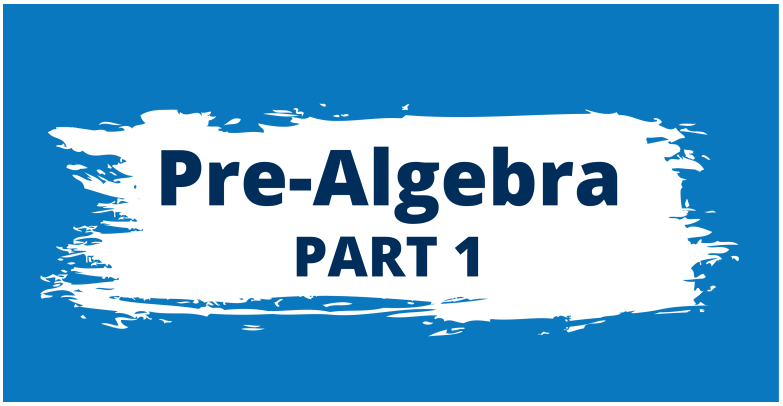
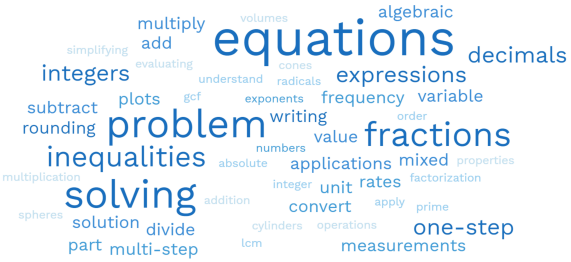
Mathematics

Pre-Algebra, Part 1 Syllabus





Course Description

Pre-Algebra, Part 1 is divided into four units:

1. Whole Number Foundations
2. Expressions, Equations, and Inequalities
3. Fractions, Decimals, and Percents
4. Statistical Analysis

Prerequisites

There are no prerequisites for this class.

Course Materials

There are no textbooks required for this course, all content can be found within the course lesson pages.

Students may use a handheld graphing or scientific calculator or a Desmos online calculator (found at desmos.com/scientific or desmos.com/calculator only) during the final exam; no other calculator is allowed.

Course Outcomes

As students complete the course assignments, they will increase their knowledge, improve a 21st-century skill, and develop an attribute.

Knowledge: Pre-Algebra, Part 1

In this course, *knowledge* refers to the subject matter and content students will learn while completing the readings, practices, quizzes, and assignments.

On successful completion of this course, students will be able to do the following:

1. Perform the four mathematical operations (addition, subtraction, multiplication, and division) on rational numbers (including positive and negative numbers, fractions, and decimals), and apply these operations to solve mathematical problems.
2. Apply concepts of ratio, proportion, and percent to real world problems.
3. Understand the meaning of a variable and use variables to write algebraic expressions, linear equations, and linear inequalities to solve real-world mathematical problems.
4. Gather and analyze data from the outcomes of an event using relative frequencies and data display graphs.

21st-Century Skill: Critical Thinking—Reasoning

As students complete this course's assignments, they will gain skills in *Reasoning*. This skill is part of Critical Thinking.

Attribute: Humility

This course focuses on developing the attribute of *humility* in the context of mathematics.

Grading and Assignments

Your grade in this course will be based on these assignments and exams.

Grading Scale

Assignment or Exam	Grading	Percent of Total Grade
Topic Assignments	Computer Graded	20%
Application Problems and Project	Teacher Graded	15%

Assignment or Exam	Grading	Percent of Total Grade
Module Quizzes	Computer Graded	35%
Content Guides	Teacher Graded	10%
Mid-Course Quiz and Final Exam	Computer Graded	20%

Topic Assignments

Each module consists of 4 topics. Each topic has one assignment where students will be asked to demonstrate their knowledge of the content learned from the lesson material. In total, there are 56 assignments in the course. Students will have unlimited attempts.

Content Guides

Every module will have a content guide to help students take notes on the key topics in the lessons. Students will submit them for a grade at the end of each module. Content guides are graded based on completion, so students will get full points if they have everything filled out.

Application Problems and Final Project

At the end of some modules, students will have application problems that challenge them to apply what they learned to real-world problems. There are instructions, templates, and a rubric provided to help students be successful in completing this portion of the course. The 21st Century Skill of **Reasoning** is taught through the completion of these projects as well. Students should integrate the practices shared in the instructions and feedback to ensure that they earn the optional micro-credential at the end of the course.

Module Quizzes

At the end of each module, students will take a quiz that covers all topics taught. These quizzes potentially will allow for multiple attempts on each question.

Exams

Students will complete these exams during the course.

Mid-Course Quiz: The mid-course quiz is found in Module 8 and covers all of the material learned in Modules 1-7. Like module quizzes, they allow for two attempts on each question.

Final Exam: The final exam is found in Module 16 and is a comprehensive final that covers all material learned in the course from Modules 1-15.

Final Grade

The letter grade will be calculated according to these percentages.

Grading Scale

Percent to Letter Grade Calculation	
A	100% – 93%
A–	92% – 90%
B+	89% – 87%
B	86% – 83%
B–	82% – 80%
C+	79% – 77%
C	76% – 73%
C–	72% – 70%
D+	69% – 67%
D	66% – 63%
D–	62% – 60%
F (fail)	59% – 0%