Algebra 1 Quick-Quiz-11032023

Question 1.

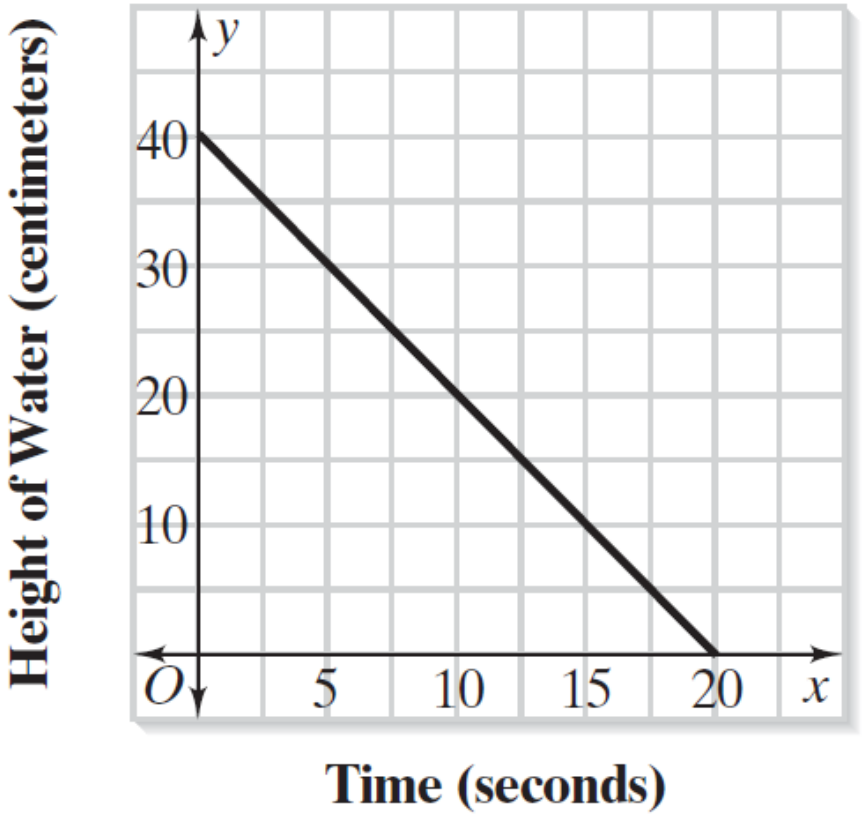
The table shows Victor's wages as a function of the number of hours he works in a week. Overtime pay begins after 40 hours worked in one week. What is Victor's overtime pay rate?

Victor's Pay Scale	
Hours Worked	**Wages ($)**
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.

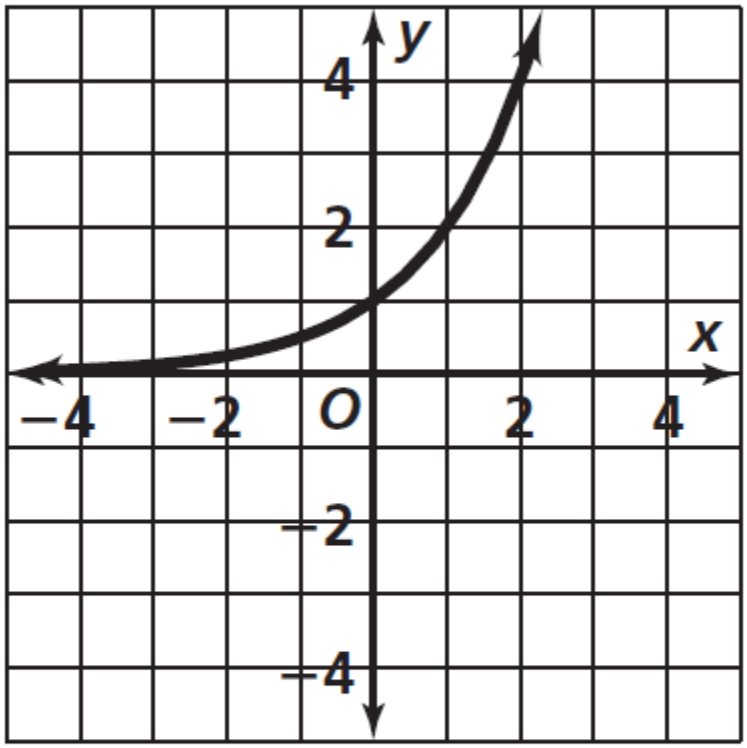
Julie recorded the data below. When she graphs the data, what will the y-intercept of the graph represent?

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 $y = 2x$

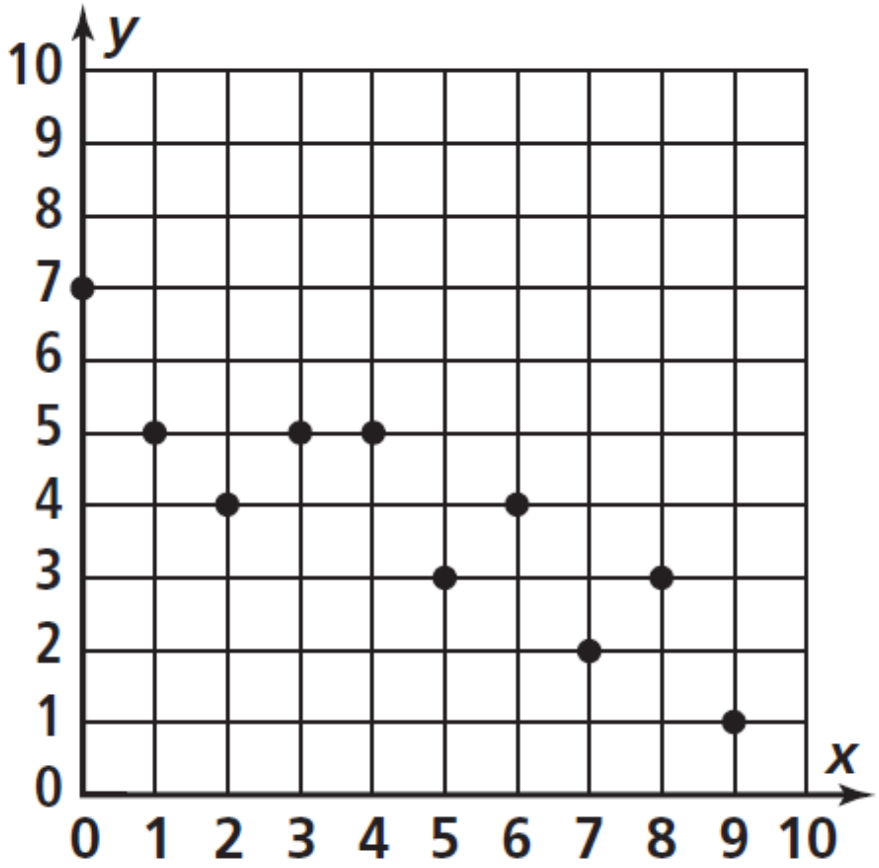
B $y = -2x$

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

B 2 and 8

C -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 $\frac{3}{2}$

B 3 and -4

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

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

A $x = -5$

B $x = 0$

C $x = 1$

D $x = 5$