

Algebra Quick Quiz 02152022

Question 1.

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

(1) $x = 5$

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

(2) $y = 10$

(4) $y = 5x + 17$

Question 2

Which of the following is equivalent to the expression below?

$$x^2 - 144$$

A. $(x - 1)(x - 144)$

B. $(x - 1)(x + 144)$

C. $(x - 12)(x - 12)$

D. $(x - 12)(x + 12)$

Question 3.

Sam and Odel have been selling frozen pizzas for a class fundraiser. Sam has sold half as many pizzas as Odel. Together they have sold a total of 126 pizzas. How many pizzas did Sam sell?

(1) 21

(3) 63

(2) 42

(4) 84

Question 4

When $3g^2 - 4g + 2$ is subtracted from $7g^2 + 5g - 1$, the difference is

(1) $-4g^2 - 9g + 3$

(3) $4g^2 + 9g - 3$

(2) $4g^2 + g + 1$

(4) $10g^2 + g + 1$

Question 5.

The expression $x^2 - 10x + 24$ is equivalent to

(1) $(x + 12)(x - 2)$

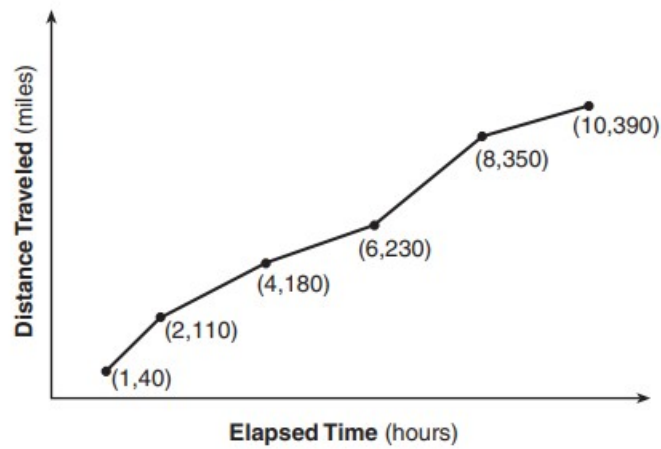
(3) $(x + 6)(x + 4)$

(2) $(x - 12)(x + 2)$

(4) $(x - 6)(x - 4)$

Question 6.

The Jamison family kept a log of the distance they traveled during a trip, as represented by the graph below.



During which interval was their average speed the greatest?

- (1) the first hour to the second hour
- (2) the second hour to the fourth hour
- (3) the sixth hour to the eighth hour
- (4) the eighth hour to the tenth hour

Question 7.

Which value of x is the solution of $\frac{2x}{5} + \frac{1}{3} = \frac{7x-2}{15}$?

- | | |
|---------------------|-------|
| (1) $\frac{3}{5}$ | (3) 3 |
| (2) $\frac{31}{26}$ | (4) 7 |

Question 8.

Which expression is equivalent to $(3x^2)^3$?

- | | |
|------------|-------------|
| (1) $9x^5$ | (3) $27x^5$ |
| (2) $9x^6$ | (4) $27x^6$ |

Question 9.

Given $7x + 2 \geq 58$, which number is *not* in the solution set?

- (1) 6 (3) 10
(2) 8 (4) 12

Question 10.

Which table could represent a function?

x	f(x)
1	4
2	2
3	4
2	6

(1)

x	h(x)
2	6
0	4
1	6
2	2

(3)

x	g(x)
1	2
2	4
3	6
4	2

(2)

x	k(x)
2	2
3	2
4	6
3	6

(4)

Bonus

Question 11a.

The zeros of the function $f(x) = x^3 - 9x^2$ are

- (1) 9, only (3) 0 and 3, only
(2) 0 and 9 (4) -3, 0, and 3

Question 11b.

Which expression is equivalent to $2(x^2 - 1) + 3x(x - 4)$?

(1) $5x^2 - 5$

(3) $5x^2 - 12x - 1$

(2) $5x^2 - 6$

(4) $5x^2 - 12x - 2$