# Algebra II

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| Instructor | Ms. Lopez | Phone | 510-370-3334 |
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| Office Hours | 4:00pm-4:30pm or upon request |  | Quarter 3 |

### Text:

McDougal Little, Algebra II

### Description:

During this quarter, you will review many of the concepts introduced at the end of Algebra I, such as solving for variables, linear equations, and linear systems. The focus will shift from technique to applications, as you gain a higher level of fluency in the algebraic concepts presented. As you explore the content, try to examine how some of these techniques can apply to aspects of the world around you.

### Essential Understanding:

Continuing from Algebra I, you will discover techniques to easily solve seemingly complex and difficult equations. We will review many of the concepts previously seen, and refine them to account for the nuances presents in society. In doing so, you will begin to understand the complexities of daily life and the extent in which Mathematics can both describe the present and predict the future.

### General Guidelines:

## Lessons:

Lessons will be given throughout the class depending on the math level that you are in. You will have multiple lessons a week. If you are struggling with a concept it is your responsibility to review the lesson and ask questions. **It is a requirement to come to the lesson area and take notes**. I will be checking your notebook, making sure you are taking notes for credit. If you are absent on one of the days that there is a lesson it is your responsibility to get the notes either from google classroom or a peer.

## Individual Work:

33.33% of your grade is based on completing the assignments that will be assigned to you after every lesson. All assignments will be out of 10 points and assignments will be collected every week (Fridays). Use your class time properly, if you do not understand the individual work it is a good time for you to ask help from either your peers or me. **You must show work to receive full credit.**

## Group Work:

33.33% of your grade is based on completing and participating in group work. You must communicate with your group and do the group work together. If your team completes the group work however, you did not participate you will be getting no credit for that assignment. **You will not be able to make up any group work**.

## Final/Assessments:

33.33% of your grade is based on assessments and your final**. You will be able to use your notebook during the assessments and final.** You must make at least 70% to ‘pass’ the assessment. If you do not pass an assessment you may choose to retake a similar assessment however, you will not be allowed to use notes. You may also do test corrections for half of the remaining of the credit missed. You will not be able to make up the final exam nor make corrections on the final exam.

## Late Policy:

You will be able to make up any work if you have an **excused absent** for full credit and will be given extra days equal to the amount of days missed. If you need an extension you must email me **before** the day that the assignment is due. If I see that you are not using your class time properly you will not be given the extended time. If you get the extended time you will be able to receive full credit. If you turn in your assignment late without an extension you will be given a 7 out of 10 (C).

### Goals:

Polynomials and Polynomial Functions

Rational Exponents and Radical Functions

### Requirements:

Adding and Substracting Polynomials

Solving Quadratic Equations Paper Chain Activity

### Resources:

Touring with Mr. Niemann, Ms. Sun, or myself

Khan Academy

### Course Schedule:

| Week | Guiding Question | Topic | Individual Work |
| --- | --- | --- | --- |
| January 8th -January 12th | **What is the outcome of using properties of exponents?** |  | **Vocabulary:**  -Scientific Notation  -Polynomial  -Polynomial function  -Synthetic  -Substitution  -End behavior |
| January 15th – January 19th |  | -**5.1:** Use Properties of Exponents  **-5.2**: Evaluate and Graph Polynomials functions | **5.1 (P.333 #’s 3-35 odds)**  **DUE: Friday January 19th at 4:00pm** |
| January 22nd-Juanary 26th |  | - | -**5.2**: **(P. 341 #’s 3-21 odds)**  **DUE: Friday January 26TH at 4:00pm** |
| QUIZ | **5.1-5.2** | **THURSDAY** | **JANUARY 25th** |
| January 29th-February 2nd | **What is the rule to add or substract the coefficients?** | -**5.3**: Add, Subtract, and Multiply Polynomials  -**5.4:** Factor and Solve Polynomial Equations | **Vocabulary:**  -factored Completely  -Like Terms  -Factoring by grouping  -Quadratic Form  -**5.3: (P. 349 #’s 3-25 odds skip 15)**  **-5.4: (P.356 #’s 3-29 odds skip 9)**  **DUE: Friday February 2nd at 4:00pm** |
| QUIZ | **5.3-5.4** | **FRIDAY** | **FEBRUARY 2nd** |
| MIDTERM I | **5.1-5.4** | **TUESDAY** | **FEBRUARY 6th** |
| February 8th-February 13th |  | **GROUP WORK** | **DUE: Thursday February 22nd at the beginning of class** |
| February 20th-February 23rd | **How can you use the theorems to factor polynomials?** | **-5.5:** Apply the Remainder and Factor theorems | **Vocabulary:**  -long division  -synthetic division  -**5.5: (P. 366 #’s 3-17 odds)**  **DUE: Friday February 23rd at 4:00pm** |
| February 26th-March 2nd | **What does the real zeros of a polynomial function get you?** | -**5.6:** Find Rational Zeros | **Vocabulary:**  -Zero of a function  -Constant term  -Leading coefficient  -**5.6 (P. 374 #’s 3-17 odds)**  **DUE: Friday March 2nd at 4:00pm** |
| QUIZ | **5.5-5.6** | **THURSDAY** | **MARCH 1ST** |
| March 5th- March 9th | **What can the rational exponents get you?** | -**6.1:** Evaluate nth Roots and Use Rational Exponents | **Vocabulary:**  - Nth root of a  -Index of a radical  -**6.1 (P. 417 #’s 3-31 odds)**  **DUE: Friday March 9th at 4:00pm** |
| March 12th-March 16th | **No Class** | **Intersession Week** |  |
| March 19th -March 23rd |  | **-6.2:** Apply Properties of Rational Exponents | **Vocabulary:**  -Simplest form of a radical  -like radicals  -**6.2 (P. 424 #’s 3-39 odds)**  **DUE: Tuesday March 27th at 4:00pm** |

### Examinations:

FINAL EXAM

**THURSDAY MARCH 29th**