

Function Review for Unit 3

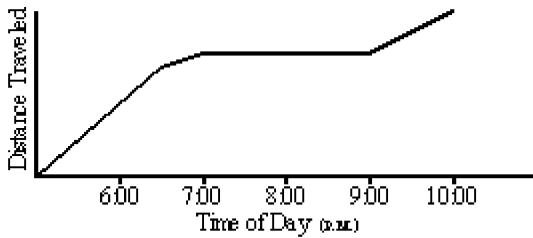
Multiple Choice *Identify the choice that best completes the statement or answers the question.*

_____ 1. Find the value of the variables in the table.

x	n	4	6	10	12
y	1	15	m	36	43

- A) $m = 22, n = 0$ B) $m = 29, n = 0$ C) $m = 19, n = 2$ D) $m = 21, n = 2$

_____ 2. The graph corresponds to Mr. Davis's shopping trip to a mall by car.

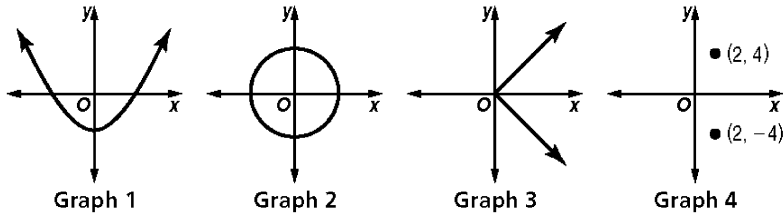


What most likely happened between 7:00 P.M. and 9:00 P.M.?

Mr. Davis:

- A) was at the mall shopping. B) was driving to the mall. C) was looking for a parking space. D) got tired and went home.

_____ 3. Which graph is a function of x ?



- A) Graph 1 B) Graph 2 C) Graph 3 D) Graph 4

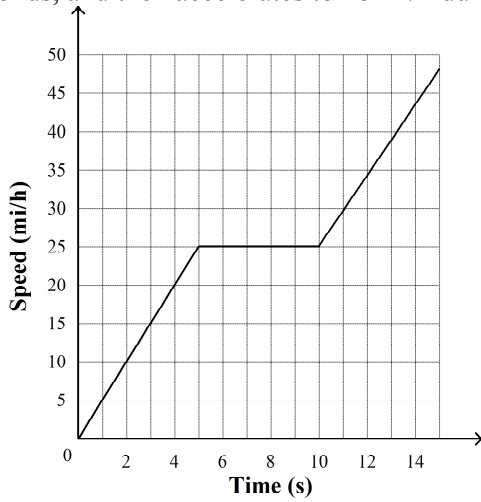
_____ 4. Which relation is a function?

- A) $\{(5, 3), (2, 8), (-5, -1), (4, 7), (2, 1)\}$ C) $\{(-5, 3), (2, 8), (-5, -1), (4, 7), (2, 2)\}$
 B) $\{(5, 3), (2, 8), (-5, -1), (4, 7), (5, 7)\}$ D) $\{(5, 3), (2, 8), (-5, -1), (4, 7), (-2, 1)\}$

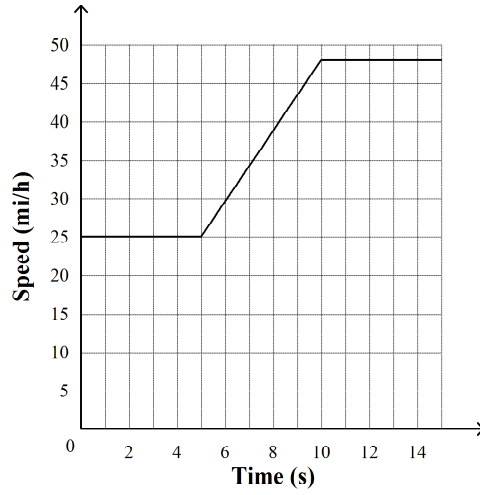
5. Which graph below could match the situation described?

A car traveling at 0 mi/h accelerates to 25 mi/h over the first 5 seconds. It maintains that speed for the next 5 seconds, and then accelerates to 48 mi/h during the next 5 seconds.

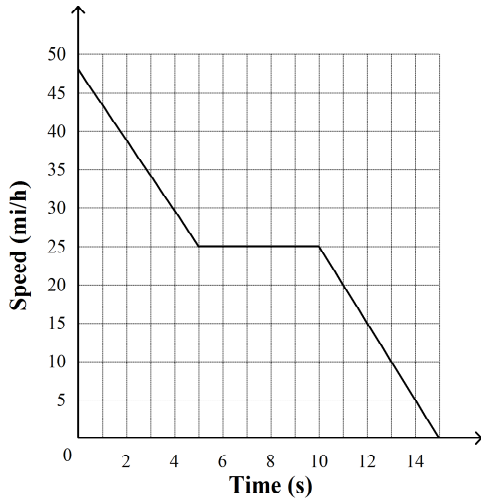
A)



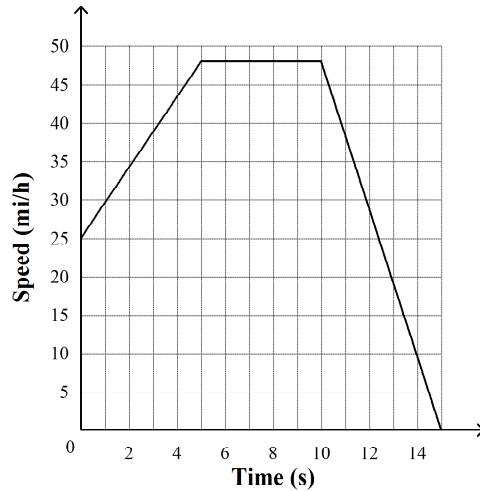
B)



C)



D)



6. Uncle Brian gives Rebecca money on each of her birthdays. How much money will Uncle Brian most likely give Rebecca on her 14th birthday?

Birthday	8	9	10	11	12
Money	\$9	\$12	\$18	\$30	\$54

A) \$78 B) \$102 C) \$198 D) \$390

7. A museum has an interactive exhibit on U.S. mountains. Entering a natural number n causes it to speak the name of the n th highest mountain in the United States. Entering number 16 causes it to say Mt. Mitchell. This exhibit models a function. What is the domain?

A) the numbers entered B) the interactive exhibit C) the name of the mountains D) the museum

8. What is the range of the function described in Question 7?

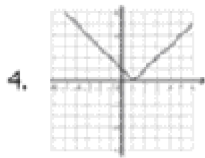
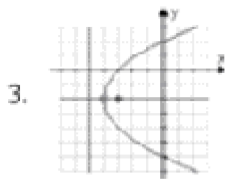
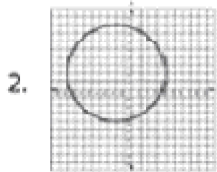
A) the interactive exhibit B) the number Toby enters C) the names of the mountains D) the museum

____ 9.

Which represents a function?

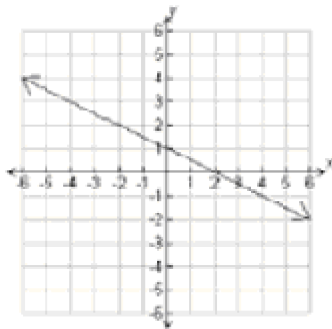
1.

x	y
2	2
3	5
4	10
5	15



- A) Both 1 and 4 B) Both 1 and 2 C) Only 1 D) Only 3

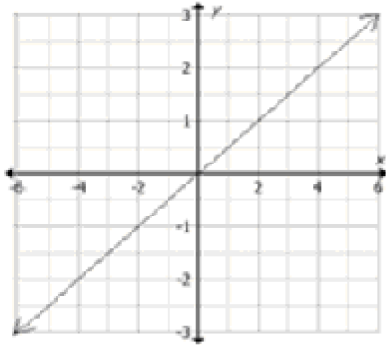
____ 10. A linear function is graphed in the coordinate plane.



What is the value of $f(4)$?

- A) -6 B) -1 C) 1 D) 3

- ____ 11. A function is graphed in the coordinate plane.



What is the value of $f(2)$ of the graphed function?
 A) -4 B) -1 C) 1 D) 4

Short Answer

12. Write the next two terms in the pattern. Then write the now-next equation (include the start value!)
 8, 14, 20, 26, ...
13. Find the domain and range of the relation.

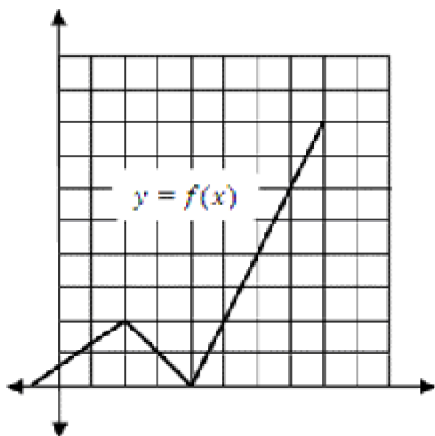
Age of Person	Books Read
65	42
36	37
29	37
29	17

14. What are the two missing numbers in the pattern?
 87, 94, 101, ?, ?, 122
15. Write a now-next rule for the table.

x	$f(x)$
3	7
4	8
5	9
6	10

16. Identify the independent and dependent variables in the situation below.
 Your GPA is based on the grades you receive in your courses.
17. Identify the independent and dependent variables in the situation below.
 Jake said that the more hours you work, the more money you make.

Use the graph below to answer the following questions.

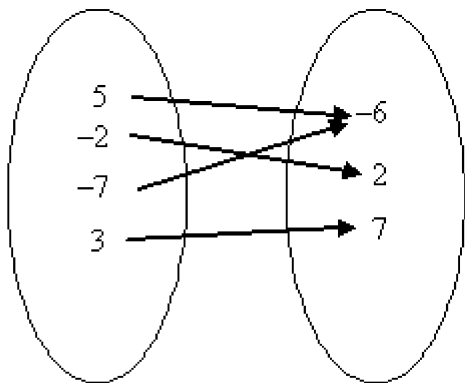


18. What is the value of $f(4)$?
19. What is the value of $f(7)$?
20. For what value(s) does $f(x) = 2$?
21. For what value(s) does $f(x) = 4$?
22. What are the domain and range shown on the graph?
23. **Write a now next equation for the table.**

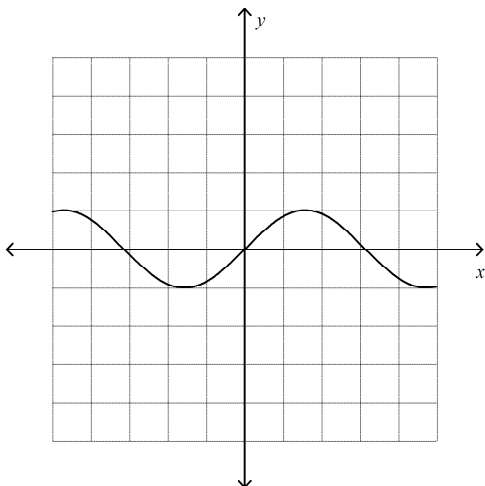
x	$f(x)$
2	-8
3	-12
4	-16
5	-20

Determine whether the relation is a function.

24.



25.



Find the domain: _____

Find the Range: _____

$f(5) =$ _____

$f(-3) =$ _____

find x when $f(x) = 0$ _____

26. Evaluate using the following formulas:

$$f(x) = 2^x - 4$$

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

$$h(x) = \frac{30}{x} - 7$$

a. $f(3) =$ _____

d. $g(-4) =$ _____

b. $h(5) =$ _____

e. $h(10) =$ _____

c. Solve for x when $g(x) = 17$