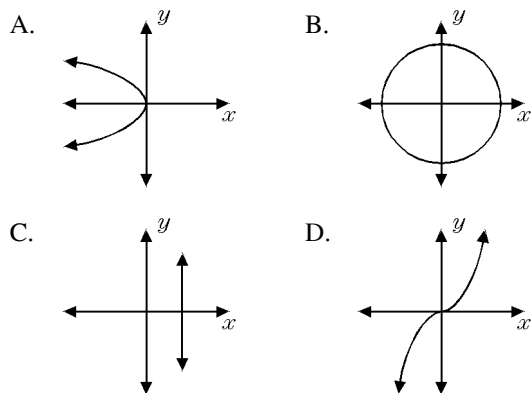


Unit 7: Functions

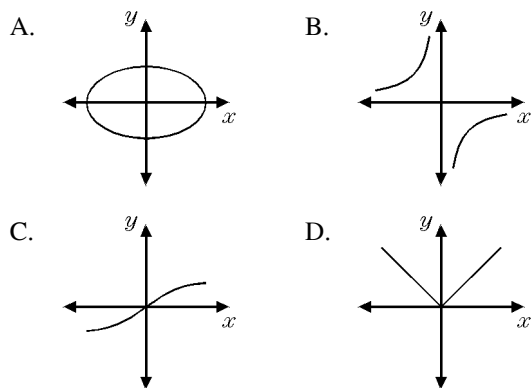
Name: \_\_\_\_\_

Date: \_\_\_\_\_

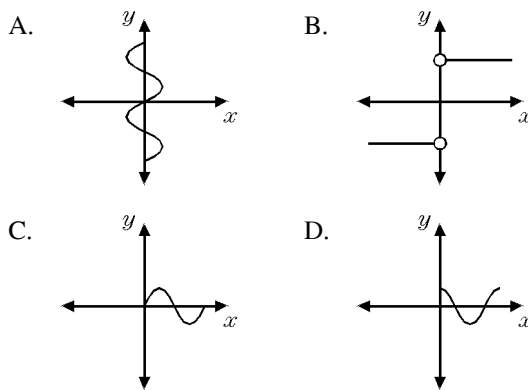
1. Which graph represents a function?



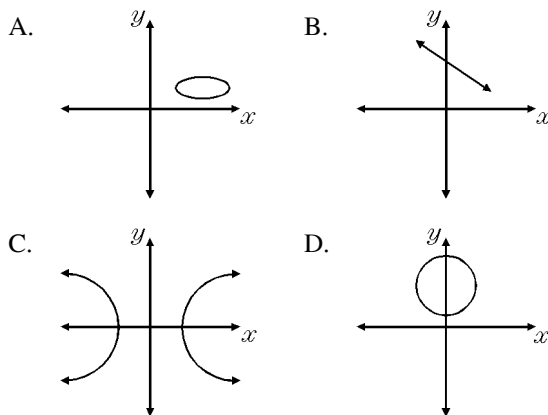
2. Which diagram is not the graph of a function?



3. Which diagram shows a relation that is *not* a function?

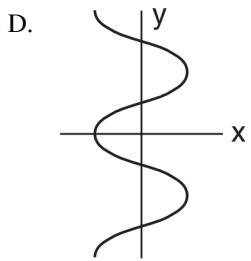
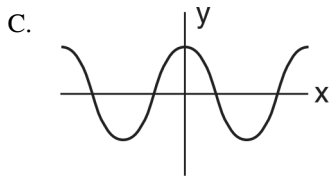
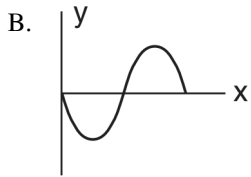
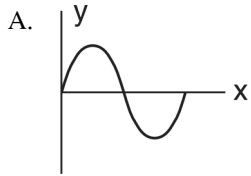


4. Which graph of a relation is also a function?

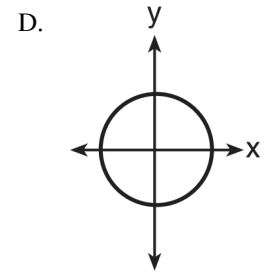
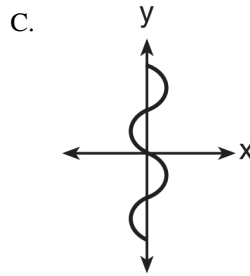
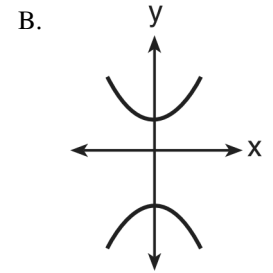
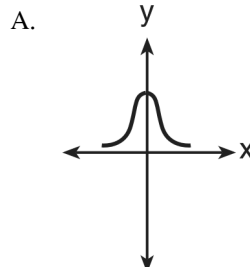


Unit 7: Functions

5. Which graph does *not* represent a function?

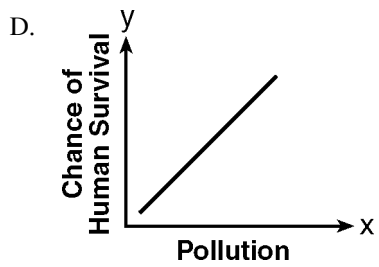
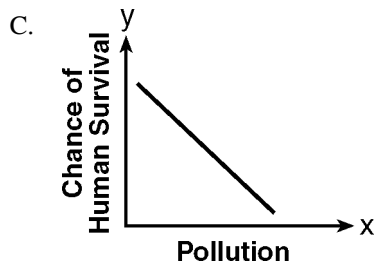
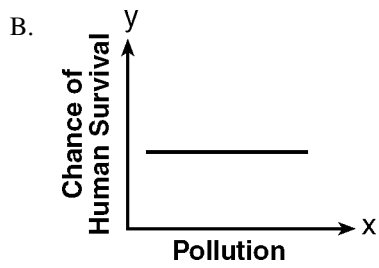
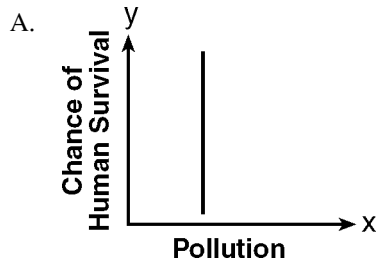


6. Which graph represents a function?

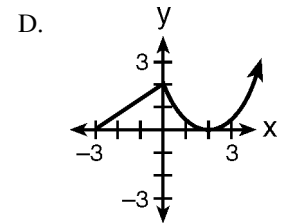
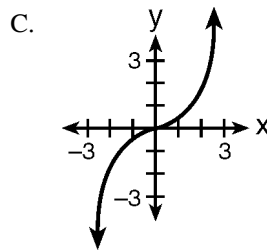
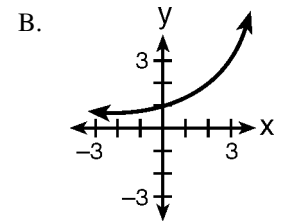
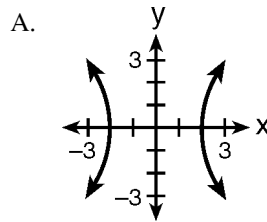


Unit 7: Functions

7. Which graph does *not* represent a function of  $x$ ?

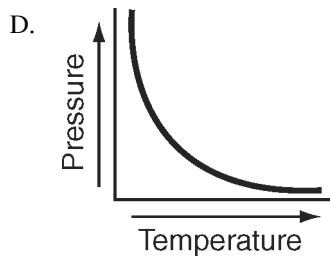
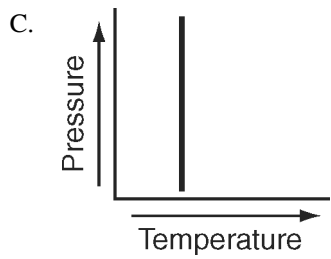
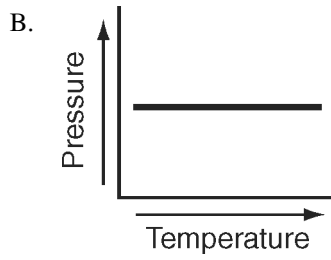
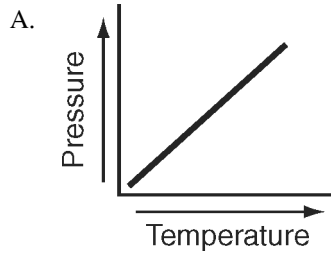


8. Which graph is not a function?

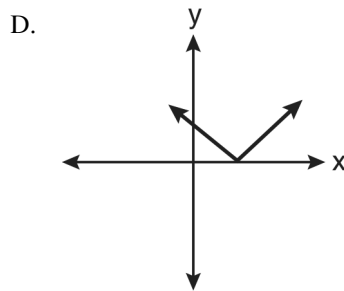
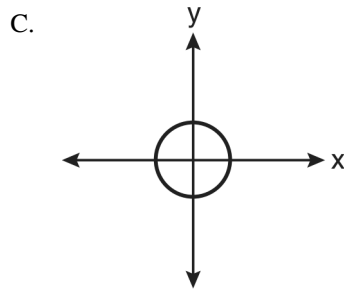
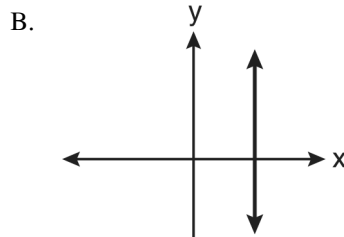
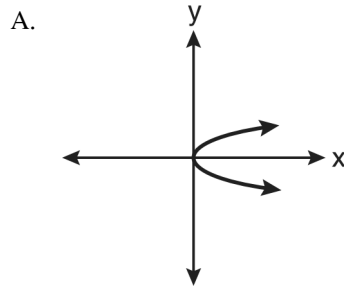


Unit 7: Functions

9. Each graph below represents a possible relationship between temperature and pressure. Which graph does *not* represent a function?

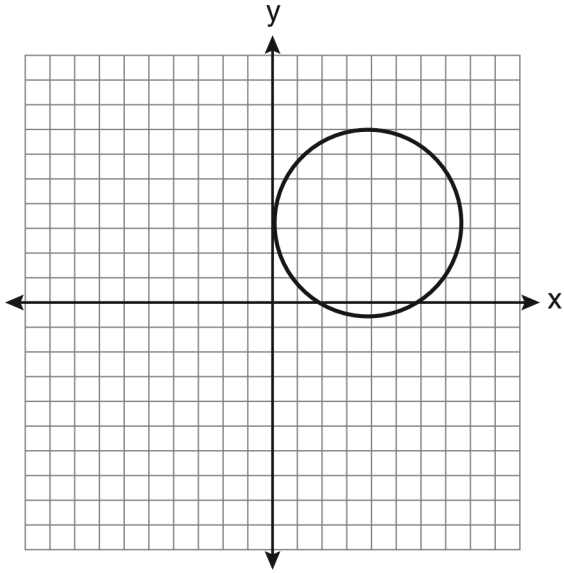


10. Which graph represents a function?



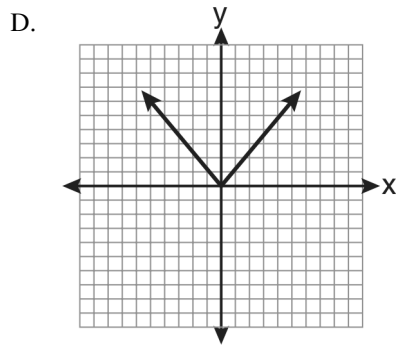
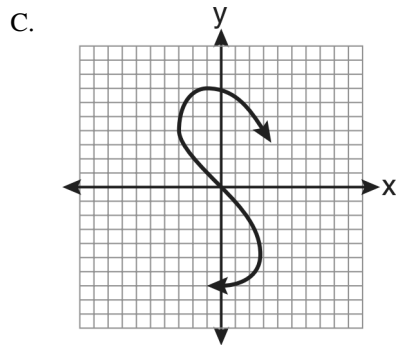
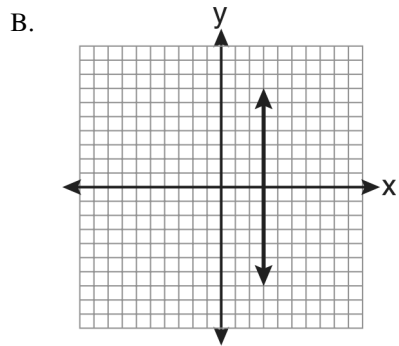
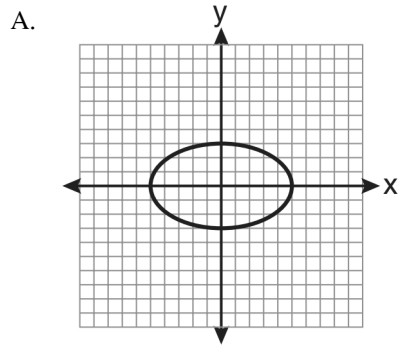
Unit 7: Functions

11. Which statement is true about the relation shown on the graph below?



- A. It is a function because there exists one  $x$ -coordinate for each  $y$ -coordinate.
- B. It is a function because there exists one  $y$ -coordinate for each  $x$ -coordinate.
- C. It is not a function because there are multiple  $y$ -values for a given  $x$ -value.
- D. It is not a function because there are multiple  $x$ -values for a given  $y$ -value.

12. Which graph represents a function?



## Unit 7: Functions

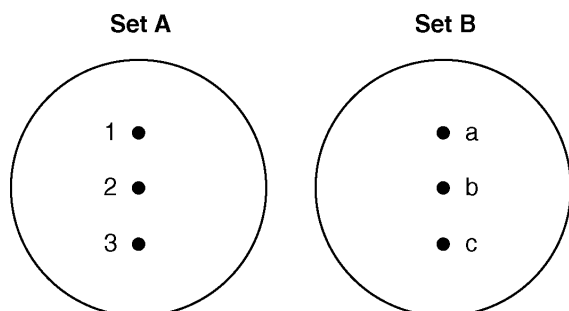
13. Given the relation  $R = \{(-2, 3), (a, 4), (1, 9), (0, 7)\}$ . Which placement for  $a$  makes this relation a function

A. 1      B. -2      C. 0      D. 4

14. Which set of ordered pairs is *not* a function?

A.  $\{(3, 1), (2, 1), (1, 2), (3, 2)\}$   
B.  $\{(4, 1), (5, 1), (6, 1), (7, 1)\}$   
C.  $\{(1, 2), (3, 4), (4, 5), (5, 6)\}$   
D.  $\{(0, 0), (1, 1), (2, 2), (3, 3)\}$

15. On the accompanying diagram, draw a mapping of a relation from set  $A$  to set  $B$  that is not a function. Explain why the relationship you drew is *not* a function.



16. Which set of ordered pairs does *not* represent a function?

A.  $\{(3, -2), (-2, 3), (4, -1), (-1, 4)\}$   
B.  $\{(3, -2), (3, -4), (4, -1), (4, -3)\}$   
C.  $\{(3, -2), (4, -3), (5, -4), (6, -5)\}$   
D.  $\{(3, -2), (5, -2), (4, -2), (-1, -2)\}$

17. Which relation is *not* a function?

A.  $\{(1, 5), (2, 6), (3, 6), (4, 7)\}$   
B.  $\{(4, 7), (2, 1), (-3, 6), (3, 4)\}$   
C.  $\{(-1, 6), (1, 3), (2, 5), (1, 7)\}$   
D.  $\{(-1, 2), (0, 5), (5, 0), (2, -1)\}$

18. Which relation represents a function?

A.  $\{(0, 3), (2, 4), (0, 6)\}$   
B.  $\{(-7, 5), (-7, 1), (-10, 3), (-4, 3)\}$   
C.  $\{(2, 0), (6, 2), (6, -2)\}$   
D.  $\{(-6, 5), (-3, 2), (1, 2), (6, 5)\}$

Unit 7: Functions

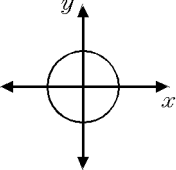
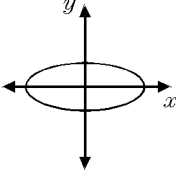
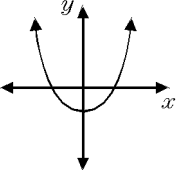
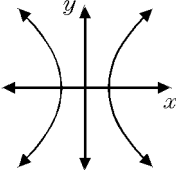
19. Which relation is a function?

- A.  $\{(\frac{3}{4}, 0), (0, 1), (\frac{3}{4}, 2)\}$
- B.  $\{(-2, 2), (-\frac{1}{2}, 1), (-2, 4)\}$
- C.  $\{(-1, 4), (0, 5), (0, 4)\}$
- D.  $\{(2, 1), (4, 3), (6, 5)\}$

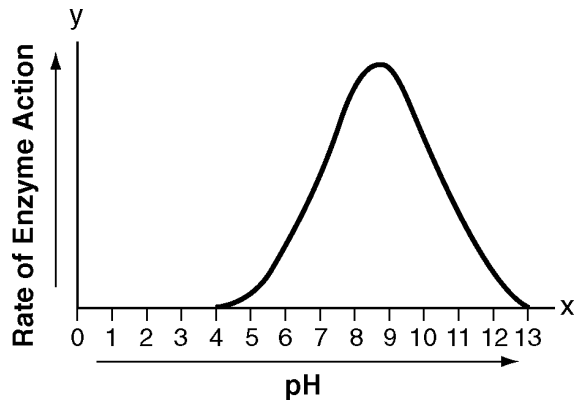
20. Which relation is a function?

- A.  $\{(\frac{3}{4}, 0), (0, 1), (\frac{3}{4}, 2)\}$
- B.  $\{(-2, 2), (-\frac{1}{2}, 1), (-2, 4)\}$
- C.  $\{(-1, 4), (0, 5), (0, 4)\}$
- D.  $\{(2, 1), (4, 3), (6, 5)\}$

21. Which graph illustrates a quadratic relation whose domain is all real numbers?

- A. 
- B. 
- C. 
- D. 

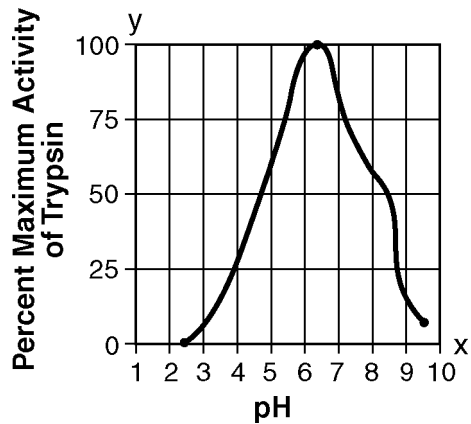
22. The effect of pH on the action of a certain enzyme is shown on the accompanying graph.



What is the domain of this function?

- A.  $4 \leq x \leq 13$
- B.  $4 \leq y \leq 13$
- C.  $x \geq 0$
- D.  $y \geq 0$

23. Data collected during an experiment are shown in the accompanying graph.

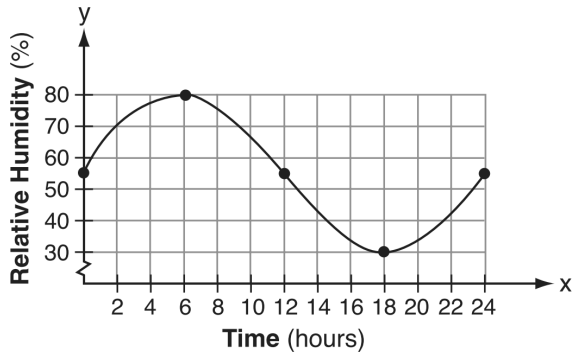


What is the range of this set of data?

- A.  $2.5 \leq y \leq 9.5$
- B.  $2.5 \leq x \leq 9.5$
- C.  $0 \leq y \leq 100$
- D.  $1 \leq x \leq 10$

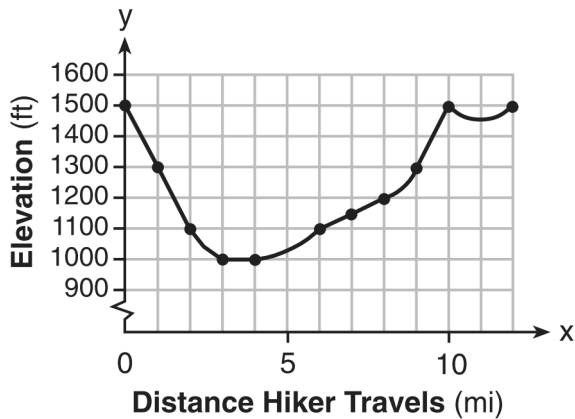
Unit 7: Functions

24. A meteorologist drew the accompanying graph to show the changes in relative humidity during a 24-hour period in New York City.



What is the range of this set of data?

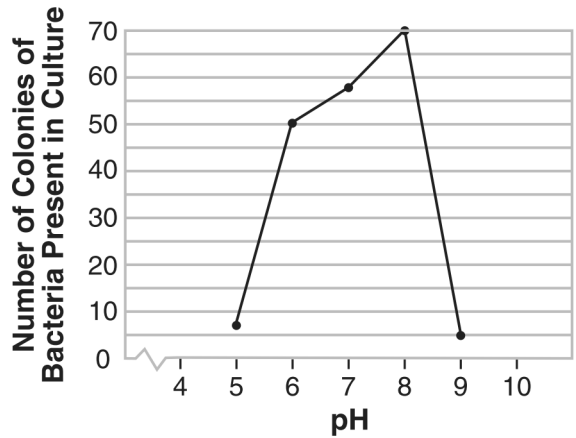
- A.  $0 \leq y \leq 24$                       B.  $0 \leq x \leq 24$   
 C.  $30 \leq y \leq 80$                       D.  $30 \leq x \leq 80$
25. The accompanying graph shows the elevation of a certain region in New York State as a hiker travels along a trail.



What is the domain of this function?

- A.  $1,000 \leq x \leq 1,500$                       B.  $1,000 \leq y \leq 1,500$   
 C.  $0 \leq x \leq 12$                                   D.  $0 \leq y \leq 12$

26. The accompanying graph illustrates the presence of a certain strain of bacteria at various pH levels.



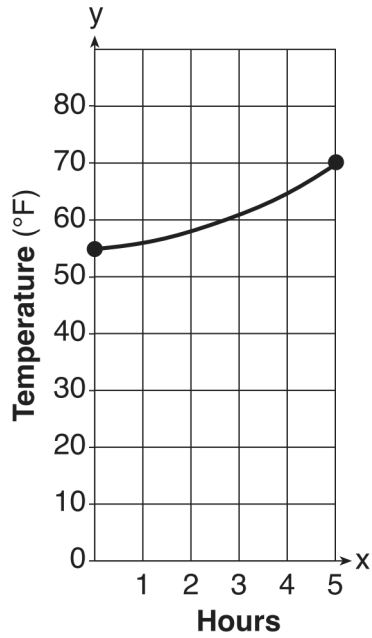
What is the range of this set of data?

- A.  $5 \leq x \leq 9$                                   B.  $5 \leq x \leq 70$   
 C.  $0 \leq y \leq 70$                                   D.  $5 \leq y \leq 70$



Unit 7: Functions

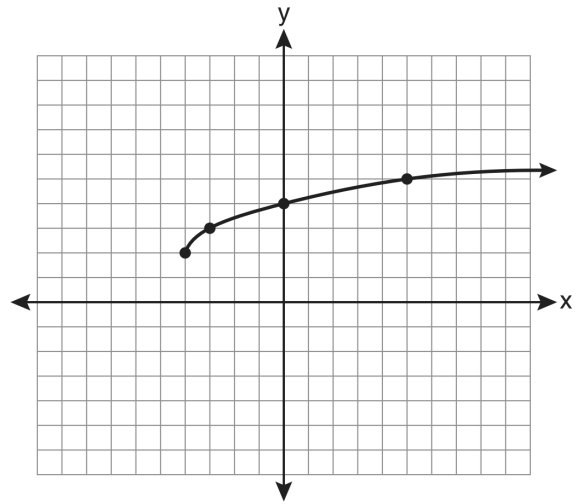
27. The air temperature in Dallas, Texas, over a 5-hour period is shown in the accompanying graph.



What is the range of this set of data?

- A.  $0 \leq x \leq 5$                       B.  $56 \leq x \leq 70$   
 C.  $0 \leq y \leq 80$                       D.  $56 \leq y \leq 70$

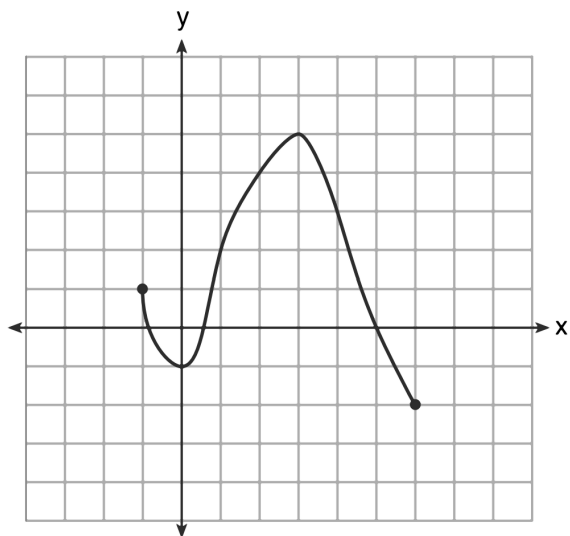
28. What are the domain and the range of the function shown in the graph below?



- A.  $\{x|x > -4\}; \{y|y > 2\}$   
 B.  $\{x|x \geq -4\}; \{y|y \geq 2\}$   
 C.  $\{x|x > 2\}; \{y|y > -4\}$   
 D.  $\{x|x \geq 2\}; \{y|y \geq -4\}$

Unit 7: Functions

29. What is the domain of the function shown below?



- A.  $-1 \leq x \leq 6$       B.  $-1 \leq y \leq 6$   
C.  $-2 \leq x \leq 5$       D.  $-2 \leq y \leq 5$

Unit 7: Functions      01/22/2013

1.  
Answer:      D
2.  
Answer:      A
3.  
Answer:      A
4.  
Answer:      B
5.  
Answer:      D
6.  
Answer:      A
7.  
Answer:      A
8.  
Answer:      A
9.  
Answer:      C
10.  
Answer:      D
11.  
Answer:      C
12.  
Answer:      D
13.  
Answer:      D
14.  
Answer:      A
- 15.
16.  
Answer:      B
17.  
Answer:      C
18.  
Answer:      D
19.  
Answer:      D
20.  
Answer:      D

21.  
Answer:      C
22.  
Answer:      A
23.  
Answer:      C
24.  
Answer:      C
25.  
Answer:      C
26.  
Answer:      D
27.  
Answer:      D
28.  
Answer:      B
29.  
Answer:      A