Algebra 1 Quick quiz 01032023

Question 1.

Find $f(-4)$ when $f(x) = -x^2 - 2x$.

A 24 **B** 8

C -8 **D** -24

E none of the above

Use your graphing software to check your answer.

Question 2

Solve the equation $4x - 2(x - 4) = 1$.

A $x = \frac{5}{2}$ **B** $x = \frac{9}{2}$

C $x = -\frac{7}{2}$ **D** $x = -\frac{3}{2}$

E none of the above

Question 3.

Which is an algebraic expression for the nth number in the following pattern:

2, 4, 6, 8, ...

A $2n$

B 2^n

C $2n + 1$

D $2 + n$

E $2(n + 1)$

Question 4.

To rent a cabin for one night, a resort charges $50.00 plus an additional $10.00 per person. Which function models the total cost for x people to rent the cabin for one night?

A $C(x) = 50x$

B $C(x) = 10x$

C $C(x) = 50 + 10x$

D $C(x) = 10 + 50x$

E $C(x) = 60x$

Question 5.

Which function rule models the data in the table?

x	y
-1	-22
0	-15
1	-8

A $y = 7x - 15$
B $y = -7x - 15$
C $y = 7x + 15$
D $y = -7x + 15$
E none of the above

Question 6.

The graph of which function is **not** a line?

A $2x + 4y = 5$ **B** $y = 0.6x$

C $y = 2x^3$ **D** $y = 4$

E $y = 4x - (2x + 1) + 4$

Question 7.

Which of the following statements are **true** about the graph of $y = -2x^2 + 3x - 1$?

I. The parabola opens upward.

II. The parabola opens downward.

III. The graph of $y = \left(\frac{1}{2}\right)x^2$ is wider.

IV. The graph of $y = \left(\frac{1}{2}\right)x^2$ is narrower.

A II and III **B** I and IV

C I and III **D** II and IV

E None of the statements are true.

Question 8.

Which table of ordered pairs is *not* a function?

A

x	*y*
−1	4
0	4
2	4
4	4

B

x	*y*
−8	0
−8	1
−8	2
−8	3

C

x	*y*
−2	−4
0	0
2	−4
4	−16

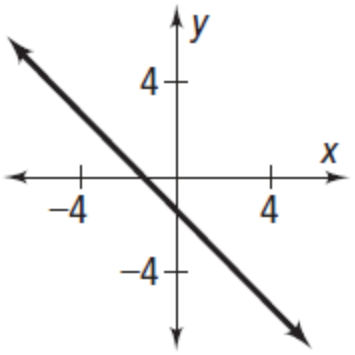
D

x	*y*
−1	−1
0	0
2	8
3	−7

E All of these are functions.

Question 9.

Which equation is graphed below?



A $y = -2$
B $x = -2$
C $y = -x - 2$
D $x = y - 2$
E none of the above

Question 10.

What are the solutions to
$x^2 - 11x + 24 = 0$?

A -8 and -3
B -8 and 3
C 8 and -3
D 8 and 3
E none of the above

Bonus Question

Question 11

If $f(x) = 2x$ and $g(x) = x + 2$, what is $f(x) + g(x)$?

A $x + 2$
B $x + 4$
C $2x + 2$
D $3x + 2$
E $2x^2 + 2$