Algebra Quick Quiz1215021

Question 1.

Which equation represents a line parallel to the x-axis?

(1) $x = 5$

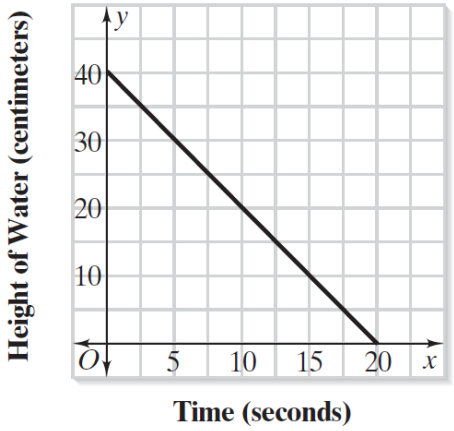
(2) $y = 10$

(3) $x = \frac{1}{3}y$

(4) $y = 5x + 17$

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 $y = 2.5x + 20$

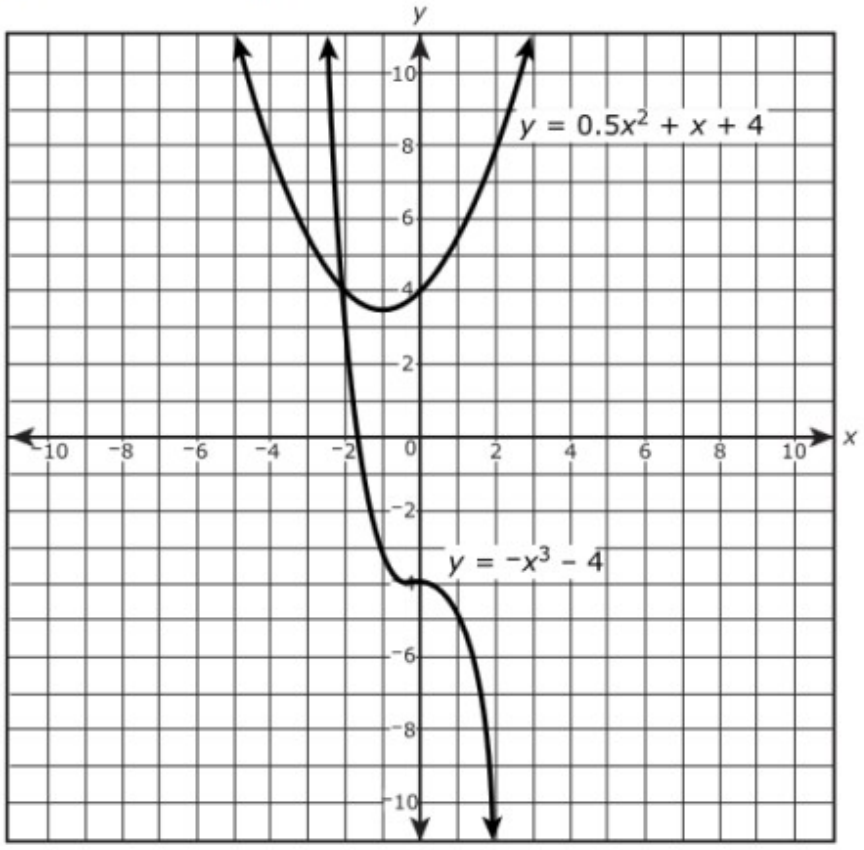
B $y = 20x + 2.5$

C $y = -2x + 40$

D $y = -40x + 2$

Question 3.

. The graphs of $f(x) = -x^3 - 4$ and $g(x) = 0.5x^2 + x + 4$ are given.



Use the graphs to find the solution to the equation $-x^3 - 4 = 0.5x^2 + x + 4$.

Enter your answer in the box.

$x =$ ☐

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.

An animal shelter spends \$2.35 per day to care for each cat and \$5.50 per day to care for each dog. Pat noticed that the shelter spent \$89.50 caring for cats and dogs on Wednesday.

Write an equation to represent the possible numbers of cats and dogs that could have been at the shelter on Wednesday.

- Let x represent the number of cats.
- Let y represent the number of dogs.

Question 6.

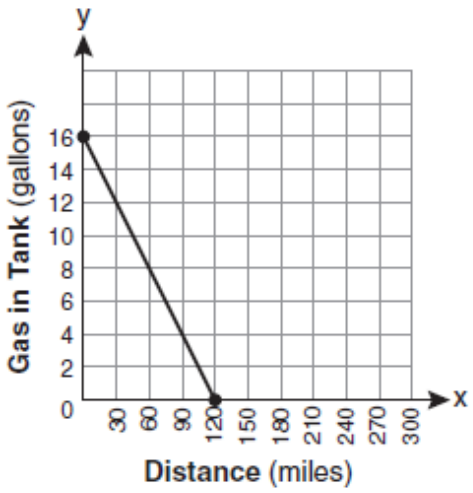
Julie recorded the data below. When she graphs the data, what will the *y*-intercept of the graph represent?

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 7.

7 The gas tank in a car holds a total of 16 gallons of gas. The car travels 75 miles on 4 gallons of gas. If the gas tank is full at the beginning of a trip, which graph represents the rate of change in the amount of gas in the tank?



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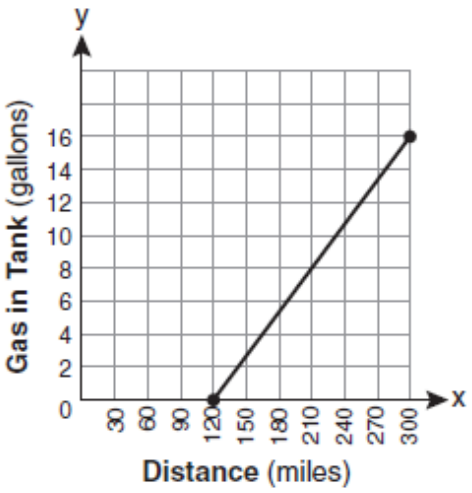

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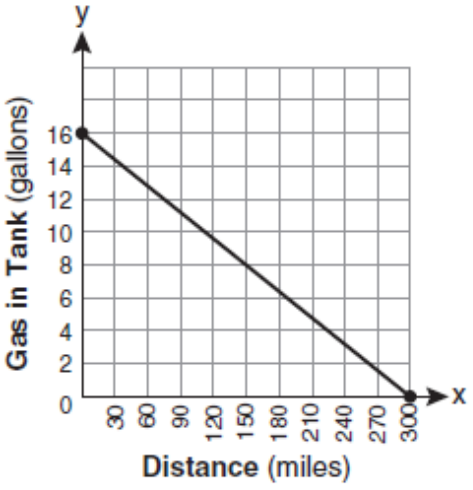

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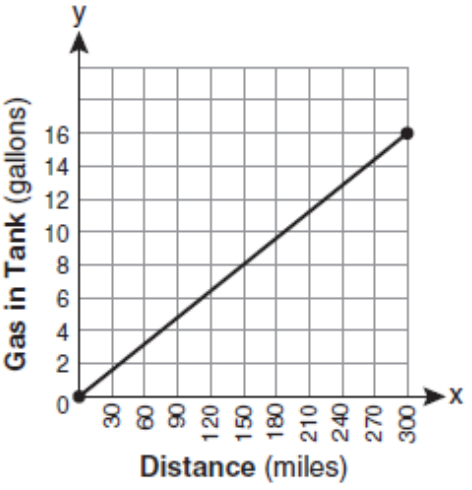


(4)

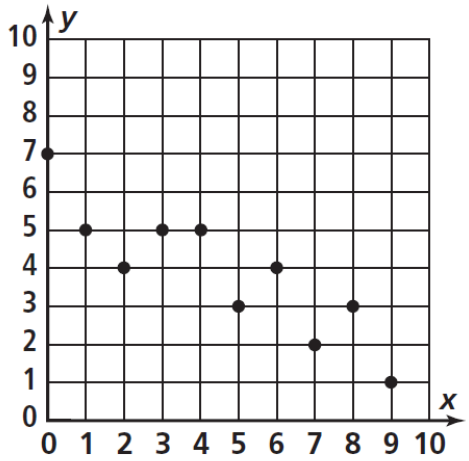
Question 8.

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.

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 10.

What is the solution to the inequality $-9 \leq 2x + 1 < 5$?

A $-5 \leq x < 2$
B $-4 \leq x < 3$
C $4 \geq x > -3$
D $5 \geq x > -2$

Bonus Question

Question 11
Part A.

For which value is the function $y = \frac{1}{x - 5}$ undefined?

A $x = -5$ **C** $x = 1$

B $x = 0$ **D** $x = 5$

Part B.

If $3ax + b = c$, then x equals

(1) $c - b + 3a$ (3) $\frac{c - b}{3a}$

(2) $c + b - 3a$ (4) $\frac{b - c}{3a}$