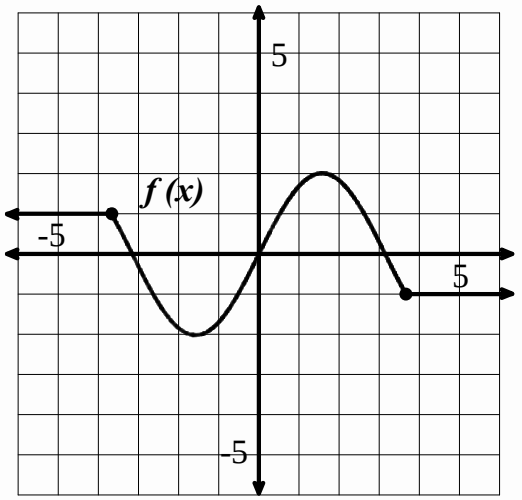
Name: _____ Period: _____ Date: _____ Score: _____

Sec 1H Unit 5 Review - FUNCTIONS

Use the graph at the right to answer questions 1-12. Estimate where needed.



1. List any minimum(s) of the graph: _____.

2. List any maximum(s) of the graph: _____.

3a. When is the graph increasing?

3b. When is the graph decreasing?

4a. When is the graph positive?

4b. When is the graph negative?

5. What is the range of the graph?

6. What is the domain?

Give two end behavior statements:

7. _____.

8. _____.

9. List any x-intercepts: _____.

10. $f(5)$ = _____.

11. $f(-.5)$ = _____.

12. $f(x) = 2$, x = _____.

13. $f(x) = 0$, x = _____.

14. If $h(x) = 2x - 4$, and $f(x) = -2x + 5$ and $g(x) = -10$, *find the following:*

a. $f(-4)$ =

b. $h(x) = 0$

c. $f(x) = -4$

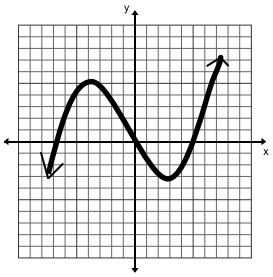
d. $f(x) + h(x)$

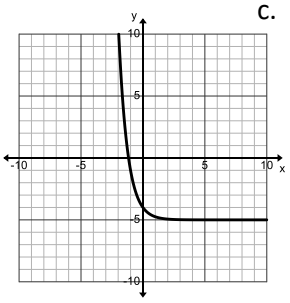
e. $h(x) - g(x)$

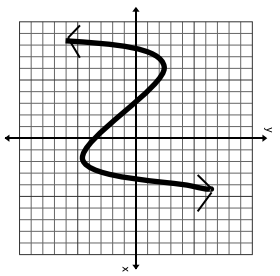
f. $f(w)$=

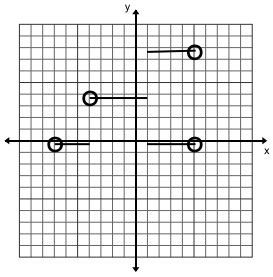
g. $h(3m)$=

15. State if the relationship represents a Function (F) or Not a Function (NF)

a. 

b. 

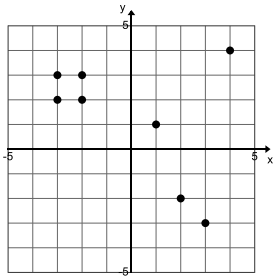
c. 

d. 

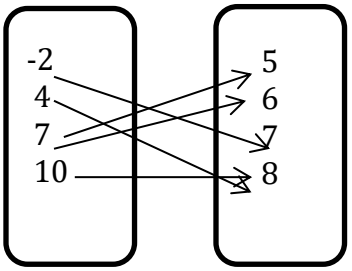
e. {(2, -1), (3, -1), (4, -1), (-2, 1), (-3, 1), (-4, 1)}

f.

x	-2	-1	0	-1
y	4	1	1	1

g. 

h.



16. Give the domain and range of each relation.

a. {(2, -1), (3, -1), (4, -1), (-2, 1), (-3, 1), (-4, 1)}

b.

x	-2	0	2	3	4	5
y	-2	7	4	-2	4	7

17. Match a story with a graphic representation.

I. The amount of water in the washing machine when washing a load of laundry. _____

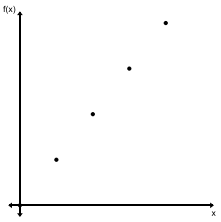
II. The money earned if each correct answer earns 10 more dollars. _____

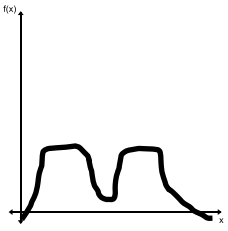
III. The amount of time left in a person's life. _____

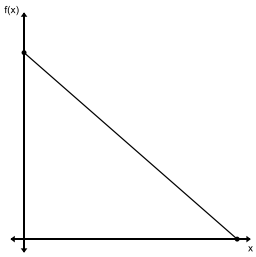
IV. The value of a car over a 15 year period of time. _____

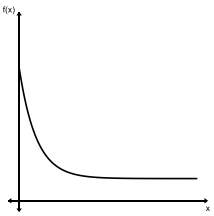
V. The money earned for each correct answer doubles the previous earnings. _____

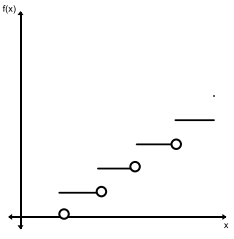
VI. The amount of money a babysitter earns, if her pay increase only when she completes a full hour. _____

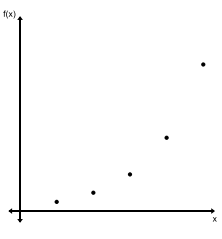
A. 

B. 

C. 

D. 

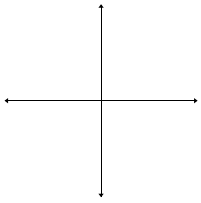
E. 

F. 

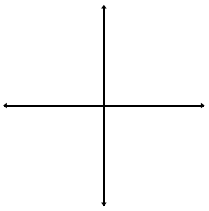
18. From problem #17, which graphs are continuous, and which are discrete?

CONTINUOUS: DISCRETE:

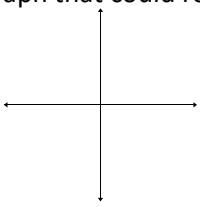
19. Draw a continuous graph that could represent a function.



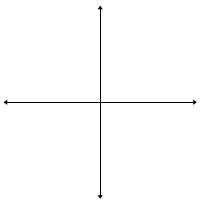
20. Draw a continuous graph that is NOT a function.

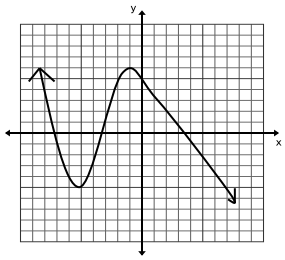


21. Draw a discrete graph that could represent a function.

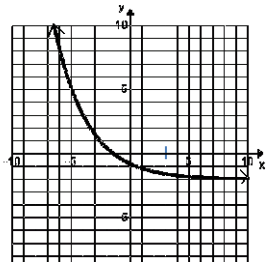


22. Draw a discrete graph that is NOT a function.

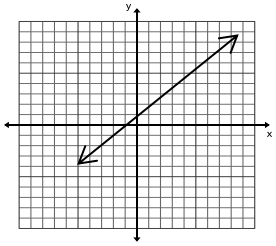




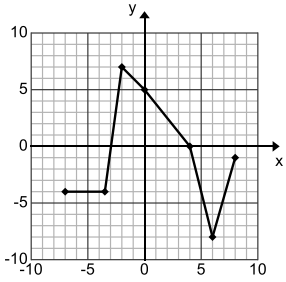
23.
a) What are the end behaviors?
b) When is the graph increasing?
c) When is the graph decreasing?
d) List all x-and y-intercepts.



24.
a) What are the end behaviors?
b) When is the graph increasing?
c) When is the graph decreasing?
d) List all x-and y-intercepts.



25.
a) What are the end behaviors?
b) When is the graph increasing?
c) When is the graph decreasing?
d) List all x-and y-intercepts.



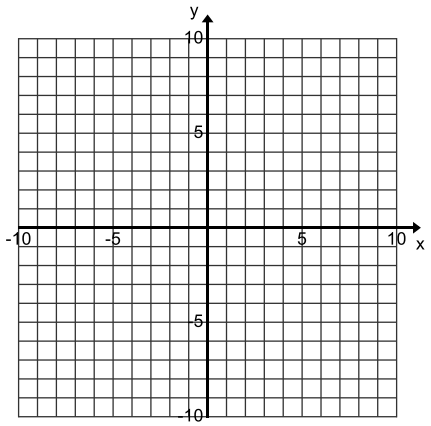
26.
a) What are the end behaviors?
b) When is the graph increasing?
c) When is the graph decreasing?
d) List all x-and y-intercepts.

27. Draw a graph that meets all the following criteria:
Nonlinear;

Intercepts: (-8,0), (-4,0), (0,0), (4,0), (8,0);

Maximums:(-6,3), (2,3); Minimums:(-2,-3), (6,-3);

End behavior: $x \to -\infty$, $y \to -\infty$ and $x \to \infty$, $y = 2$.



28. Fill out the table below.

x	$a(x)$	$b(x)$	$a(x) + b(x)$	$a(x) - b(x)$
-2	-7	-11		
-1	-2	-2		
0	0	1		
1	2	4		
2	4	7		
3	10	10		
4	15	12		

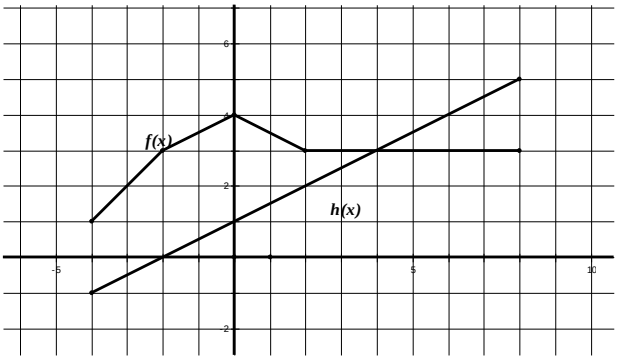
29. When is b(x) increasing?

30. When is b(x) > a(x)?

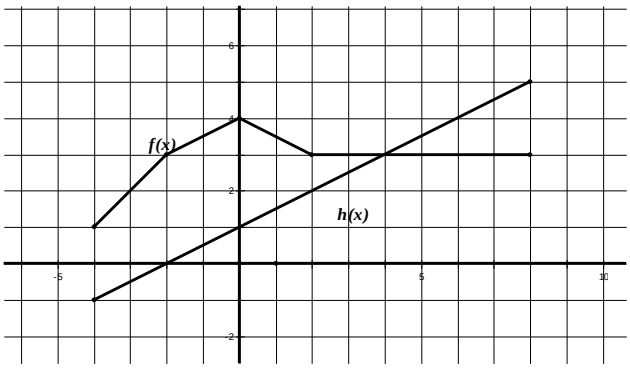
31. What is the y-intercept of b(x)?

32. What is the minimum of a(x)?

31. Find $f(x) + h(x)$ and plot it on the graph below.



32. Find $f(x) - h(x)$ and plot it on the graph below.



36. Write how you would say "23 < x < 28" out loud.