Algebra 1 Quick-Quiz-11282023
Non Calculator section.
Question 1.

The first four terms in a linear sequence are shown below.

1, 7, 13, 19, . . .

What is the sixth term in the sequence?

A. 30

B. 31

C. 32

D. 33

Question 2

Line g has a slope of $-\frac{4}{7}$. Which of the following equations represents a line that is **perpendicular** to line g?

A. $y = -\frac{7}{4}x$

B. $y = -\frac{4}{7}x$

C. $y = \frac{4}{7}x$

D. $y = \frac{7}{4}x$

Question 3.

Which of the following is equivalent to the expression below?

$$(4x + 6)(2x)$$

A. $16x$

B. $20x$

C. $8x^2 + 6x$

D. $8x^2 + 12x$

Question 4

Which of the following is equivalent to the expression below?

$$x^2 - 5x - 24$$

A. $(x - 6)(x + 4)$

B. $(x + 6)(x - 4)$

C. $(x + 8)(x - 3)$

D. $(x - 8)(x + 3)$

Question 5.

What is the value of the expression below?

$$\left(\sqrt{11}\right)^4$$

A. 11

B. 22

C. 121

D. 1331

Question 6.

What are the solutions of the equation below?

$$x^2 + 4x - 12 = 0$$

A. -6 and -2

B. -6 and 2

C. -8 and -4

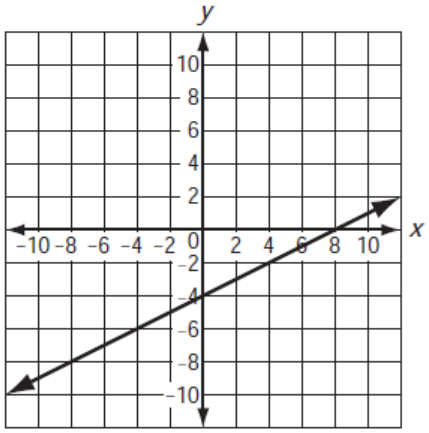
D. -8 and 4

Question 7.

14 Which of the following best represents the graph of the equation below?

$$y = \frac{1}{2}x - 4$$

A.



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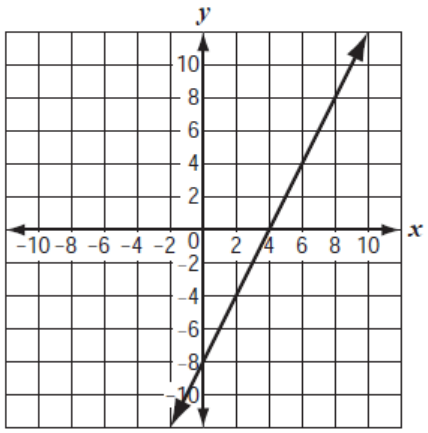

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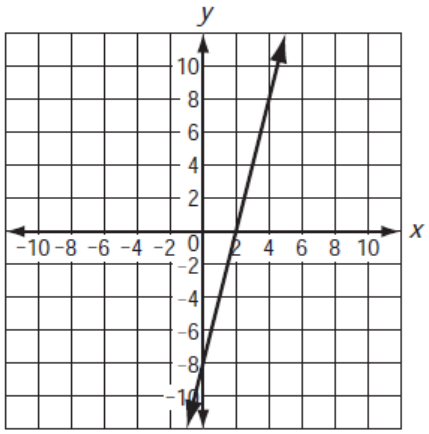

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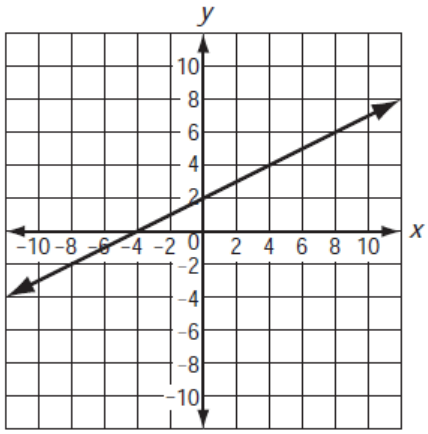


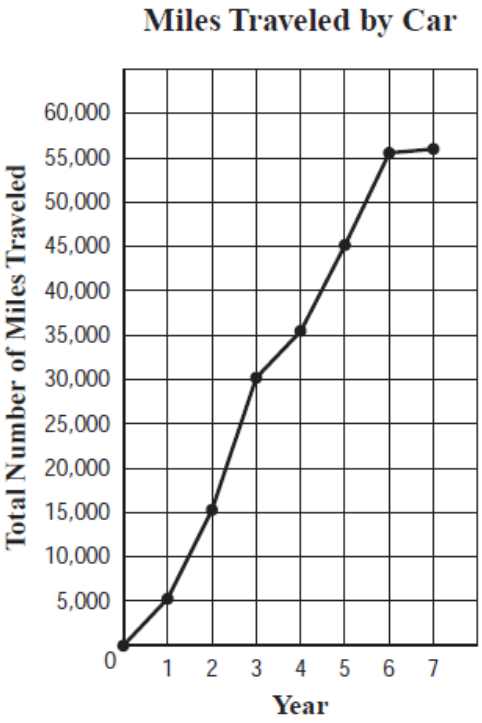
Question 8.

What is the value of the expression below?

$$3^2 - 16 \div 4 + 2$$

Question 9.

The line graph below shows the total number of miles traveled by a car during a 7-year period.



Based on the line graph, between which two consecutive years was the rate of change, in miles traveled per year, the greatest?

Question 10.

Consider the function $f(x) = 2x^2 + 6x - 8$.

What is a factored form of $f(x)$?

A. $f(x) = (2x + 1)(x - 8)$

B. $f(x) = (2x - 1)(x + 8)$

C. $f(x) = 2(x + 4)(x - 1)$

D. $f(x) = 2(x - 4)(x + 1)$

Bonus

Question 11

Consider the function $f(x) = 2x^2 + 6x - 8$.

Part A

Fill in the missing portions of the equation to rewrite $f(x)$ to reveal the vertex of the graph of the function.

Enter your answers in the boxes. Use decimals if necessary.

$f(x) = 2(x + \square)^2 + \square$