

Algebra 1

Unit 3 Test

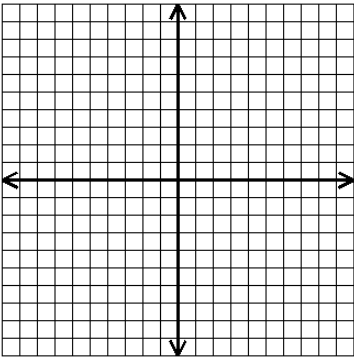
Name: _____

Date: _____Block: _____

Make a table and graph the function for the given domain. Then give the range of the function.

1. $f(x) = 3x - 5$

x	$f(x)$
-1	
0	
1	
2	
3	



Range: _____

Write a rule for the function.

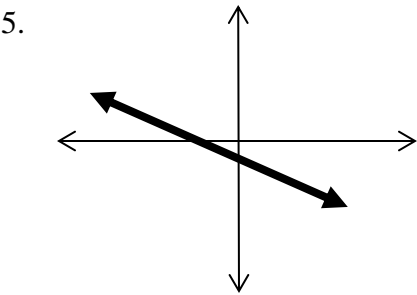
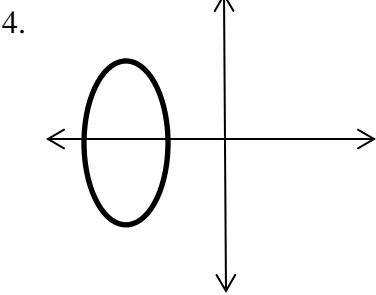
2. _____

Input, x	15	20	21	30
Output, y	7	12	13	22

3. _____

Input	Output
1	5
3	15
4	20
5	25

Use the vertical line test to determine whether or not each graph below represents a function. Explain why or why not.

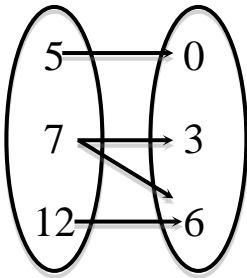


Tell whether the table or diagram represents a function. Yes or No? If not, explain.

6. _____

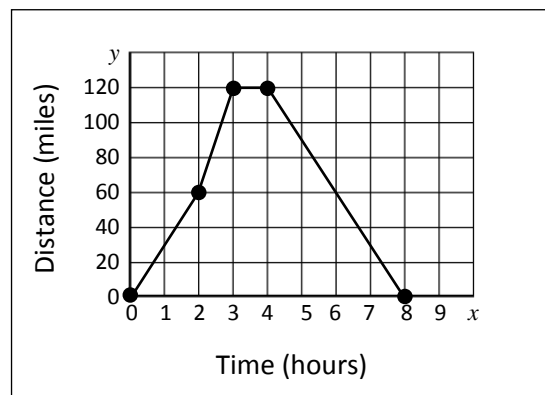
Input	Output
50	50
60	40
70	30
80	50
90	20

7. _____



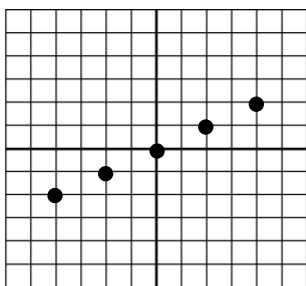
The graph shows a short trip that Bob took to visit his grandmother. His trip took a total of 8 hours going to visit and then returning home.

8. Between what two times is Bob's car not moving?
9. Between what two times is Bob traveling to Granny's house?
10. Between what two times is Bob traveling the fastest?



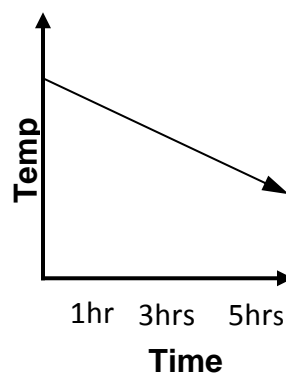
11. Evaluate $f(x) = -x + 2$ for $f(-5)$ and $f(1)$.
12. Find the **range** of the function $f(x) = -4x - 1$ if the **domain** is $\{x = -3, 12\}$.
13. Find the **domain** of the function $g(x) = 4x - 3$ if the **range** is $\{g(x) = -23, 13, 33\}$.
14. Find the value of x in the function $p(x) = 9x - 2$ so that $p(x) = -3$.

15. Which statement is true for the function whose graph is shown?



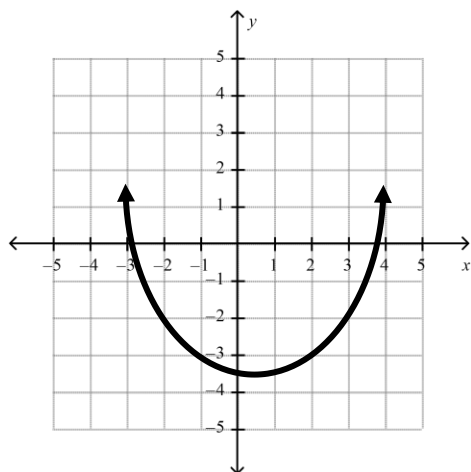
- A. The domain is $\{x \mid x = -2, -1, 0, 1, 2\}$
- B. The domain is $\{x \mid x = -4, -2, 0, 2, 4\}$
- C. The range is all real numbers.
- D. The range is $y \leq 2$.

16. Which of the following best describes the graph?

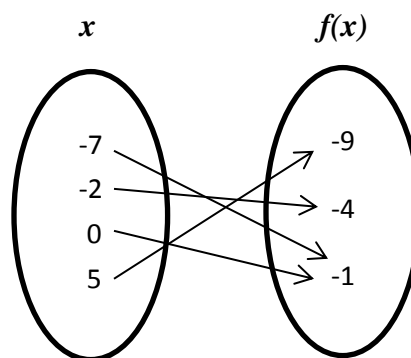


- A. As the time increases, the temperature increases.
- B. As the time decreases, the temperature decreases.
- C. As the time increases, the temperature decreases.
- D. The temperature does not depend on the time.

17. The graph below represents a function.
What is the value of $f(3)$? _____

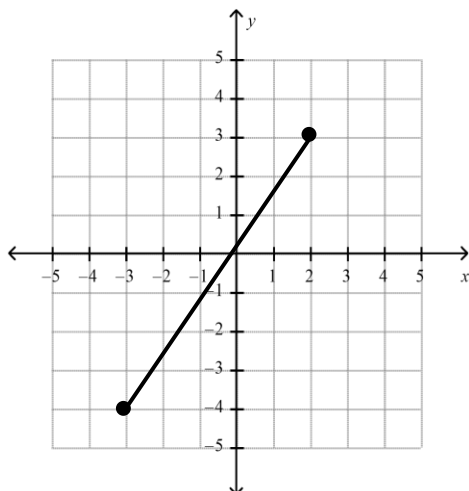


18. What is the range of the function shown below?



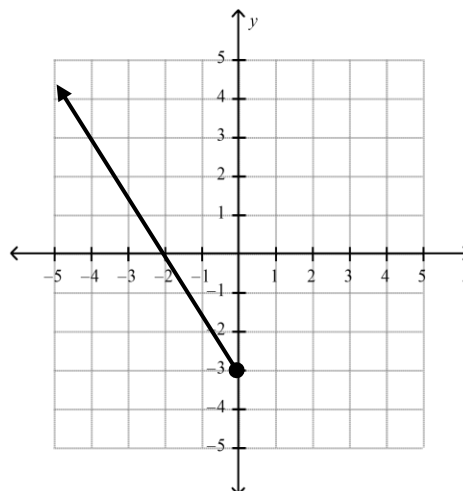
- A. $\{-7, -2, 0, 5\}$ B. $\{-9, -4, -1\}$
C. $\{-9, -7, -4, -2, -1, 0, 5\}$ D. $\{-1\}$

19. Find the domain and range of each graph below.



Domain: _____

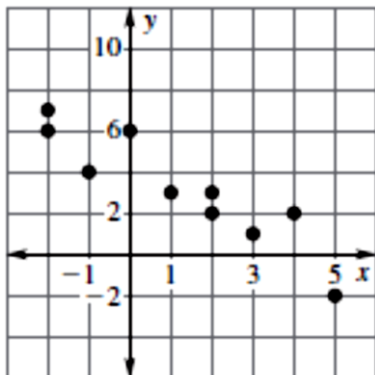
Range: _____



Domain: _____

Range: _____

20. Use the scatter plot below for a – c.



- a) What type of correlation is shown?

Positive Negative None

- b) Predict the value of y if $x = 6$ _____

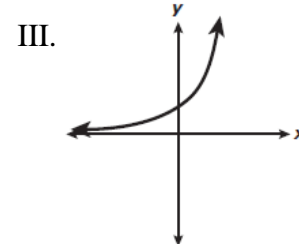
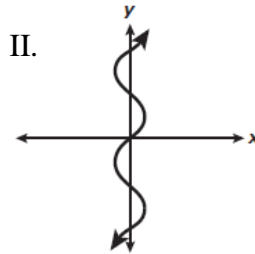
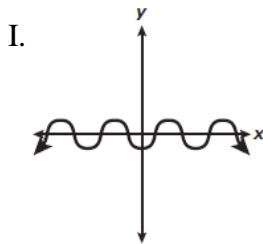
- c) Predict the value of x if $y = 10$ _____

21. A storm is headed through North Texas. The duration of the storm is measured in hours while the rainfall is measured in inches as seen in the table below. Does this situation represent a **discrete** or **continuous** function? Explain.

Duration of the storm(hrs), x	1	2	3
Amount of rain(inches), y	0.5	1	1.5

Multiple Choice.

22. Which graph does not represent y as a function of x ?



- A) I only B) II only C) III only D) I and III E) I and II

At the Dallas Zoo, employees noticed that the number of bottles of water sold was related to the temperature outside.

23. What type of correlation does this situation represent?

- A) positive
B) negative
C) no correlation

24. What is the dependent variable?

- A) temperature
B) bottles of water

25. Find the range for the function $f(x) = 3x - 2$ with the domain: $\{-3, 0, 4\}$.

- A) $\{-7, -2, 10\}$ B) $\{-11, -2, 10\}$ C) $\{7, 1, 5\}$

26. Given the function $g(x) = \{(-3, 1), (0, 5), (1, 7)\}$. What is $g(1)$?

- A) -3 B) 7 C) 1 D) not here

27. The cost, C , of getting your car repaired is given by $C = 75h + 90$, where h is the number of hours in labor the mechanic works on your car, 75 is the cost per hour the mechanic charges, and 90 is the cost for the parts needed to repair your car. Identify the independent variable.

- A) 90 B) C C) h D) 75