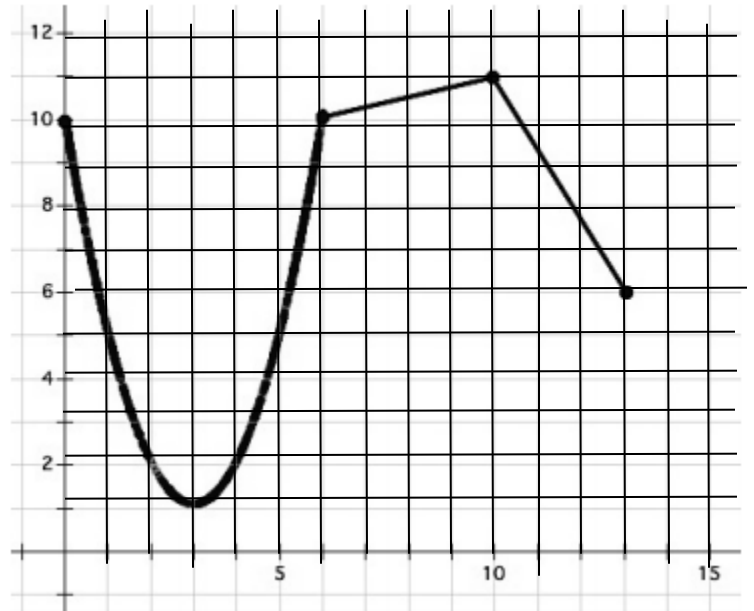


Unit 5 Day 7 – Use Function Notation Assignment

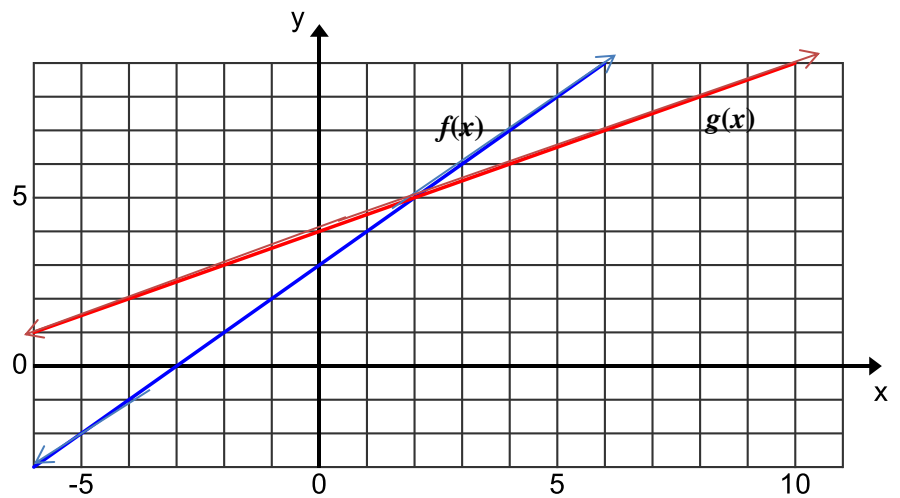
Use the graph at the right to answer the following questions.



1. What is $f(2)$?
2. For what values, if any, does $f(x) = 10$?
3. What are the intercepts?
4. What is the domain of $f(x)$?
5. On what interval is $f(x)$ increasing?
6. On what interval(s) is $f(x)$ decreasing?
7. For what values, if any, is $f(x) > 2$?



Use the graph at the right to answer the following questions.



8. Where does $f(x) = g(x)$?
9. What is $f(4) + g(4)$?
10. What is $g(-2) - f(-2)$?
11. On what interval is $f(x) > g(x)$?
12. Graph $f(x) + g(x)$ on the graph at the right.

My brain is like a muscle and mistakes are like lifting weights.

Use the following relationships to answer the questions below.

$$h(x) = 3x$$

$$g(x) = 3x + 4$$

$$f(x) = 3^x$$

13. a. Find $h(4)$

b. Find $g(4)$

c. Find $f(4)$

14. Write the equation for $h(x) + g(x)$

15. Write the equation for $f(x) + 6$

16. When is $g(x) > h(x)$?

The functions $a(x)$ and $b(x)$ are defined in the table below. Each function is a set of exactly five ordered pairs.

17. What is $a(-3) + b(-3)$?

x	$a(x)$	$b(x)$	$a(x) + b(x)$	$a(x) - b(x)$
-3	1	-1		
-1	7	-5		
0	3	-10		
2	8	2		
7	3	3		

18. What is $a(-1) - b(-1)$?

19. What is $a(0) + b(0)$?

20. Fill in the rest of the table.

21. Give two end behavior statements for this graph:

