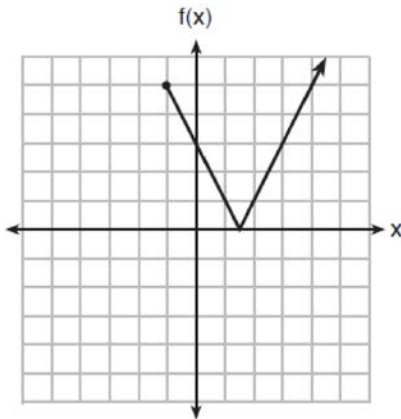


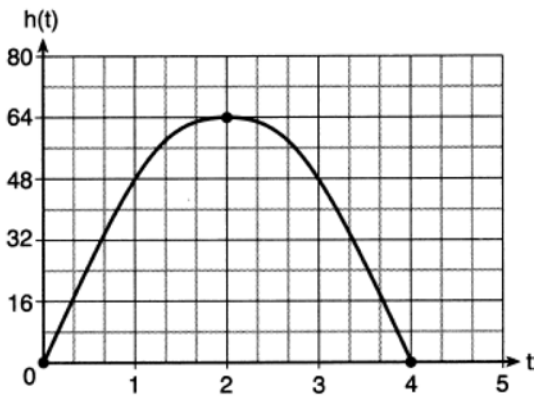
F.IF.B.5: Domain and Range 1

- 1 The function $f(x)$ is graphed below.



The domain of this function is

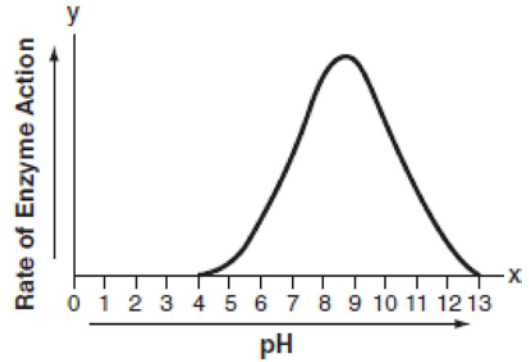
- 1) all positive real numbers
 - 2) all positive integers
 - 3) $x \geq 0$
 - 4) $x \geq -1$
- 2 The diagram below shows the graph of $h(t)$, which models the height, in feet, of a rocket t seconds after it was shot into the air.



The domain of $h(t)$ is

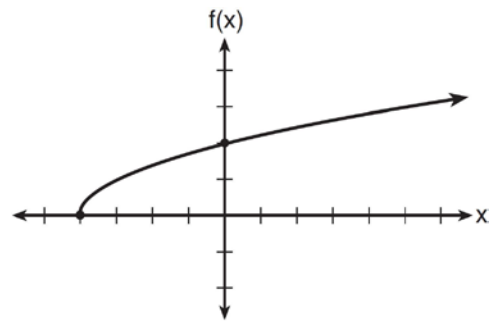
- 1) $(0, 4)$
- 2) $[0, 4]$
- 3) $(0, 64)$
- 4) $[0, 64]$

- 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?

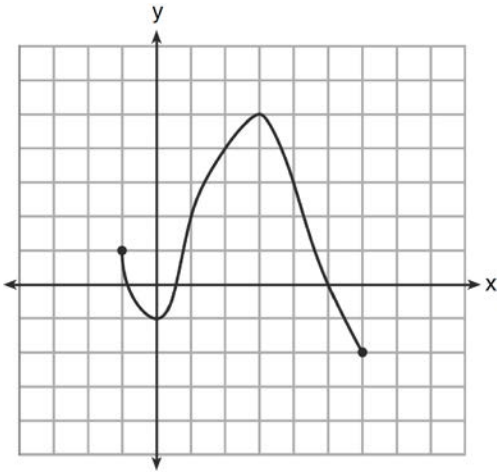
- 1) $4 \leq x \leq 13$
 - 2) $4 \leq y \leq 13$
 - 3) $x \geq 0$
 - 4) $y \geq 0$
- 4 The graph of the function $f(x) = \sqrt{x+4}$ is shown below.



The domain of the function is

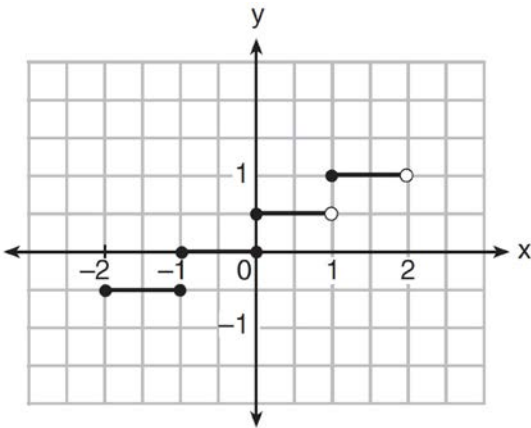
- 1) $\{x | x > 0\}$
- 2) $\{x | x \geq 0\}$
- 3) $\{x | x > -4\}$
- 4) $\{x | x \geq -4\}$

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

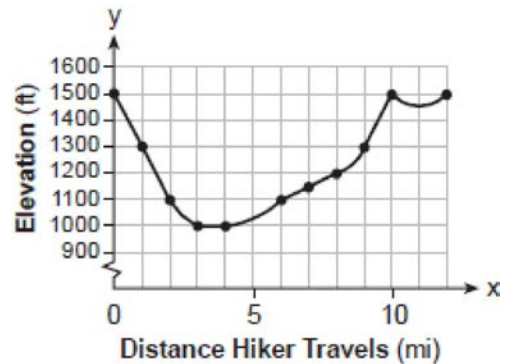
6 The graph of a relation is shown below.



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) $\{x \mid -2 \leq x \leq 2\}$

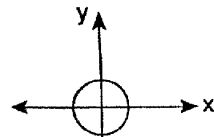
7 The accompanying graph shows the elevation of a certain region in New York State as a hiker travels along a trail.



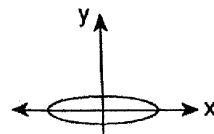
What is the domain of this function?

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

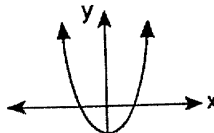
8 Which graph illustrates a quadratic relation whose domain is all real numbers?



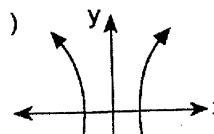
1)



2)

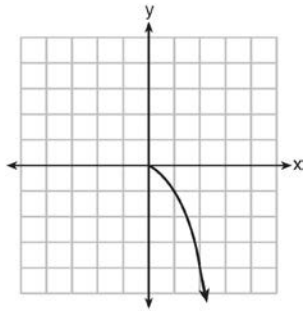


3)



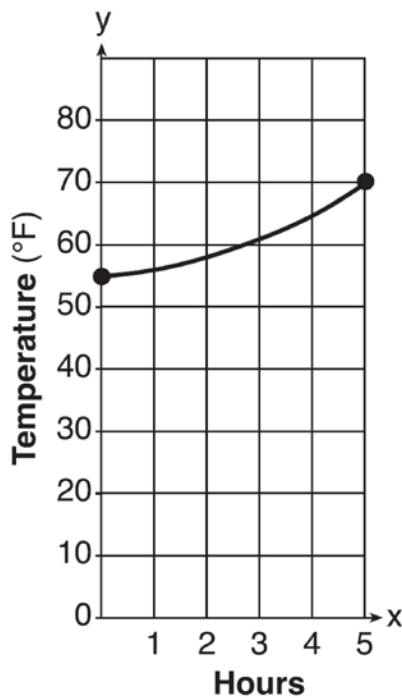
4)

9 What is the range of the function shown below?



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

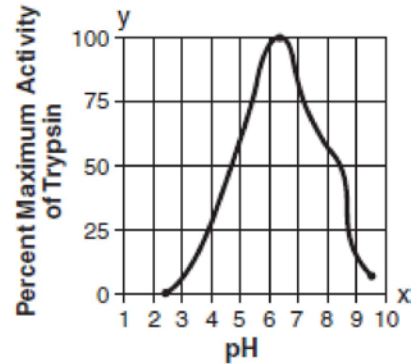
10 The air temperature in Dallas, Texas, over a 5-hour period is shown in the accompanying graph.



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) $56 \leq y \leq 70$

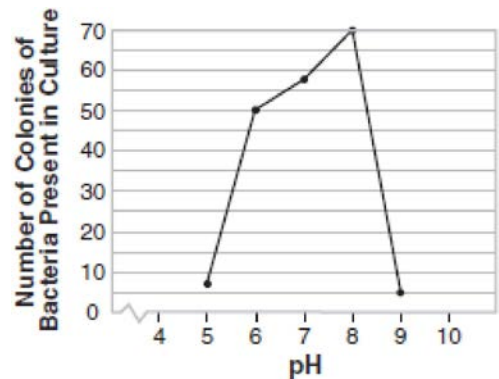
11 Data collected during an experiment are shown in the accompanying graph.



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) $1 \leq x \leq 10$

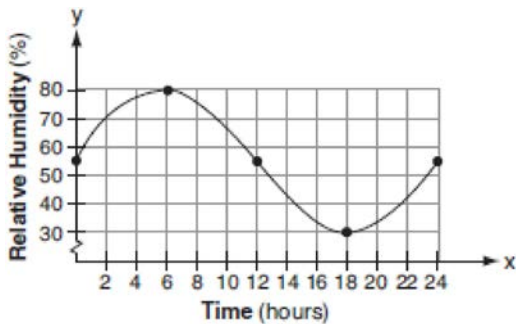
12 The accompanying graph illustrates the presence of a certain strain of bacteria at various pH levels.



What is the range of this set of data?

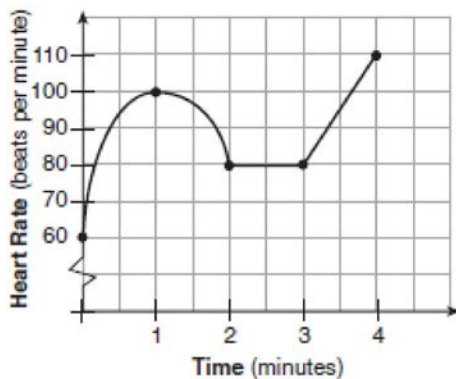
- 1) $5 \leq x \leq 9$
- 2) $5 \leq x \leq 70$
- 3) $0 \leq y \leq 70$
- 4) $5 \leq y \leq 70$

- 13 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?

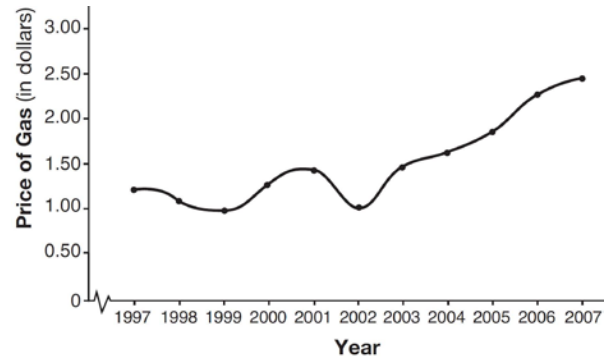
- 1) $0 \leq y \leq 24$
 - 2) $0 \leq x \leq 24$
 - 3) $30 \leq y \leq 80$
 - 4) $30 \leq x \leq 80$
- 14 The accompanying graph shows the heart rate, in beats per minute, of a jogger during a 4-minute interval.



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

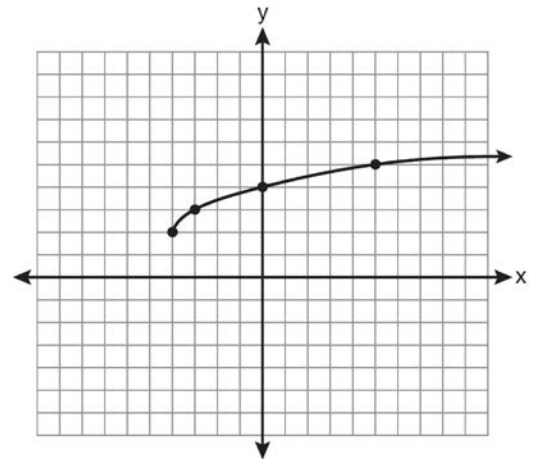
- 1) 0 – 4
- 2) 1 – 4
- 3) 0 – 110
- 4) 60 – 110

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



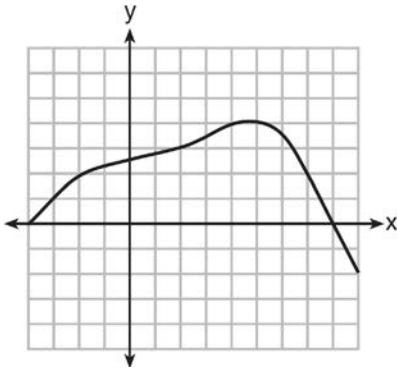
What is the approximate range of this graph?

- 1) $1997 \leq x \leq 2007$
 - 2) $1999 \leq x \leq 2007$
 - 3) $0.97 \leq y \leq 2.38$
 - 4) $1.27 \leq y \leq 2.38$
- 16 What are the domain and the range of the function shown in the graph below?



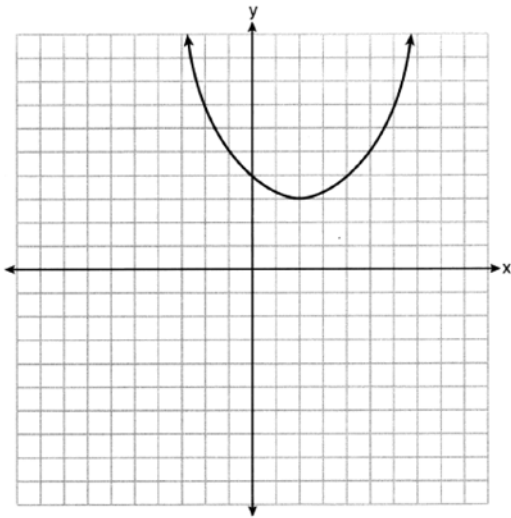
- 1) $\{x|x > -4\}; \{y|y > 2\}$
- 2) $\{x|x \geq -4\}; \{y|y \geq 2\}$
- 3) $\{x|x > 2\}; \{y|y > -4\}$
- 4) $\{x|x \geq 2\}; \{y|y \geq -4\}$

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



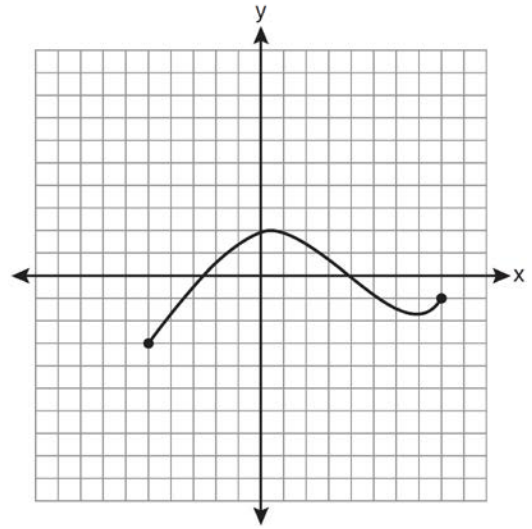
- 1) 0
- 2) 2
- 3) 3
- 4) 7

- 18 A function is graphed on the set of axes below.



State the domain of this function. State the range of this function.

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



State the domain and range of this function.

F.IF.B.5: Domain and Range 1
Answer Section

- 1 ANS: 4 REF: 011917ai
2 ANS: 2 REF: 082222ai
3 ANS: 1 REF: 010602b
4 ANS: 4 REF: 061509ai
5 ANS: 1 REF: 061202a2
6 ANS: 3 REF: 061606a2
7 ANS: 3 REF: 060804b
8 ANS: 3 REF: 019518siii
9 ANS: 3 REF: 061308a2
10 ANS: 4 REF: 061013b
11 ANS: 3 REF: 010712b
12 ANS: 4 REF: 010918b
13 ANS: 3 REF: 080708b
14 ANS: 4 REF: 060501b
15 ANS: 3 REF: 061418a2
16 ANS: 2 REF: 081003a2
17 ANS: 4 REF: 061518a2
18 ANS:

Domain is reals. Range is $y \geq 3$.

REF: 062229ai

- 19 ANS:

D: $-5 \leq x \leq 8$. R: $-3 \leq y \leq 2$

REF: 011132a2