

Algebra 1 Quick Quiz 12212022

Question 1.

The table shows Victor's wages as a function of the number of hours he works in a week. Overtime pay begins after 40 hours worked in one week. What is Victor's overtime pay rate?

<b>Victor's Pay Scale</b>	
<b>Hours Worked</b>	<b>Wages (\$)</b>
10	\$140
20	\$280
30	\$420
40	\$560
50	\$740
60	\$920

**A** \$10/hr

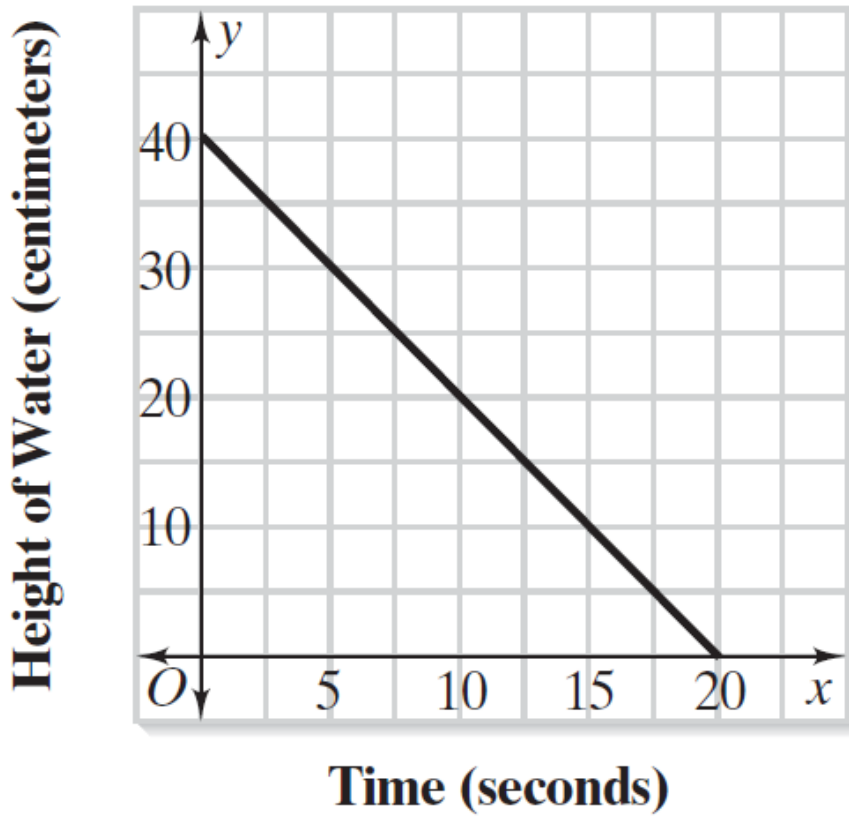
**B** \$14/hr

**C** \$18/hr

**D** \$180/hr

Question 2

The graph shows the height of water in a bucket as the water drains out of a hole in the bottom. Which of the following equations represents the line?



- A  $y = 2.5x + 20$
- B  $y = 20x + 2.5$
- C  $y = -2x + 40$
- D  $y = -40x + 2$

Question 3.

Which equation best models the data in the table?

$x$	$f(x)$
-1	$-\frac{1}{4}$
0	-1
1	-4
2	-16
3	-64

**A**  $f(x) = 4^x$

**B**  $f(x) = -4^x$

**C**  $f(x) = x^4$

**D**  $f(x) = -x^4$

Question 4.

If you graphed the equation  $5x + 3y = 12$ , you would find that     ?

- A** the  $y$ -intercept is 4
- B** the line has a positive slope
- C** the  $x$ -intercept is  $-\frac{5}{3}$
- D** the line contains the point  $\left(\frac{2}{3}, 2\right)$

Question 5.

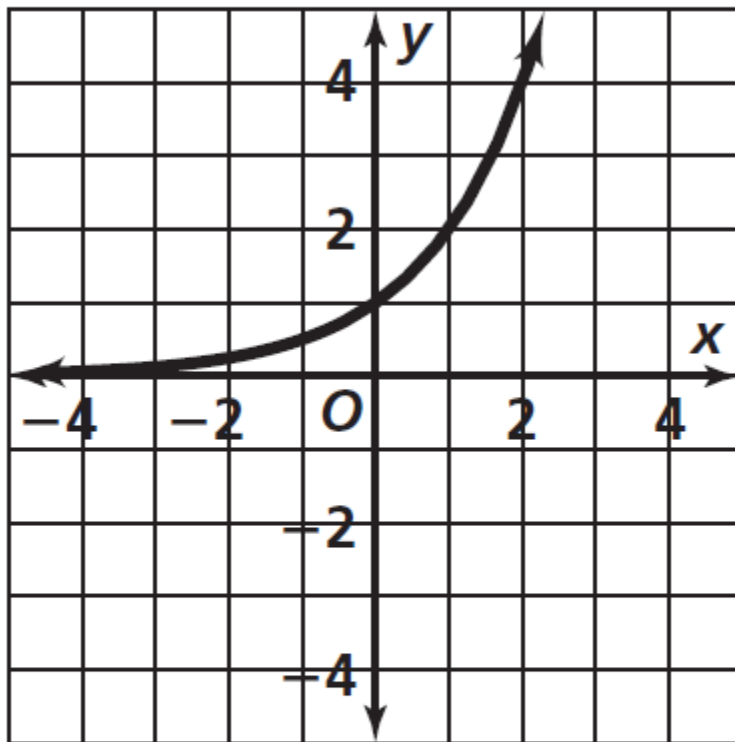
Julie recorded the data below. When she graphs the data, what will the  $y$ -intercept of the graph represent?

Week Number	Flower Height (inches)
1	4
2	5.5
3	7
4	8.5

- A** the change in flower height per week
- B** the change in flower height per day
- C** the initial height of the flower
- D** the final height of the flower

Question 6.

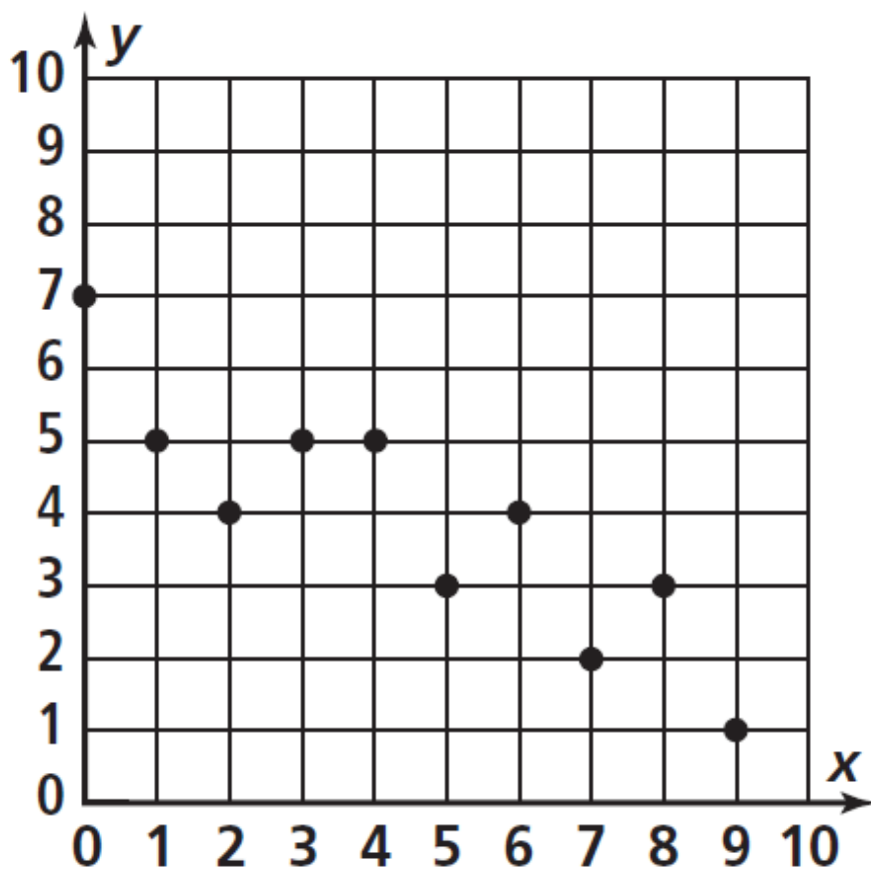
The function graphed below could be which of the following?



- A  $y = 2x$
- B  $y = -2x$
- C  $y = -2^x$
- D  $y = 2^x$

Question 7.

Which statement describes the general relationship between the  $x$ - and  $y$ -values of the points graphed below?



- A As  $x$  increases,  $y$  increases.
- B As  $x$  increases,  $y$  decreases.
- C As  $x$  increases,  $y$  remains constant.
- D There is no relationship between the  $x$ - and  $y$ -values.

Question 8.

What are the zeros of the function  
 $f(x) = x^2 - 6x - 16$ ?

**A**  $-4$  and  $4$

**C**  $-2$  and  $8$

**B**  $2$  and  $8$

**D**  $6$  and  $16$



Question 9.

A golfer hit a golf ball off the tee. The equation  $y = -4x^2 + 36x$  represents the height of the golf ball in feet  $y$  over time in seconds  $x$ . Solve the equation to identify and interpret the zeros of the function.

- A** The ball was in the air for 9 seconds.
- B** The ball went forward 9 feet.
- C** The ball was in the air for 36 seconds.
- D** The ball went forward 36 feet.

Question 10.

Which of the following are the solutions to  $2x^2 - 11x + 12 = 0$ ?

**A** 4 and  $\frac{3}{2}$

**C**  $\frac{1}{2}$  and  $\frac{7}{2}$

**B** 3 and  $-4$

**D**  $\frac{3}{4}$  and  $\frac{2}{3}$

Bonus Question

Question 11

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

For which value is the function

$$y = \frac{1}{x - 5} \text{ undefined?}$$

**A**  $x = -5$

**C**  $x = 1$

**B**  $x = 0$

**D**  $x = 5$