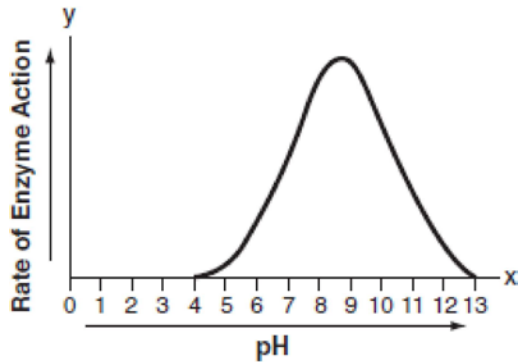


**A2.A.51: Domain and Range 1: Determine the domain and range of a function from its graph**

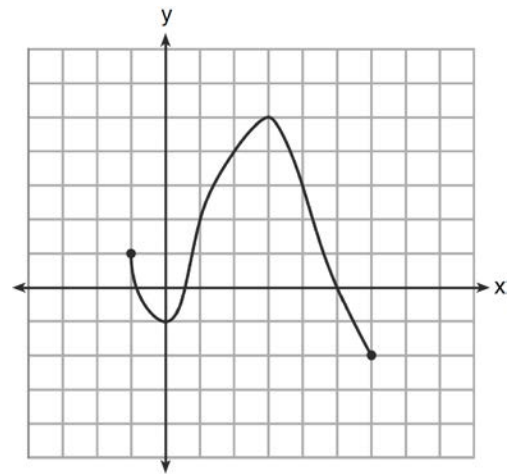
- 1 The effect of pH on the action of a certain enzyme is shown on the accompanying graph.



What is the domain of this function?

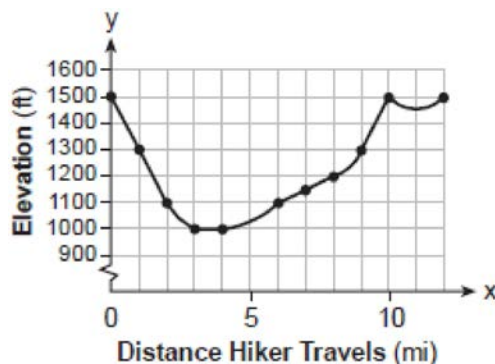
- 1)  $4 \leq x \leq 13$
- 2)  $4 \leq y \leq 13$
- 3)  $x \geq 0$
- 4)  $y \geq 0$

- 3 What is the domain of the function shown below?



- 1)  $-1 \leq x \leq 6$
- 2)  $-1 \leq y \leq 6$
- 3)  $-2 \leq x \leq 5$
- 4)  $-2 \leq y \leq 5$

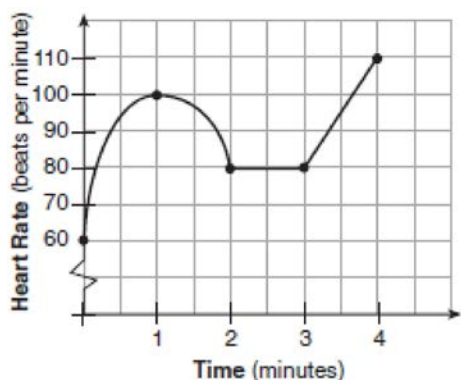
- 2 The accompanying graph shows the elevation of a certain region in New York State as a hiker travels along a trail.



What is the domain of this function?

- 1)  $1,000 \leq x \leq 1,500$
- 2)  $1,000 \leq y \leq 1,500$
- 3)  $0 \leq x \leq 12$
- 4)  $0 \leq y \leq 12$

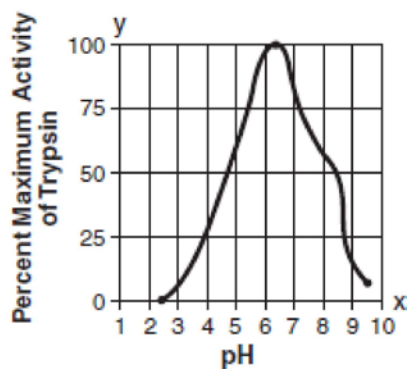
- 4 The accompanying graph shows the heart rate, in beats per minute, of a jogger during a 4-minute interval.



What is the range of the jogger's heart rate during this interval?

- 1)  $0 - 4$
- 2)  $1 - 4$
- 3)  $0 - 110$
- 4)  $60 - 110$

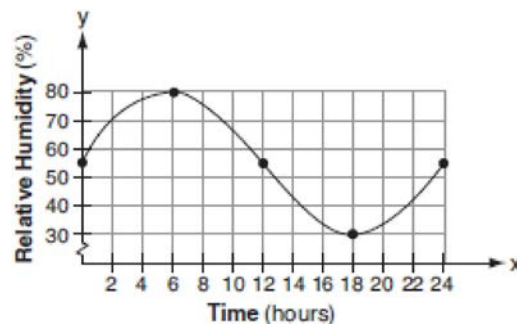
- 5 Data collected during an experiment are shown in the accompanying graph.



What is the range of this set of data?

- 1)  $2.5 \leq y \leq 9.5$
- 2)  $2.5 \leq x \leq 9.5$
- 3)  $0 \leq y \leq 100$
- 4)  $1 \leq x \leq 10$

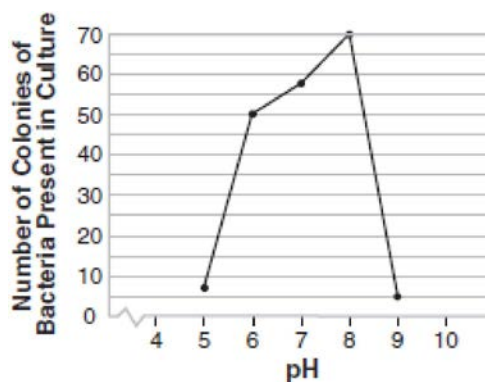
- 6 A meteorologist drew the accompanying graph to show the changes in relative humidity during a 24-hour period in New York City.



What is the range of this set of data?

- 1)  $0 \leq y \leq 24$
- 2)  $0 \leq x \leq 24$
- 3)  $30 \leq y \leq 80$
- 4)  $30 \leq x \leq 80$

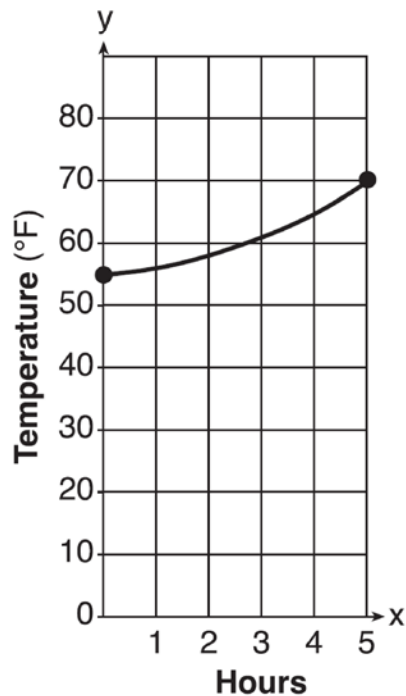
- 7 The accompanying graph illustrates the presence of a certain strain of bacteria at various pH levels.



What is the range of this set of data?

- 1)  $5 \leq x \leq 9$
- 2)  $5 \leq x \leq 70$
- 3)  $0 \leq y \leq 70$
- 4)  $5 \leq y \leq 70$

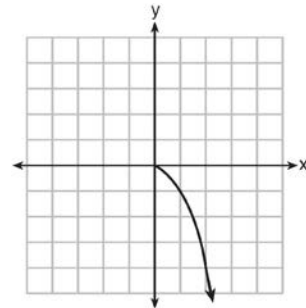
- 8 The air temperature in Dallas, Texas, over a 5-hour period is shown in the accompanying graph.



What is the range of this set of data?

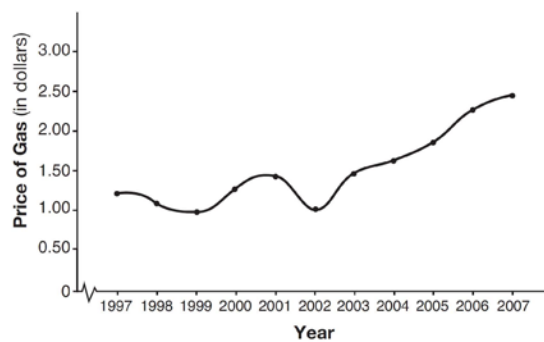
- 1)  $0 \leq x \leq 5$
- 2)  $56 \leq x \leq 70$
- 3)  $0 \leq y \leq 80$
- 4)  $56 \leq y \leq 70$

- 9 What is the range of the function shown below?



- 1)  $x \leq 0$
- 2)  $x \geq 0$
- 3)  $y \leq 0$
- 4)  $y \geq 0$

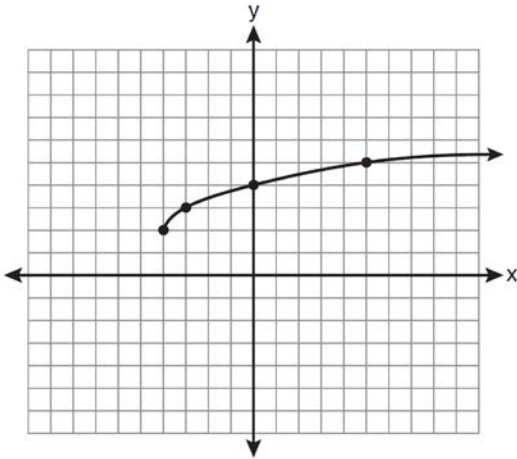
- 10 The graph below shows the average price of gasoline, in dollars, for the years 1997 to 2007.



What is the approximate range of this graph?

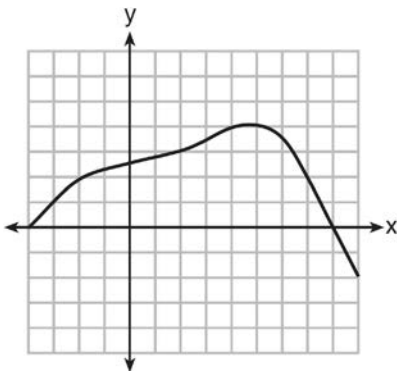
- 1)  $1997 \leq x \leq 2007$
- 2)  $1999 \leq x \leq 2007$
- 3)  $0.97 \leq y \leq 2.38$
- 4)  $1.27 \leq y \leq 2.38$

- 11 What are the domain and the range of the function shown in the graph below?



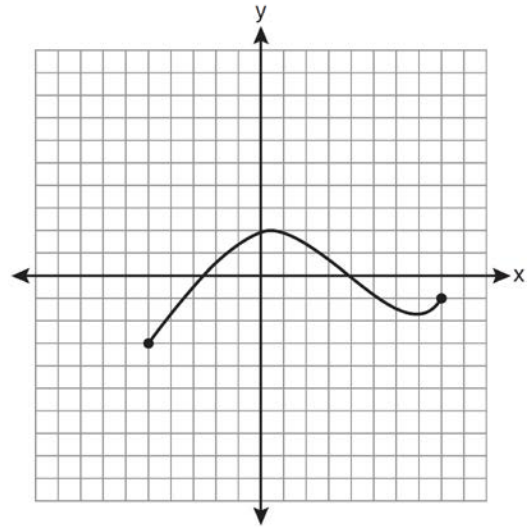
- 1)  $\{x|x > -4\}; \{y|y > 2\}$
- 2)  $\{x|x \geq -4\}; \{y|y \geq 2\}$
- 3)  $\{x|x > 2\}; \{y|y > -4\}$
- 4)  $\{x|x \geq 2\}; \{y|y \geq -4\}$

- 12 Which value is in the domain of the function graphed below, but is *not* in its range?



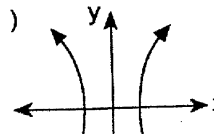
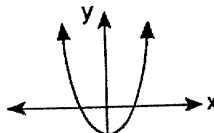
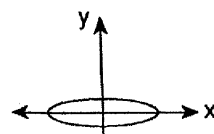
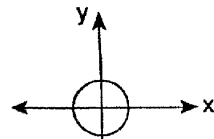
- 1) 0
- 2) 2
- 3) 3
- 4) 7

- 13 The graph below represents the function  $y = f(x)$ .



State the domain and range of this function.

- 14 Which graph illustrates a quadratic relation whose domain is all real numbers?



**A2.A.51: Domain and Range 1: Determine the domain and range of a function from its graph**  
**Answer Section**

- 1 ANS: 1 REF: 010602b  
2 ANS: 3 REF: 060804b  
3 ANS: 1 REF: 061202a2  
4 ANS: 4 REF: 060501b  
5 ANS: 3 REF: 010712b  
6 ANS: 3 REF: 080708b  
7 ANS: 4 REF: 010918b  
8 ANS: 4 REF: 061013b  
9 ANS: 3 REF: 061308a2  
10 ANS: 3 REF: 061418a2  
11 ANS: 2 REF: 081003a2  
12 ANS: 4 REF: 061518a2  
13 ANS:  
D:  $-5 \leq x \leq 8$ . R:  $-3 \leq y \leq 2$

REF: 011132a2

- 14 ANS: 3 REF: 019518siii