

Mathematics 6

Course Overview and Syllabus

Course Number: MA3106

Grade Level: 6

Prerequisite Courses: Mathematics 5

Credits: 1.0

Course Description

This course begins by connecting ratio and rate to multiplication and division, allowing students to use ratio reasoning to solve a wide variety of problems. They further apply their understanding of multiplication and division to explain the standard procedure for dividing fractions. This course builds upon previous notions of the number system to now include the entire set of rational numbers. Students begin to understand the use of variables as they write, evaluate, and simplify expressions. They use the idea of equality and properties of operations to solve one-step equations and inequalities. In statistics, students explore different graphical ways to display data. They use data displays, measures of center, and measures of variability to summarize data sets. The course concludes with students reasoning about relationships among shapes to determine area, surface area, and volume.

Course Objectives

Throughout the course, you will meet the following goals:

- Apply knowledge of multiplication and division while working with fractions and to solve ratio and rate problems
- Extend previous notion of the number system to include the entire set of rational numbers
- Effectively translate between graphic, numeric, symbolic, and verbal representations
- Develop an understanding of data distributions and statistical variability
- Learn to select and use appropriate mathematical knowledge when investigating problems
- Demonstrate an understanding of the meanings and uses for variables in mathematical problems
- Work with two- and three-dimensional shapes to solve problems involving area, surface area, and volume

Student Expectations

This course requires the same level of commitment from you as a traditional classroom course would. Throughout the course, you are expected to spend approximately 5–7 hours per week online on the following activities:

- Interactive lessons that include a mixture of instructional videos and tasks
- Assignments in which you apply and extend learning in each lesson
- Assessments, including quizzes, tests, and cumulative exams

Communication

Your teacher will communicate with you regularly through discussions, email, chat, and system announcements. You will also communicate with classmates, either via online tools or face to face, as you collaborate on projects, ask and answer questions in your peer group, and develop your speaking and listening skills.

Grading Policy

You will be graded on the work you do online and the work you submit electronically to your teacher. The weighting for each category of graded activity is listed below.

Grading Category	Weight
Lesson Quizzes	20%
Unit Tests	30%
Cumulative Exams	20%
Assignments	20%
Projects	10%
Additional	0%

Scope and Sequence

When you log into Edgenuity, you can view the entire course map—an interactive scope and sequence of all topics you will study. The units of study are summarized below:

Unit 1: Understanding Ratios and Rates

Unit 2: Applying Ratios and Rates

Unit 3: Multi-Digit Computation

Unit 4: Dividing Fractions

Unit 5: Percent

Unit 6: Extending the Number System

Unit 7: Relationships on the Coordinate Plane

Unit 8: Data Distributions and Analysis

Unit 9: Variables and Expressions

Unit 10: Equations and Inequalities

Unit 11: Area

Unit 12: Surface Area and Volume