

Name: _____

Period: _____

Algebra2H: Quadratic Equations and Functions (Chapter 5)
Tiered Assignment

○ **Standards Addressed:**

- A2.1.1 Recognize and graph various types of functions, including polynomial, rational, and algebraic functions.
- A2.1.4 Graph relations and functions with and without graphing technology.
- A2.1.5 Find the zeros of a function.
- A2.3.1 Define complex numbers and perform basic operations with them.
- A2.3.3 Solve quadratic equations in the complex number system.
- A2.3.4 Graph quadratic functions. Apply transformations to quadratic functions. Find and interpret the zeros and maximum or minimum value of quadratic functions.
- A2.3.5 Solve word problems using quadratic equations.
- A2.5.3 Factor polynomials completely and solve polynomial equations by factoring.
- A2.5.7 Understand and describe the relationships among the solutions of an equation, the zeros of a function, the x-intercepts of a graph, and the factors of a polynomial expression.

○ **Unit Length:**

12 days with a Maximum of **100** points. Assigned grade will be awarded a “Test” weight.

A: 90 +

B: 80 – 89

C: We need to talk if you think this is your level!

D/F: **NO ONE HAS THIS OPTION!**

○ **Required Work:**

- * Listen to lectures, take notes, participate in class (participation point)
- * Complete at least **6** of the **9** homework assignments before day 12. Chapter review **MUST** be one of your chosen 6.
- * You may only turn in 1 homework assignment (book pgs.) per day.
- * You may only turn in 1 assignment on day 12 other than the chapter test.
- * The explain options must be completed by day 10 Tuesday, November 10.
- * The chapter test will be given on **Thursday, November 11.**

○ **“C” Level: Maximum 70 points attempted. Your choice of activities.**

1. Homework assignments: (5 points each)
 - a. p237(1-20)
 - b. p244(2-46e)
 - c. p251(2-50e)
 - d. p259(2-64eomit 46,48)
 - e. p266(2-18e,19,36-52e, omit 40,44)
 - f. p274(2-52e, 58-66e, omit 48)
 - g. p289 (2-52e)
 - h. p281(2-36e,40-48e)
 - i. p293(6-72e, omit 12)
2. Complete all “Check Skills You’ll Need” sections and define all “New Vocabulary” for each section. (10 points) Make sure you **show work** for the check skills.
3. Complete a section from the Notetaking Guide (3 sections max) (5 points each) **Show the standards.**
4. Work on p277 with a partner. (5 points)
5. Work on p284 with a partner. (5 points)
6. Work with a partner to turn in the following story problems: p238(30); p245(54); p260(46,48); p266(32,65); p275(54,55); p282(50); p291(56) (10 points)
7. Take a quiz over 5.1 – 5.4 (10 points)
8. Take a quiz over 5.5 – 5.8 (10 points)
9. Use a calculator for p240. (5 points)
10. Use a calculator for p269. (5 points)
11. Explain to me how to solve a quadratic equation either by factoring, taking square roots/completing the square, using the quadratic formula (5 points)
12. Explain to me how to graph a quadratic function.(5 points)

○ **“B” Level: Maximum 15 points. Choose one activity.**

1. Create a test with at least 30 questions, labeling each question with what standard is being tested. **Trade with another student**, take each other’s tests, and you grade their responses. You must include your answer key (showing work). Turn the tests in simultaneously.

2. Type a 2-10 page paper (times new roman font size 12 with 1 inch margins) discussing one of the following two topics from Ch 5. Your paper should include at least 5 paragraphs including an introduction and conclusion. There must be a **works cited** page (MLA format) with **parenthetical citations**.

a. Quadratic Equations

- Create and solve a quadratic equation using all three methods from Chapter 5. **Explain each step using complete sentences**
- Be sure to include a discussion about imaginary numbers (what they are, how to find them, why were they created...)

b. Quadratic Functions as Parabolas

- Discuss how to graph a quadratic function, don't forget to talk about the case when the vertex is the same as the y-intercept. (show specific examples)
- Discuss how to find the vertex form (both ways) and graph a quadratic function in standard form. (Use specific examples)
- Discuss how to find the equation of a parabola given three points on the parabola and given the vertex and one point. (Show specific examples)

"A" Level: Maximum 20 points.

Take the chapter test with a score of at least 90% (20 points).

Take the chapter test with a score of 80-89% (10 points).

Take the chapter test with a score below 50% (-10 points).

	5	4	3	2	1	0
Accuracy of Homework	All problems are finished completely. Problems checked for accuracy were 97%-100% correct.	All problems were finished completely. Problems checked for accuracy were 96% - 80% correct.	All problems were finished completely. Problems checked for accuracy were 70% - 79% correct.	Most problems were finished completely. Problems checked for accuracy were 60 - 69% correct.	Less than half of the problems were finished completely. Problems checked for accuracy were 50-59% correct.	Problems were not finished completely and/or were below 50% level.

CATEGORY	5	4	3	2	1	0
Completion /5pts	All components are completed.	All but 1 of the components are completed.	All but 2 of the components are completed.	Several of the components are not completed.	Most of the components are not completed	None of the components are completed.
Neatness and Organization /5pts	The work is presented in a neat, clear, organized fashion that is easy to read.	The work is presented in a neat and organized fashion that is usually easy to read.	The work is presented in an organized fashion but may be hard to read at times.	The work appears sloppy and unorganized. It is hard to know what information goes together.	The work is sloppy and unorganized. It can not be deciphered.	None of the work is completed.
Mathematical Errors /5pts	90-100% of the steps and solutions have no mathematical errors.	Almost all (85-89%) of the steps and solutions have no mathematical errors.	Most (75-84%) of the steps and solutions have no mathematical errors.	More than 75% of the steps and solutions have mathematical errors.	More than 90% of the steps and solutions have mathematical errors.	There is no solution or 100% of the solutions have mathematical errors.

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	P237 1A	P244 1B	P251 1C	P259 1D	P266 1E	P274 1F	P289 1G	P281 1H	P293 1I	cs/nv 2	ng 3	P277 4	P284 5	sp 6	Q1 7	Q2 8	P240 9	P269 10	solve 11	graph 12	tot
"C" level	5	5	5	5	5	5	5	5	5	10	15	5	5	10	10	10	5	5	5	5	70

	1	2a	2b	tot
"B" level	15	15	15	85

	test	tot
"A level"	50	20

total:
100