Math 7 is a two-semester course aligned to the South Carolina College- and Career-Ready Mathematics Standards. The course is designed to help students develop computational fluency, deepen their conceptual understanding, and apply mathematical practices. Students will learn to use proportional reasoning to solve problems and will build algebra skills as they simplify expressions with exponents and solve multistep equations and inequalities using algebraic reasoning. Students will investigate circles and deepen their understanding of angle relationships, surface area, and volume. They will also analyze data presented in dot plots, stem-and-leaf plots, and histograms and gain a fundamental understanding of probability. In addition, this course includes unit-level discussion activities in which students will learn techniques for having productive group conversations and will reflect on their own thinking and the thinking of others.

There are no required materials for this course.

Length: Two Semesters

Unit 1: Number Sense

- Fractions, Decimals, and Percents
- Applications of Percents
- Using Operations on Rational Numbers to Solve Problems
- Wrap-Up: Number Sense

Unit 2: Addition and Subtraction of Rational Numbers

- Using Properties to Add and Subtract Rational Numbers
- Adding Rational Numbers
- Subtracting Rational Numbers
- Wrap-Up: Addition and Subtraction of Rational Numbers

Unit 3: Multiplication and Division of Rational Numbers

- Multiplying Rational Numbers
- Dividing Rational Numbers
- Using Properties to Multiply and Divide Rational Numbers
- Solving Multistep Problems with Rational Numbers
- Wrap-Up: Multiplication and Division of Rational Numbers

Unit 4: Rates, Ratios, and Proportions

- Unit Rates and Proportionality
- Proportional Quantities
- Identifying the Constant of Proportionality
- Wrap-Up: Rates, Ratios, and Proportions

Unit 5: Proportional Relationships

- Using Proportions to Solve Problems

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- Markups, Discounts, and Percent Change
- Identifying Proportional Relationships
- Wrap-Up: Proportional Relationships

Unit 6: Semester Wrap-Up

- Semester Wrap-Up

Unit 7: Expressions, Equations, and Inequalities

- Writing Expressions
- Algebraic Expressions
- Simplifying Exponential Expressions
- Solving Multistep Equations
- Using Equations to Solve Problems
- Solving Linear Inequalities
- Wrap-Up: Expressions, Equations, and Inequalities

Unit 8: Angle and Side Length Relationships

- Angle Relationships
- Triangles
- Scale Drawings
- Wrap-Up: Angle and Side Length Relationships

Unit 9: Geometry in Two and Three Dimensions

- Circles
- Area
- Coordinate Geometry
- Prisms
- Pyramids
- Wrap-Up: Geometry in Two and Three Dimensions

Unit 10: Displaying and Analyzing Data

- Dot Plots, Histograms, and Stem-and-Leaf Plots
- Summarizing Data Using Measures of Center and Variability
- Choosing Appropriate Measures to Summarize Data Sets
- Wrap-Up: Displaying and Analyzing Data

Unit 11: Probability

- Probability
- Theoretical and Experimental Probability
- Simulations
- Wrap-Up: Probability

Unit 12: Semester 2 Exam

- Semester Wrap Up

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