Eighth-Grade Mathematics, Part 1 (MATH-035)

Mathematics 8th Grade Math Syllabus

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Course Description

In 8th Grade Math Part 1, students will learn about the tools for solving equations, transformations of geometric figures, proportional relationships, and the equations for straight lines. The lessons are labeled as Weeks to help you pace yourself through a normal high school course, but those weeks are not deadlines or due dates. You still have your full time to finish the course.

This course has been divided into four main units:

- Unit 1: Expressions and Equations
- Unit 2: Analyzing Geometric Figures
- Unit 3: Linear Equations
- Unit 4: Functions

In addition, the course will also have students develop twenty-first-century skills in communication as well as the attribute of respect. Students will find more information on the skill and attribute in the Knowledge, Skills, and Attributes module.

Prerequisites

There are no prerequisites for this class. However, we recommend students take the classes that come before this course. Typically, this means students have already taken 7th Grade Math, Parts 1 and 2.

Course Materials

No textbooks are 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).

Course Policies

For information about resubmitting assignments, retaking quizzes, how long students are given to complete the course, and other questions, please contact your AK Grad instructor.

◎Course Outcomes

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

 Knowledge: 8th Grade Math 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. Simplify expressions and solve equations and identify various transformations (Unit 1 Expressions and Equations).
2. Use rigid transformations and angle measures to determine if triangles and other figures are similar (Unit 2 Analyzing Geometric Figures).
3. Graph and interpret proportional relationships, calculate slope, and solve systems of linear equations algebraically and graphically (Unit 3 Linear Equations).
4. Determine if a relation is a function and graph and analyze linear functions that model real-world situations (Unit 4 Functions).

21st-Century Skill: Communication

As students complete this course's assignments, they will gain skills in *Communication: Communicate Using Writing*. This skill is part of the Communication category.

 Attribute: Respect

This course focuses on developing the attribute of *repect* in the context of 8th Grade Math.

🖉Grading and Assignments

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

Assignment or Exam	Grading	**Percent of Total Grade**
Topic Assignments	Computer-Graded	20%
Application Book Project and Content Guides	Teacher-Graded	30%
Module Quizzes	Computer-Graded	30%
Midcourse Quiz and Final Exam	Computer-Graded	20%

Topic Assignments

Each module consists of four 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 topic assignments in the course. Students will have unlimited attempts.

Content Guides

Every module has a content guide to help students work on the key math problems in the lessons. Students will fill out the content guides and submit them for a grade at the end of the last module of each unit. Content guides are graded based on completion, so students will get full points if they have everything filled out.

Application Book Project

At the end of each module is an assignment to create at least one page of a book explaining at least one topic from the module. The book should be written to a 6th-grade or 7th-grade audience and is meant to challenge students to teach the content in a clear and simple way using tools for math communication. There are instructions, examples, templates, and rubrics provided to help students be successful in completing this portion of the course.

The module book page assignments prepare students for the midcourse book project in module 8 and the final book project in module 16.

The book project is also how students demonstrate the twenty-first-century skill of *Communication: Communicate Using Writing*.

Module Quizzes

At the end of each module, students will take a quiz that covers all topics taught. While students have unlimited attempts for topic assignment questions, module quizzes will only allow for 2 attempts at each question and do not generate additional questions.

Midcourse Quiz

This computer-graded quiz will cover the material up to the midcourse quiz. The questions on the midcourse quiz will be similar in format to the questions on the final exam.

Final Exam

This computer-graded quiz will cover the material from the entire course.

Course Grade

The letter grade will be calculated according to these percentages.

Percent to Letter Grade Calculation	
A	100%–93%
A–	<93%–90%
B+	<90%–87%
B	<87%–83%
B–	<83%–80%
C+	<80%–77%
C	<77%–73%
C–	<73%–70%
D+	<70%–67%
D	<67%–63%
D–	<63%–60%
F (fail)	<60%–0%