D3 Unit 6 Algebra 1 Name_____

Quiz Graphing Quadratic Functions

Date_____ Period____

1) Identify the values of a, b, and c for the quadratic function in standard form $y = -8x^2 + 6x - 2$

2) Which of the following quadratic functions opens down?

A) $y = x^2 - 6x + 3$
B) $y = -4x^2 + 9$
C) $y = 0.5x^2 - 9x + 6$
D) $y = 16x^2 + 14x + 9$

3) Which of the following is the equation for the axis of symmetry?

A) $x = -\frac{b}{2a}$ B) $x = -\frac{a}{2b}$
C) $x = \frac{b}{2a}$ D) $x = -\frac{c}{2a}$

True or False

4) _____If a parabola opens up, then it has a maximum.

5) _____The x-coordinate of the vertex is can be found with $-\frac{b}{2a}$.

6) Write the equation for the axis of symmetry for the quadratic function $y = 3x^2 + 8x - 6$.

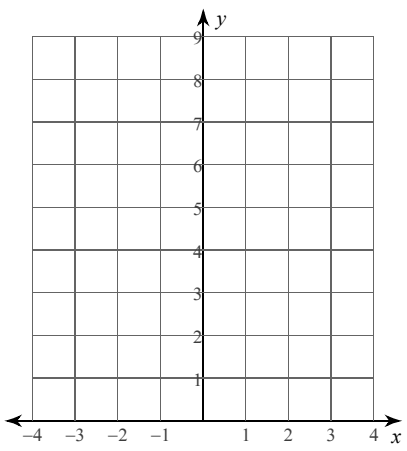
A) $x = -\frac{4}{3}$ B) $x = \frac{4}{3}$ C) $x = -\frac{3}{4}$ D) $x = -2$

7) Find the coordinates of the vertex of the quadratic function $y = 4x^2 + 8x - 3$?

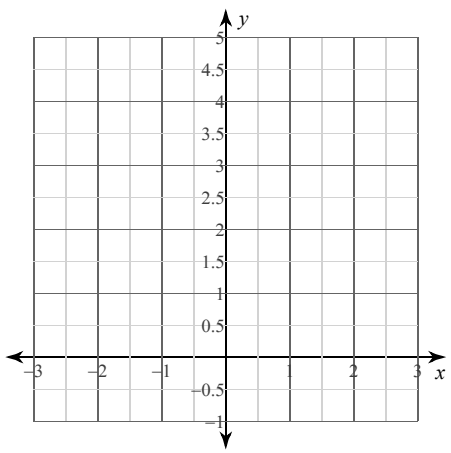
A) $(1, -7)$ B) $(-1, -7)$ C) $(-2, 45)$ D) $(-1, 7)$

Sketch the graph of each function and identify the vertex.

8) $y = x^2 - 2x + 5$



9) $y = -x^2 + 2x + 3$



10) What are the x-intercepts of the graph of $y = -x^2 - 6x + 40$?

A) -11 and 5 B) -7 and 1
C) -10 and 4 D) 4 and 10

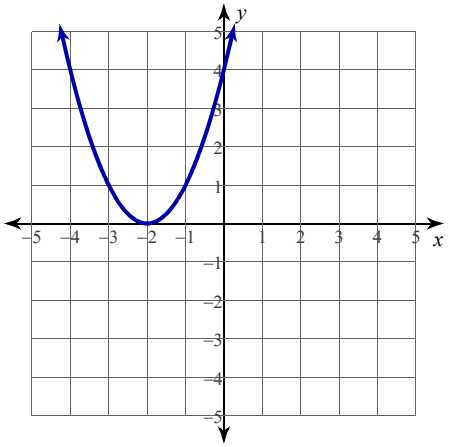
11) Which one of the following is a solution of $y = -3x^2 + 22x + 93$?

A) -3 B) $\frac{31}{6}$ C) 3 D) -7

12) Which one of the following is a root of $y = 4x^2 - 17x + 13$?

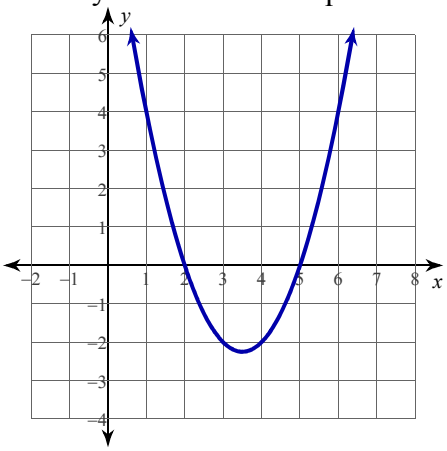
A) 1 B) 13
C) $-\frac{17}{3}$ D) -1

13) How many solutions does this quadratic function have?



A) No Real Solution
B) Two Solutions
C) Four Solutions
D) One Solution

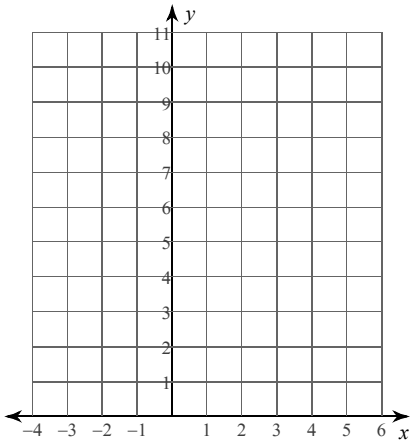
14) Identify the roots of the quadratic function.



A) 2 and 0 B) 5 and 6
C) 3.5 and -2 D) 2 and 5

Sketch the graph of each function and IDENTIFY the root(s).

15) $y = 2x^2 - 12x + 20$



16) $y = -2x^2 + 8x - 6$