# 7th Grade High Math: Accelerated Math
# Curriculum Overview

The seventh grade high math curriculum is aligned to the 7th and 8th Common Core State Standards and integrates the 8 Mathematical Practices. Students will extend their knowledge of 6th grade standards to apply operations of rational numbers to solve word problems as well as to expressions, equations, and inequalities. Students extend their understanding of ratios and develop understanding of proportionality to solve single- and multi-step problems. The students will solve real-world and mathematical problems involving area, surface area, and volume of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes and right prisms. Students build on their previous work with data and statistics to compare two data distributions and address questions about differences between populations. They begin informal work with random sampling to generate data sets and learn about the importance of representative samples for drawing inferences. In order to be prepared for 8th grade Algebra, students will be introduced to the concept of a function and will be able to graph linear functions, as well as solve systems of linear equations. Students use ideas about distance and angles, how they behave under translations, rotations, reflections, and dilations, and ideas about congruence and similarity to describe and analyze two-dimensional figures and to solve problems.

The course uses the 2019 Big Ideas Math series. Each child has an online student edition, with additional resources for parents and students to access anytime. These resources include video tutorials, test practice, a glossary with audio, progress checks, vocabulary help, manipulative visual aids, skill reviews, and a game closet to reinforce skills. The resources and online student edition can be accessed at www.bigideasmath.com.

Skills to be developed throughout the course:

**Standards for Mathematical Practice**

- Make sense of problems and persevere in solving them.
- Reason abstractly and quantitatively.
- Construct viable arguments and critique the reasoning of others.
- Model with mathematics.
- Use appropriate tools strategically.
- Attend to precision.
- Look for and make use of structure.
- Look for and express regularity in repeated reasoning.

Units of Study:

- Operations with Rational Numbers
- Expressions, Equations, & Inequalities
- Ratios & Proportions
- Percents
- Probability & Statistics
- Perimeter & Area of Geometric Shapes
- Surface Area & Volume of 3-D figures
- Transformations

- Angles & Triangles
- Graphing & Writing Linear Equations
- Exponents & Scientific Notation
- Real Numbers & the Pythagorean Theorem
- Volume & Similar Solids

The Learning Standards for this course align to the Common Core State Standards. Priority standards are linked below:

- 7th Grade Common Core Standards
- 8th Grade Common Core Standards
    - 8.NS.A
    - 8.EE.A
    - 8.EE.B
    - 8.F.A
    - 8.G.A
    - 8.G.B
    - 8.G.C