Algebra Quick-Quiz-05232022

Question 1.

What are the zeros of $f(x) = (x + 5)(x - 4)$?

A 4 and 5
B -4 and 5
C 4 and -5
D -4 and -5
E none of the above

Question 2

Look at the equation below.

$6 - 2y = 2(3 - y)$

Which of these properties is shown by the equation?

A identity property
B associative property
C distributive property
D commutative property
E transitive property

Question 3.

What is the vertex of the parabola $y = (x + 3)^2 + 1$?

A $(-3, -1)$
B $(-3, 1)$
C $(-1, -3)$
D $(-1, 3)$
E none of the above

Question 4.

The statement "A number multiplied by itself is the number added to itself" is represented by which of these equations?

A $n = 2n$
B $n = n + 1$
C $n^2 = 2n$
D $2n = n + 1$
E none of the above

Question 5.

Using a graphing calculator or coordinate grids, do the graphs of $f(x) = x + 2$ and $g(x) = x^2 - 2x - 4$ intersect?

A No, they do not intersect.
B Yes, they intersect at one point.
C Yes, they intersect at two points.
D Yes, they intersect at three points.
E Not enough information is given to determine whether the graphs intersect.

Question 6.

The tables below show the values of four different functions for given values of x.

x	f(x)
1	12
2	19
3	26
4	33

x	g(x)
1	–1
2	1
3	5
4	13

x	h(x)
1	9
2	12
3	17
4	24

x	k(x)
1	–2
2	4
3	14
4	28

Which table represents a linear function?

(1) $f(x)$
(2) $g(x)$
(3) $h(x)$
(4) $k(x)$

Question 7.

When $3x + 2 \leq 5(x - 4)$ is solved for x, the solution is

(1) $x \leq 3$
(2) $x \geq 3$
(3) $x \leq -11$
(4) $x \geq 11$

Question 8.

The range of the function $f(x) = x^2 + 2x - 8$ is all real numbers

(1) less than or equal to -9
(2) greater than or equal to -9
(3) less than or equal to -1
(4) greater than or equal to -1

Question 9.

The zeros of the function $f(x) = x^2 - 5x - 6$ are

(1) -1 and 6

(2) 1 and -6

(3) 2 and -3

(4) -2 and 3

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Question 10.

Which equation and ordered pair represent the correct vertex form and vertex for $j(x) = x^2 - 12x + 7$?

(1) $j(x) = (x - 6)^2 + 43$, (6,43)

(2) $j(x) = (x - 6)^2 + 43$, $(-6,43)$

(3) $j(x) = (x - 6)^2 - 29$, $(6,-29)$

(4) $j(x) = (x - 6)^2 - 29$, $(-6,-29)$

Bonus Question

Question 11

In a sequence, the first term is 4 and the common difference is 3. The fifth term of this sequence is

(1) -11

(2) -8

(3) 16

(4) 19