# Algebra I

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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 1

### Description:

This course is designed to emphasize the study of multiple representations of linear and non-linear functions.  It includes mathematical concepts for working with rational numbers, various expressions, analyzing and solving linear equations & inequalities, data analysis, probability, statistics, and polynomials.  Students will use hands-on materials and calculators when needed in solving problems where the algebra concepts are applied.  Students who complete Algebra I should take Geometry next.

### Essential Understanding:

Real world situations can be represented symbolically and graphically. Algebraic expressions and equations generalize relationships from specific cases. A problem solver understands what has been done, knows why the process was appropriate, and can support it with reasons and evidence. There can be different strategies to solve a problem, but some are more effective and efficient than others are. The context of a problem determines the reasonableness of a solution. The ability to solve problems is the heart of mathematics.

### 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:

Writing Equations of parallel and perpendicular lines

Solving inequalities

Graphing inequalities

### Requirements:

Inequality Maze (Group Activity)

### Resources:

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

Khan Academy

### Course Schedule:

| Week | Guiding Question | Topic | Individual Work |
| --- | --- | --- | --- |
| January 8th -January 12th | **How can you distinguish a parallel equation from a perpendicular equation?** | **-5.5:** Write Equations of parallel and perpendicular lines | **Vocabulary:**  -Positive Correlation  -Negative Correlation  -Relatively no correlation  **5.5 (P. 322 #’s 3-15 odds and 19-25 odds)**  **DUE: Friday January 12th at 4:00pm** |
| January 15th – January 19th |  | -**5.6:** Fit a Line to Data | **Vocabulary:**  -Scatter plot  -Correlation  -Line of fit  **5.6 (P.328 #’s 3-7 all and 13 and 14)**  **DUE: Friday January 19th at 4:00pm** |
| QUIZ | **5.5-5.6** | **THURSDAY** | **JANUARY 18TH** |
| January 22nd-Juanary 26th | **How can an equation or inequality can be used to represent a given situation?** | -**6.1:** Solve Inequalities Using Addition and Subtraction  -**6.3:** Solve Multi-Step Inequalities | **Vocabulary:**  -Graph of an Inequality  -Equivalent Inequalities  -Inequality  -Solution of an inequality  -**6.1**: **(P. 359 #’s 3-21 odds)**  **DUE: Friday January 26TH at 4:00pm** |
| QUIZ | **6.1-6.3** | **TUESDAY** | **JANUARY 30TH** |
| January 29th-February 2nd | **What is the difference between compound inequalities and inequalities?** | -**6.4:** Solve Compound Inequalities | **Vocabulary:**  -Compound inequality  -**6.3: (P. 372 #’s 3-27 odds)**  **DUE: Friday February 2nd at 4:00pm** |
| February 5th-6th |  |  | **-6.4: (P. 384 #’s 3-19 odds skip 7)**  **DUE: Tuesday February 6th at 4:00pm** |
| MIDTERM I | **5.5-6.4** | **TUESDAY** | **FEBRUARY 6th** |
| February 8th-February 13th |  | **GROUP WORK** | **DUE: Thursday February 22nd at the beginning of class** |
| February 20th-February 23rd | **What is the absolute value?** | -**6.5:** Solve Absolute Value Equations | **Vocabulary:**  -Absolute value equation  -**6.5: (P. 393 #’s 3-31 odds)**  **DUE: Friday February 23rd at 4:00pm** |
| February 26th-March 2nd | **What does the absolute value of inequalities tell you?** | -**6.6:** Solve Absolute Value Inequalities | **Vocabulary:**  **-**Absolute value  -Equivalent inequalities  -Compound inequalities  -Absolute deviation  -Mean  -**6.6: (P. 401. #’s 3-19 odds)**  **DUE: Friday March 2nd at 4:00pm** |
| March 5th- March 9th | **How can you use inequalities to describe an overestimate or an underestimate?** | -**6.7:** Graph Linear Inequalities in Two Variables | **Vocabulary:**  **-**Linear inequality in two variables  -Graph of an inequality in two variables  -**6.7 (P. 409 #’s 3-31 odds)**  **DUE: Friday March 9th at 4:00pm** |
| QUIZ | **6.5-6.7** | **THURSDAY** | **MARCH 8TH** |
| March 12th-March 16th | **No Class** | **Intersession Week** |  |
| March 19th -March 23rd |  | **-7.1:** Solve Linear Systems by Graphing | **Vocabulary:**  -system of linear equations  -Solution of a system of linear equations  -Consistent  -Consistent independent system  -**7.1 (P. 430 #’s 13-25 odds)**  **DUE: Tuesday March 27th at 4:00pm** |

### Examinations:

FINAL EXAM

**THURSDAY MARCH 29th**