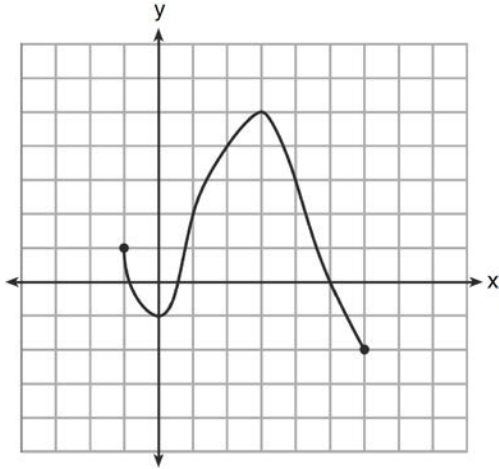


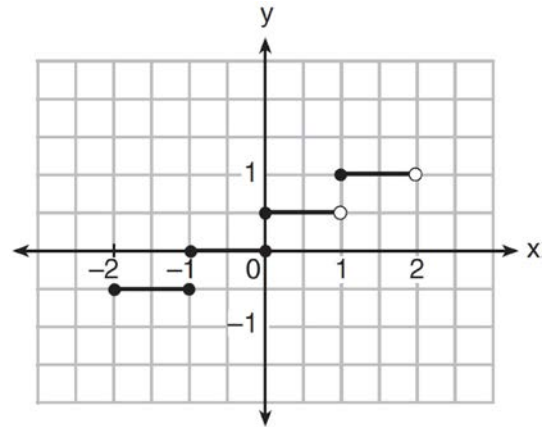
F.IF.A.2: Domain and Range 1a

1 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) $-2 \leq y \leq 5$

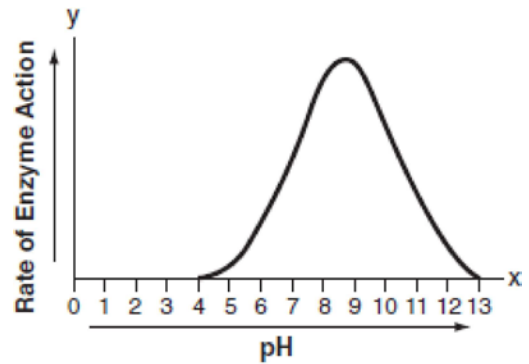
2 The graph of a relation is shown below.



What is the domain of this relation?

- 1) $\{-2, -1, 0, 1\}$
- 2) $\{-\frac{1}{2}, 0, \frac{1}{2}, 1\}$
- 3) $\{x \mid -2 \leq x < 2\}$
- 4) $\{x \mid -2 \leq x \leq 2\}$

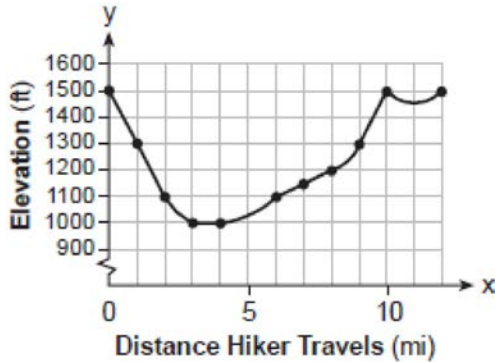
3 The effect of pH on the action of a certain enzyme is shown on the accompanying graph.



What is the domain of this function?

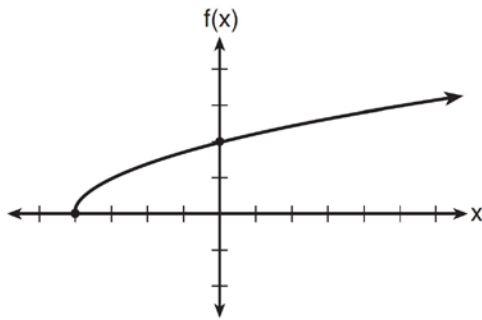
- 1) $4 \leq x \leq 13$
- 2) $4 \leq y \leq 13$
- 3) $x \geq 0$
- 4) $y \geq 0$

- 4 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?

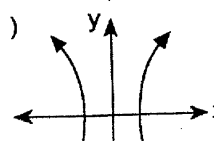
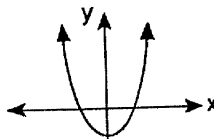
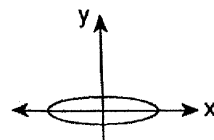
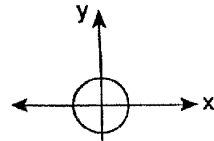
- 1) $1,000 \leq x \leq 1,500$
 - 2) $1,000 \leq y \leq 1,500$
 - 3) $0 \leq x \leq 12$
 - 4) $0 \leq y \leq 12$
- 5 The graph of the function $f(x) = \sqrt{x+4}$ is shown below.



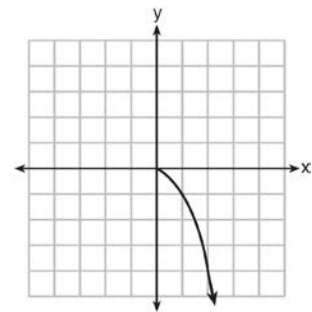
The domain of the function is

- 1) $\{x | x > 0\}$
- 2) $\{x | x \geq 0\}$
- 3) $\{x | x > -4\}$
- 4) $\{x | x \geq -4\}$

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

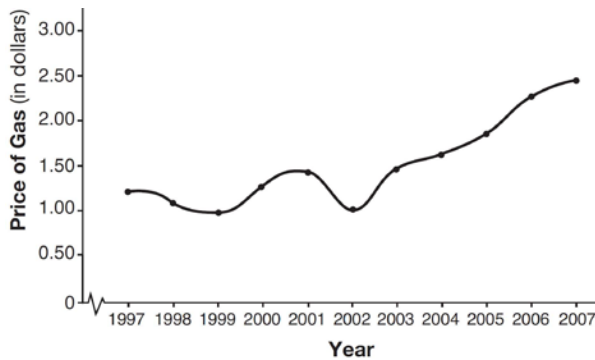


- 7 What is the range of the function shown below?



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

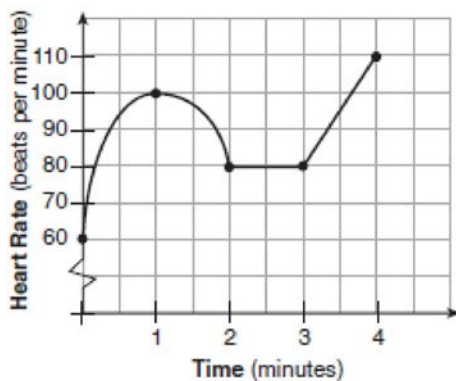
- 8 The graph below shows the average price of gasoline, in dollars, for the years 1997 to 2007.



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) $1.27 \leq y \leq 2.38$

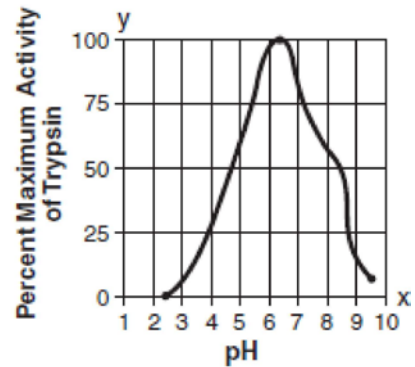
- 9 The accompanying graph shows the heart rate, in beats per minute, of a jogger during a 4-minute interval.



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

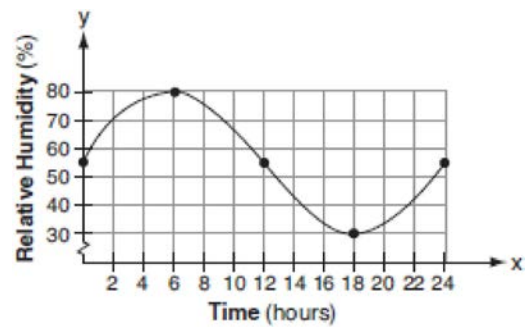
- 10 Data collected during an experiment are shown in the accompanying graph.



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) $1 \leq x \leq 10$

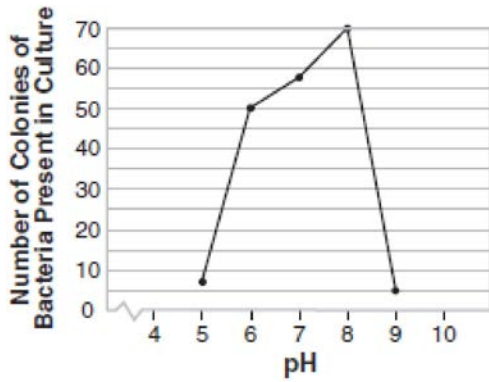
- 11 A meteorologist drew the accompanying graph to show the changes in relative humidity during a 24-hour period in New York City.



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) $30 \leq x \leq 80$

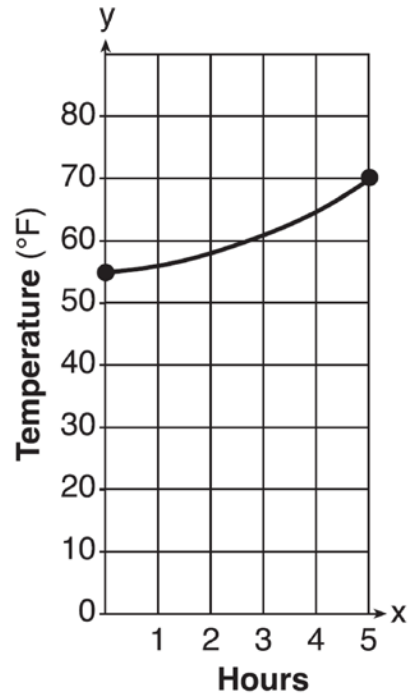
- 12 The accompanying graph illustrates the presence of a certain strain of bacteria at various pH levels.



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) $5 \leq y \leq 70$

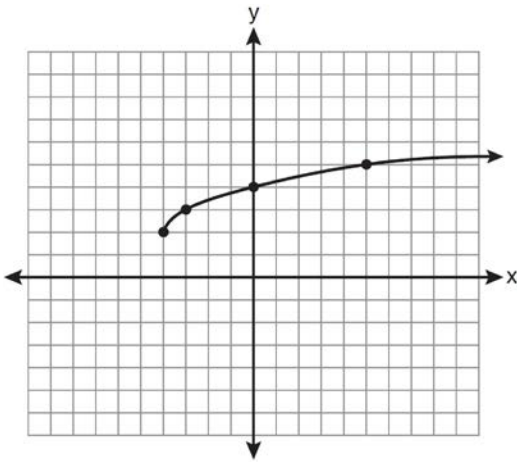
- 13 The air temperature in Dallas, Texas, over a 5-hour period is shown in the accompanying graph.



What is the range of this set of data?

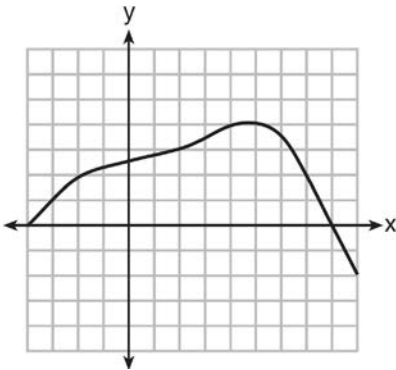
- 1) $0 \leq x \leq 5$
- 2) $56 \leq x \leq 70$
- 3) $0 \leq y \leq 80$
- 4) $56 \leq y \leq 70$

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



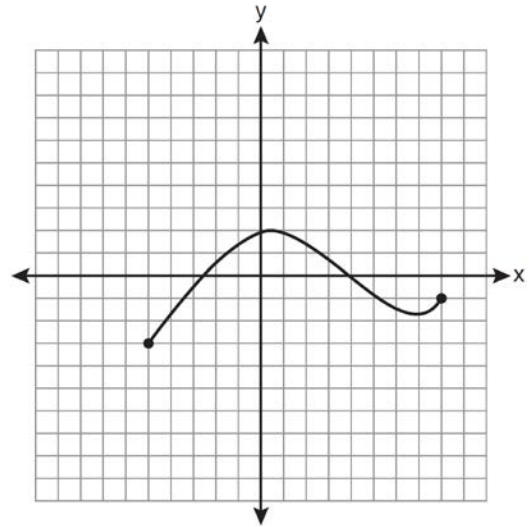
- 1) $\{x | x > -4\}; \{y | y > 2\}$
- 2) $\{x | x \geq -4\}; \{y | y \geq 2\}$
- 3) $\{x | x > 2\}; \{y | y > -4\}$
- 4) $\{x | x \geq 2\}; \{y | y \geq -4\}$

- 15 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

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



State the domain and range of this function.

F.IF.A.2: Domain and Range 1a
Answer Section

- | | | |
|----|-------------------------|-----------------------|
| 1 | ANS: 1 | REF: 061202a2 |
| 2 | ANS: 3 | REF: 061606a2 |
| 3 | ANS: 1 | REF: 010602b |
| 4 | ANS: 3 | REF: 060804b |
| 5 | ANS: 4 | REF: 061509ai |
| 6 | ANS: 3 | REF: 019518siii |
| 7 | ANS: 3 | REF: 061308a2 |
| 8 | ANS: 3 | REF: 061418a2 |
| 9 | ANS: 4 | REF: 060501b |
| 10 | ANS: 3 | REF: 010712b |
| 11 | ANS: 3 | REF: 080708b |
| 12 | ANS: 4 | REF: 010918b |
| 13 | ANS: 4 | REF: 061013b |
| 14 | ANS: 2 | REF: 081003a2 |
| 15 | ANS: 4 | REF: 061518a2 |
| 16 | ANS: | |
| | D: $-5 \leq x \leq 8$. | R: $-3 \leq y \leq 2$ |

REF: 011132a2