

Course Description: Math 6 Honors (1 of 2) builds on previously learned concepts such as adding, subtracting, multiplying, and dividing and deepening knowledge of arithmetic with fractions, decimals, and negative numbers to solve real-world problems. Topics include statistics, ratios, unit conversions, geometry, writing and evaluating expressions with variables and exponents, and working with equations.

Course Objectives:

- Add, subtract, multiply, and divide integers and rational numbers.
- Find greatest common factors and least common multiples of pairs of numbers.
- Write and use ratios to show relationships and convert units of measurement.
- Rewrite numbers and expressions in different forms.
- Solve problems related to ratios, fractions, decimals, and percents.
- Compare and order numbers using number lines and inequality statements.
- Identify statistical questions and what makes them statistical.
- Identify and interpret integers, including opposite numbers, in real-world problems.
- Represent data in different displays.
- Rewrite and identify equivalent expressions using properties.
- Write and evaluate expressions that represent situations.
- Identify and interpret values that describe data.
- Represent relationships between pairs of numbers in the coordinate plane.
- Write and solve equations using substitution, tables, and operations.
- Calculate the area of polygons using the areas of rectangles and triangles.
- Calculate volumes of rectangular prisms with cubes and formulas.
- Identify nets to represent three-dimensional shapes and find surface areas.

Required Materials:

In course.

Course Overview:

Unit 1: Whole Numbers and Fractions

- Discussion (Lessons 1-5)
- Learn (Lessons 1-5)

- Key Terms
 - Text: Operations with Whole Numbers; Division and Factors of Whole Numbers; Greatest Common Factor and Least Common Multiple; Adding and Subtracting Fractions; Multiplying and Dividing Fractions
 - Workbooks
- Enrichment (Check Your Understanding: Lessons 1-5)
 - Checkpoint (Lessons 1-4)
 - Unit 1 Exam (Lesson 5)

Unit 2: Decimals, Ratios, and Percents

- Discussion (Lessons 6-10)
- Learn (Lessons 6-10)
 - Key Terms
 - Text and Videos: Operations with Decimals; Ratios; Percents; Comparing Fractions, Decimals, and Percents; Word Problems with Fractions, Decimals, and Percents
 - Workbooks
- Enrichment (Check Your Understanding: Lessons 6-10)
- Checkpoint (Lessons 6-9)
- Unit 2 Exam (Lesson 10)
- Project (Lessons 7 and 9)

Unit 3: Integers and Exponents

- Discussion (Lessons 11-15)
- Learn (Lessons 11-15)
 - Key Terms
 - Text and Videos: Introduction to Integers; Adding Integers; Subtracting Integers; Multiplying and Dividing Integers; Exponents
 - Workbooks
- Enrichment (Check Your Understanding: Lessons 11-15)
- Checkpoint (Lessons 11-14)
- Unit 3 Exam (Lesson 15)
- Project (Lessons 12, 13, and 14)

Unit 4: Variables and Expressions

- Discussion (Lessons 16-20)
- Learn (Lessons 16-20)
 - Key Terms
 - Text and Videos: Order of Operations; Working with Variables; Evaluating Expressions; Equivalent Expressions; Modeling with Expressions
 - Workbooks
- Enrichment (Check Your Understanding: Lessons 16-20)
- Checkpoint (Lessons 16-19)
- Unit 4 Exam (Lesson 20)
- Project (Lessons 17, 18, and 19)

Unit 5: Equations and Figures in Two Dimensions

- Discussion (Lessons 21-25)
- Learn (Lessons 21-25)
 - Key Terms
 - Text and Videos: Equations; Solving Equations; Converting Units; The Coordinate Plane; Areas of Rectangles and Triangles
 - Workbooks
- Enrichment (Check Your Understanding: Lessons 21-25)
- Checkpoint (Lessons 21-24)
- Unit 5 Exam (Lesson 25)
- Project (Lessons 22, 23, and 24)

Unit 6: Polygons and Three-Dimensional Shapes

- Discussion (Lessons 26-29)
- Learn (Lessons 26-29)
 - Key Terms
 - Text and Videos: Areas of Polygons; Volumes of Rectangular Prisms; Representing Shapes with Nets; Finding Surface Areas; Review and Final Exam
 - Workbooks
- Enrichment (Check Your Understanding: Lessons 26-30)

- Checkpoint (Lessons 26-29)
- Unit 6 Exam (Lesson 29)
- Course Final Exam (Lesson 30)
- Course Summary (Lesson 30)
- Course Bibliography (Lesson 30)