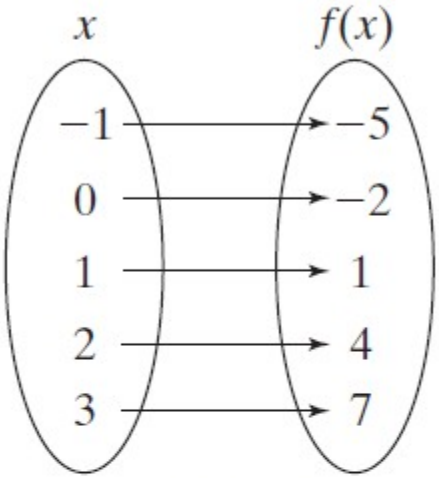
Algebra 1 Quick Quiz 11012023

Question 1.

. One way to represent a function $f(x)$ is to use a mapping diagram like the one below.




Which of the following is NOT another correct way to represent $f(x)$?

**A** $x$ is every integer between $-1$ and 3 and $f(x) = 3x - 2$.

**B** $f(x) = \{(-1, -5), (0, -2), (1, 1), (2, 4), (3, 7)\}$

**C** $f(x) = 3x + 2$ and the domain is $\{-1, 0, 1, 2, 3\}$.

**D** The range is $\{-5, -2, 1, 4, 7\}$ and $f(x) = 3x - 2$.

Question 2

Find the range for the function rule $y = 3x + 4$ for the domain $\{-3, -2, -1, 2\}$.

**A** $\{-3, -2, 4, 6\}$

**B** $\{5, 10, 12, 16\}$

**C** $\{-5, 10, 2, 1\}$

**D** $\{-5, -2, 1, 10\}$

Question 3.

Find $f(-2)$ given $f(x) = x^2 - 3x + 4$.

**A** 4

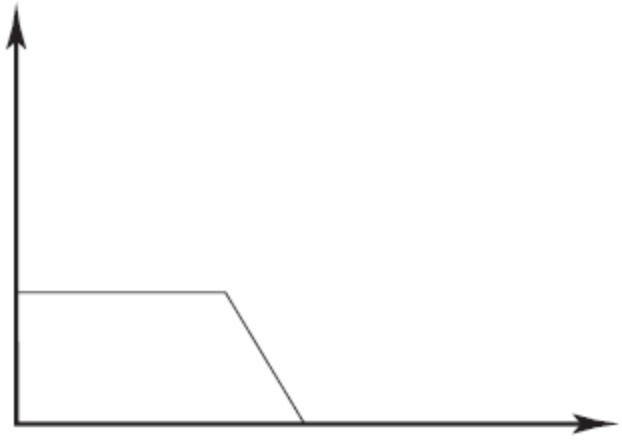
**B** 6

**C** 14

**D** 16

Question 4.

Which of the following is most likely represented by this graph?



**A** a lawn mower that runs out of gas

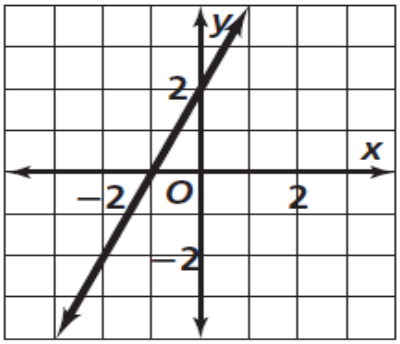
**B** the outdoor temperature on a hot day as it approaches noon

**C** your speed as you jog and then go up a steep hill

**D** the weight of a turtle

Question 5.

Which table of values was used to make the following graph?




A

| x | −3 | −1 | 0 | 1 |
|---|---|---|---|---|
| y | −2 | −1 | 2 | 4 |

B

| x | −3 | −2 | 0 | 1 |
|---|---|---|---|---|
| y | 4 | 2 | 2 | 4 |

C

| x | −3 | −1 | 0 | 1 |
|---|---|---|---|---|
| y | −4 | 0 | 2 | 4 |

D

| x | −3 | −2 | 0 | 1 |
|---|---|---|---|---|
| y | −3 | −2 | 2 | 4 |

Question 6.

Which situation could the equation $y = 20x + 80$ represent?

**A** You bought a CD player for $80 and then bought $20 worth of CDs.

**B** You have paid $20 toward a new television and plan to pay $80 more each month.

**C** You received 2 gift certificates for $20 for your birthday and already had saved $80 worth of gift certificates.

**D** You have saved $80 and add $20 to your savings each month.

Question 7.

Which of the following tables can be generated by $y = x^2 + 2$?

**A**

| x | y |
|---|---|
| −1 | 1 |
| 0 | 2 |
| 1 | 3 |
| 2 | 4 |

**B**

| x | y |
|---|---|
| −2 | 0 |
| −1 | 1 |
| 0 | 2 |
| 1 | 3 |

**C**

| x | y |
|---|---|
| 2 | 4 |
| 0 | 2 |
| −1 | 2 |
| −2 | 8 |

**D**

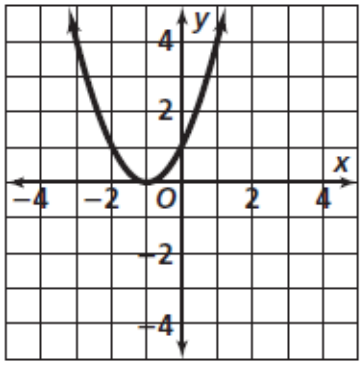
| x | y |
|---|---|
| −1 | 3 |
| 0 | 2 |
| 1 | 3 |
| 2 | 6 |

# Question 8.

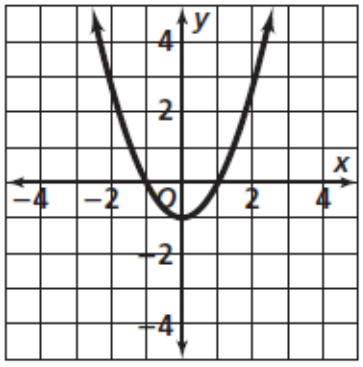
Try to reason this out without the use of graphing software. I trust you to be honest.

Which of the following is the graph of $y = x^2 - 1$?

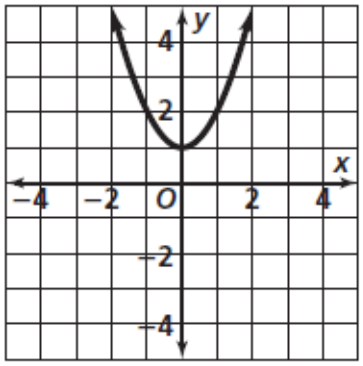
A



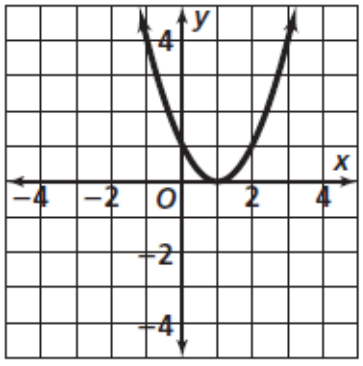

B




C




D



Question 9.

Which of the following is the function rule for the table shown below?

| $c$ | $G(c)$ |
|---|---|
| $-2$ | 17 |
| $-1$ | 5 |
| 0 | 1 |
| 1 | 5 |
| 2 | 17 |

**A** $G(c) = c + 19$

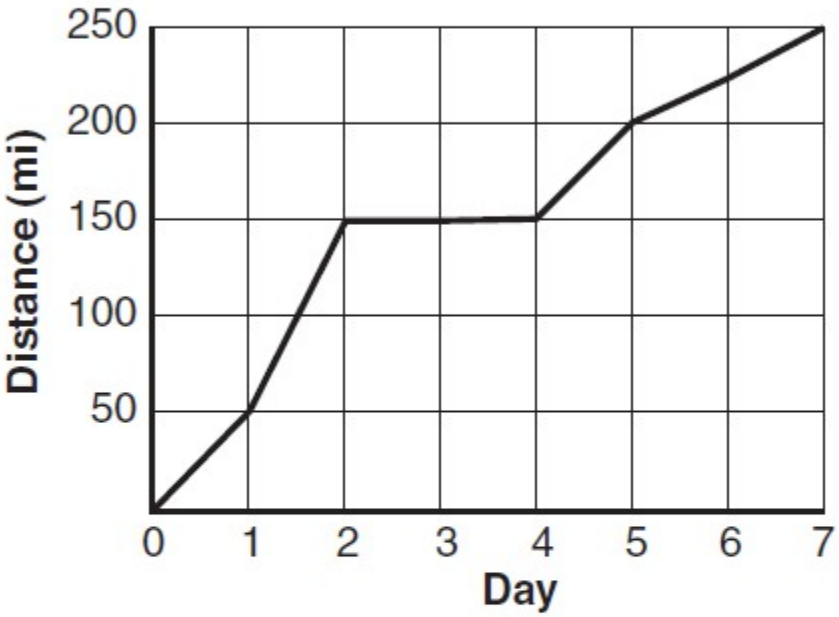
**B** $G(c) = c^2 + 13$

**C** $G(c) = c^4 + 1$

**D** $G(c) = 4c^2 + 1$

Question 10.

The graph shows the cumulative distance Yolanda traveled on her week-long bicycle trip.




Which best describes what happened during Days 2–4?

**A** Yolanda rode downhill.
**B** Yolanda rode on a flat place.
**C** Yolanda took a break from riding.
**D** Yolanda rode 150 miles each of those days.

Bonus Question

Question 11
I just want to know how many of you already know this.

If $f(x) = |x + 2|$, what is the range for the domain $\{-3, -2, 1\}$?

**A** $\{0, 1, 3\}$

**B** $\{1, 3\}$

**C** $\{1, 3, 4\}$

**D** $\{-1, 0, 3\}$