

Name _____

Day _____ Block _____

Chapter 11 Algebra Quiz

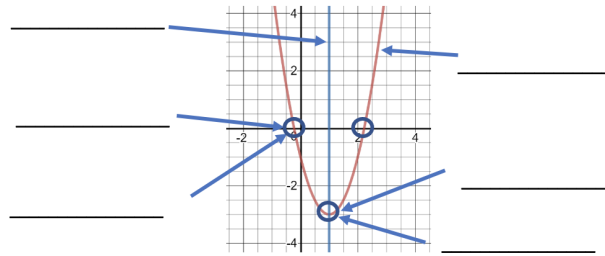
College Readiness B
Kuehn, Depies, Hedeem

Answer all questions. You are allowed to use any notes from either Int. Algebra or CCR.
You must show all work to receive full credit.

1. (12 points) Fill in the blanks for the following diagram using words from the word bank. Not all words will be used, but each can only be used once.

Word Bank

Parabola	Axis of Symmetry
Vertex	y -intercept
x -intercept	Zero
Maximum	Minimum



2. (6 points) Determine if the quadratic is smiling/frowning with the vertex as a maximum/minimum:

$$y = -x^2 + 3x + 4$$

A. Smiling/maximum | B. Smiling/minimum | C. Frowning/maximum | D. Frowning/minimum

3. (8 points) What is the vertex?

$$y = x^2 + 4x + 6$$

A. (2, 18) | B. (2, 2) | C. (2, -2) | D. (-2, 2)

4. (8 points) What are the x-intercepts of the following quadratic?

$$y = x^2 - 5x - 6$$

- A. (6, 0) and (-1, 0) | B. (-3, 0) and (-2, 0) | C. (-6, 0) and (1, 0) | D. (3, 0) and (2, 0)

5. (16 points) Graph the Quadratic with all of the characteristics.

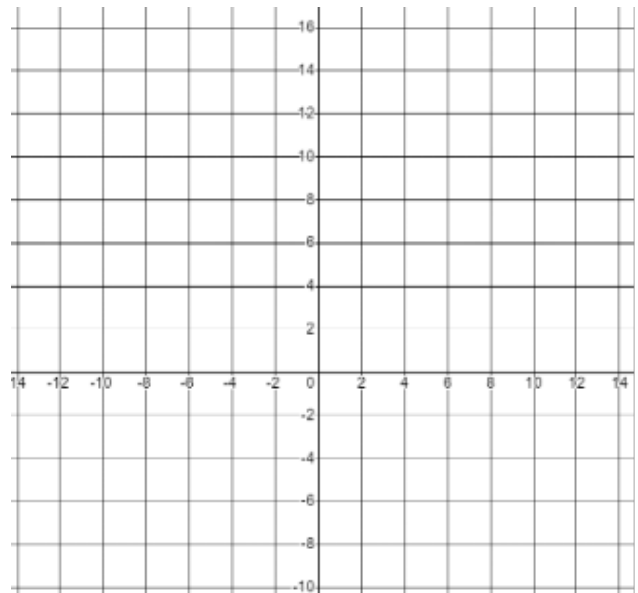
$$y = x^2 + 10x + 16$$

A: B: C:

The parabola is Smiling or Frowning?

The vertex is a Maximum or Minimum?

Axis of Symmetry:



Factor:

Vertex: (,)

y-intercept: (,)

x-intercepts: (,) and (,)

6. (14 points) Solve the following quadratic by completing the square.

$$k^2 + 6k + (\quad) = -4 + (\quad)$$

7. (12 points) Solve using square roots.

$$3x^2 + 3 = 57$$

8. (10 points) Using the discriminant, determine how many solutions there are to the following equation. Explain how you know.

$$y = 3x^2 - 6x + 10$$

9. (14 points) What are the zeros of the following quadratic? Solve using the Quadratic Formula.

$$4x^2 + 11x + 1 = 0$$

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