

# Algebra I Course Syllabus (1/4)

Fall 2021

**Course Title:** Algebra I (1/4)  
**Course Code:** MES41QQB-01  
**Semester:** Fall 2021

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**Room:** 222

## Course Description:

Welcome to the first part of your Algebra I journey! This semester we will be exploring relationships & patterns between numbers, mathematically modeling real-world situations, and apply a variety tools & strategies to make sense and solve problems. No matter your experience in mathematics so far (good, bad, or indifferent), we will focus on building our mathematically mindset to approach the subject and show that everyone (including you!) can be “Math Person.” The course is structured to start with a short unit on mathematical mindset followed by three main units of study and will conclude with a semester review. Two projects will be completed throughout the semester.

## Course Expectations

- ◆ All students and educators will recognize and respect each others’ life experiences & identity (ethnicity, race, gender, sexual orientation, religion, age, etc.)
- ◆ Attend and participate in class and coursework—in person or virtually, when needed.
- ◆ Ask questions whenever you are confused, need clarity, or just curious about a mathematical topic. Questions are very important!
- ◆ Believe in your ability as a student of mathematics. Everyone can be good at math! You just might not know it yet.

## Grading Policy

- ◆ Participation: 15%
- ◆ Classwork: 20%
- ◆ Homework: 20%
- ◆ Quizzes & Tests: 20%
- ◆ Mindset Math: 15%
- ◆ Projects: 10%

## Semester Sequence & Units of Study:

- ◆ Unit 0: Mathematical Mindset (2 Weeks)
- ◆ Unit 1: Foundations of Algebra (4 Weeks)
- ◆ Unit 2: Solving Equations (5 Weeks)
- ◆ Unit 3: Solving Inequalities (4 Weeks)
- ◆ Semester Wrap-Up & Review (2 Weeks)

## Grading Policy Description:

- ◆ **Participation:** Attending live or asynchronous lessons and completing classroom activities that build conceptual understanding. Participation is graded on completion and effort put forth.
- ◆ **Classwork:** Attending live or asynchronous lessons and completing classroom activities that practice or are applications of a concept. Classwork is graded on completion and effort put forth.
- ◆ **Homework:** Assignments or tasks related to the unit of study. Multiple options will be provided to students to allow for choice. Homework is graded on completion and correct mathematics.
- ◆ **Quizzes & Tests:** Assessments within units of study and at the end of them. Quizzes & Tests are graded on completion and correct mathematics.
- ◆ **Mindset Math:** Attending live or asynchronous lessons and completing activities or tasks outside of the current unit of study. Mindset Math is graded on completion and effort put forth.
- ◆ **Projects:** One project will be connected to the units of study and a smaller project outside the units of study that demonstrate application or deeper study of a mathematical topics. Projects are graded using project specific rubrics.
- ◆ **All course work can be resubmitted for a higher grade with revisions.**
- ◆ **All course work will be accepted without a late-penalty up until final grades are submitted.**

## Course Materials and Digital Tools:

- ◆ Course materials will be primarily teacher modified, adapted, and or/created following the Pearson Prentice Hall Algebra I sequence of lessons, activities, assessments and Common Core Learning Standards—in addition to NYS Next Generation Math Standards.
- ◆ Google Classroom will be used to assign, monitor, and grade student course work. In addition, it will be used provide asynchronous lessons and additional resources for students and additional Regents Exam preparation.
- ◆ Variety of Digital Tools will be used for instruction and assessment, including: Desmos, GeoGebra, Pear Deck, Lumio, Nearpod, EdPuzzle, Kahoot!, Quizizz, and FlipGrid.
- ◆ Student Class Portfolios will be kept within the classroom and digitally to archive student learning, thinking, and growth.

## Semester's Essential Questions

- ◆ **Unit 0: Mindset Mathematics**
  - How do we develop a Growth Mindset in mathematics?
  - How can we model and represent situations mathematically?
  - How do we make and defend conjectures?
- ◆ **Unit 1: Foundations of Algebra**
  - How do you represent quantities, patterns, and relationships?
  - How are properties related to algebra?
- ◆ **Unit 2: Solving Equations**
  - Can equations that appear to be different be equivalent?
  - How can you solve equations?
  - What kinds of relationships can proportions represent?
- ◆ **Unit 3: Solving Inequalities**
  - How do you represent relationships between quantities that are not equal?
  - Can inequalities that appear to be different be equivalent?
  - How can you solve inequalities?

## Semester's Learning Standards for Algebra I:

- ◆ **Conceptual Category: Numbers & Quantities**
  - **Domain:** Quantities (Q)
    - **Cluster:** Reason Quantitatively and use units to solve problems.
- ◆ **Conceptual Category: Algebra**
  - **Domain:** Seeing Structure in Expressions (SSE)
    - **Cluster:** Interpret Structure of Expressions
  - **Domain:** Creating Equations (CED)
    - **Cluster:** Create equations that describe numbers or relationships
  - **Domain:** Reasoning with Equations and Inequalities (REI)
    - **Cluster:** Solve equations and inequalities with one variable.
    - **Cluster:** Understanding solving equations as a process of reasoning and explain the reasoning.
    - **Cluster:** Represent and solve equations and inequalities graphically.