) =$

13. $g(4.2) =$

14. $f(x) = 4 \quad x = ?$

15. $g(x) = 42 \quad x = ?$

16. A population of mushrooms triples every 4 days. The population started with 2 mushrooms. The function that models this growth is $f(x) = 2(3)^{\frac{x}{4}}$.

a) Evaluate the function over the domain $\{0, 4, 12, 20\}$.

b. If given, $f(4) = 6$, complete the following sentence:

After _____ _____, there are _____ _____.

c. If given, $f(36) = 39366$, complete the following sentence:

After _____ _____, there are _____ _____.