Which ratio table could be used to represent the graph?

A

| Water (liters) $x$ | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| Syrup (liters) $y$ | 2 | 4 | 6 | 8 |

B

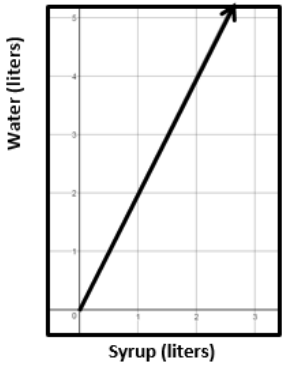
| Water (liters) $x$ | 2 | 4 | 6 | 8 |
|---|---|---|---|---|
| Syrup (liters) $y$ | 1 | 2 | 3 | 4 |

C

| Water (liters) $x$ | 1 | 3 | 6 | 9 |
|---|---|---|---|---|
| Syrup (liters) $y$ | 3 | 9 | 12 | 18 |

D

| Water (liters) $x$ | 3 | 9 | 12 | 18 |
|---|---|---|---|---|
| Syrup (liters) $y$ | 1 | 3 | 6 | 9 |




Ms. Jones is planning a pizza party for her students. Anthony's Pizza offers free delivery and charges $9 for each large pizza. Which table could be used to figure out the cost for different amounts of pizza?

A

| $x$ Number of pizzas | 1 | 2 | 4 | 8 |
|---|---|---|---|---|
| $y$ Total cost | 9 | 18 | 36 | 72 |

B

| $x$ Number of Pizzas | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| $y$ Total cost | 9 | 18 | 36 | 64 |

C

| $x$ Number of Pizzas | 9 | 18 | 36 | 72 |
|---|---|---|---|---|
| $y$ Total cost | 1 | 2 | 4 | 8 |

D

| $x$ Number of Pizzas | 9 | 18 | 36 | 64 |
|---|---|---|---|---|
| $y$ Total cost | 1 | 2 | 3 | 4 |

Which equation represents the same relationship as the line graphed?

A $y = 4x$

B $y = x + 4$

C $y = x - 4$

D $y = \frac{x}{4}$

What is the slope of the relationship shown in the table?

| $x$ | $y$ |
|---|---|
| 3 | 9 |
| 4 | 12 |
| 5 | 15 |

A $\frac{1}{3}$

B $\frac{1}{2}$

C 2

D 3

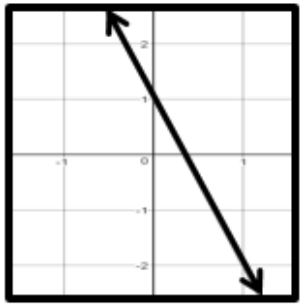
Which equation represents the same function as the line graphed?

A $y = 3x + 1$

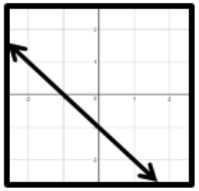
B $y = -3x + 1$

C $y = 3x - 1$

D $y = -3x - 1$



Select all of the linear function representations that have a negative slope.

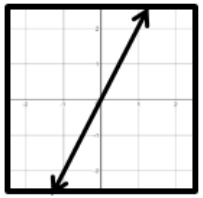


| $x$ | $y$ |
|---|---|
| -2 | 4 |
| 0 | 0 |
| 1 | -2 |
| 4 | -8 |

$y = x - 5$

| $x$ | $y$ |
|---|---|
| -2 | -5 |
| -1 | -4 |
| 1 | -2 |
| 2 | -1 |

$y = -5x$



Which function appears to have two distinct zeros?

a. $f(x) = x^2 + 6x + 9$

b. $f(x) = 0.5x + 4$

c. $f(x) = x^2 - 9$

d. $f(x) = \dfrac{4x - 9}{3}$

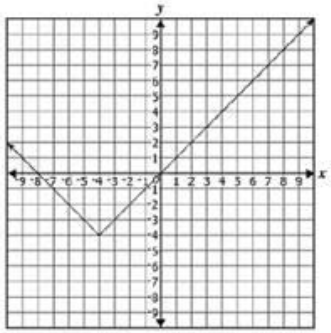
A steel ball is dropped from a television tower and falls 1600 feet to the ground below. The relationship between the height of the ball, in feet, and the time the ball is in the air, in seconds, can be represented by the function $h(t) = 1600 - 16t^2$.

Which of these values for the domain and range are reasonable for this real-world situation?

| |
|---|
| $-10 \le t \le 10$ |
| $0 \le t \le 10$ |

| |
|---|
| $-\infty < h < 1600$ |
| $0 \le h \le 1600$ |

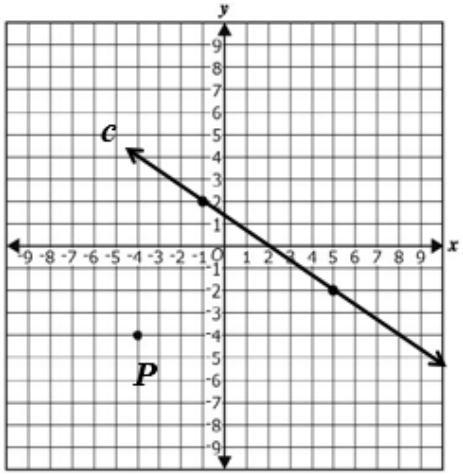
The following graph shows a relation.



Which of the following best describes the range of this relation?

a. All real numbers
b. All real numbers between -10 and 10
c. All real numbers less than or equal to -4.
d. All real numbers greater than or equal to -4.

Find the coordinates of a point that lies on a line which passes through point *P* and is perpendicular to line *c*.



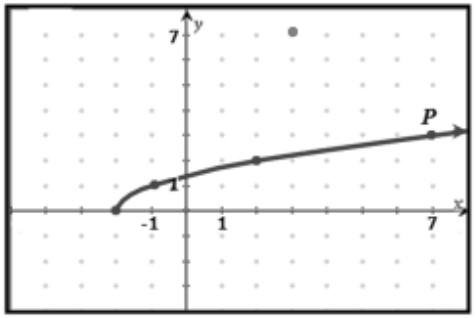

Given $f(x) = 3x^3 - 2$ and $g(x) = 4x + 1$

What is the value of $g(f(x))$ ?

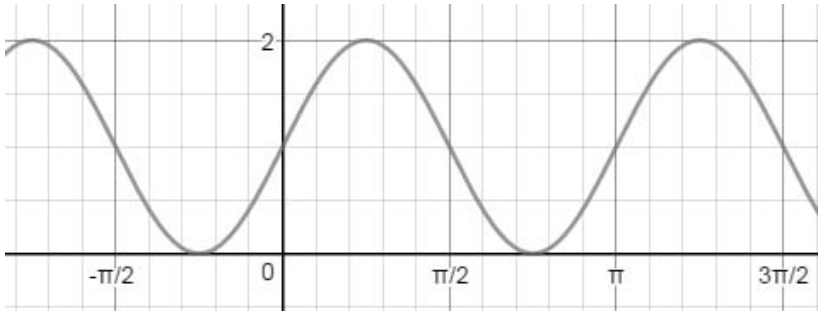
Find the values of $f(x) = 9x^2 + 1$ for the domain values of $\{-3, 6\}$.

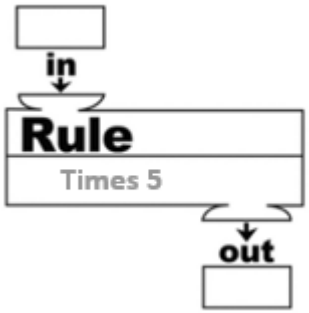
$\{\square, \square\}$

**Point $P$ lies on the graph of $f(x) = \sqrt{x+2}$ . Locate the image of point $P$ that lies on the graph of $f^{-1}(x)$ .**




**Create two different equations that correspond to the graph shown:**




$$f(x) = \begin{cases} 5 & \text{for } x \le -2 \\ x^2 - 2 & \text{for } -2 \le x < 1 \\ x + 2 & \text{for } x \ge 1 \end{cases}$$