

7th Grade Math Syllabus

School: Smoky Mountain Elementary School

Teacher: Mrs. Gilland

Room: E131

School Year: 2026 - 2027

The 7th Grade Math curriculum in Tennessee focuses on four key areas: proportional relationships, operations with rational numbers and linear equations, geometry and measurement, and statistical analysis. The standards are designed to build upon prior learning and prepare students for higher-level mathematics.

1st 9 Weeks

Unit 1: The Number System

This unit focuses on **rational numbers**, which include integers, fractions, and decimals. Students will learn how to perform all four operations (addition, subtraction, multiplication, and division) with rational numbers. This unit also emphasizes understanding the properties of these operations.

- **Standard 7.NS.A.1:** Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram.



Unit 2: Ratios and Proportional Relationships

In this unit, students will deepen their understanding of ratios and proportional relationships. They'll learn to identify, represent, and solve problems involving these concepts. A key focus is on the **constant of proportionality** and its various representations, like graphs and equations.

- **Standard 7.RP.A.1:** Compute unit rates associated with ratios of fractions, including ratios of lengths, areas, and other quantities measured in like or different units.

- **Standard 7.RP.A.2:** Recognize and represent proportional relationships between quantities.
- **Standard 7.RP.A.3:** Use proportional relationships to solve multi-step ratio and percent problems.
- **Standard 7.G.A.1:** Solve problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale.
- **Standard 7.G.B.3:** Describe the two-dimensional figures that result from slicing three-dimensional figures.

2nd 9 Weeks

- **Standard 7.NS.A.2:** Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.
 - **Standard 7.NS.A.3:** Solve real-world and mathematical problems involving the four operations with rational numbers.
-



Unit 3: Expressions and Equations

This unit extends students' algebraic skills from previous grades. They will learn to apply properties of operations to create equivalent expressions and solve multi-step equations and inequalities. A major emphasis is placed on using these skills to solve real-world problems.

- **Standard 7.EE.A.1:** Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.
 - **Standard 7.EE.A.2:** Understand that rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities in it are related.
 - **Standard 7.EE.B.3:** Solve multi-step real-world and mathematical problems posed with positive and negative rational numbers.
 - **Standard 7.EE.B.4:** Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities.
-

3rd 9 Weeks



Unit 4: Geometry

This unit covers key geometric concepts, including drawing geometric shapes, understanding relationships between angles, and solving problems involving area, surface area, and volume.

- **Standard 7.G.A.2:** Draw (freehand, with ruler and protractor, and with technology) geometric shapes with given conditions.
 - **Standard 7.G.B.4:** Know the formulas for the area and circumference of a circle and use them to solve problems.
 - **Standard 7.G.B.5:** Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure.
-

Unit 5: Statistics and Probability

This final unit introduces students to probability and statistical analysis. They'll learn how to draw inferences about a population from a sample, compare data distributions, and understand the likelihood of events.

- **Standard 7.SP.A.1:** Understand that statistics can be used to gain information about a population by examining a sample of the population.
- **Standard 7.SP.A.2:** Use data from a random sample to draw inferences about a population with an unknown characteristic of interest.
- **Standard 7.SP.B.3:** Informally assess the degree of visual overlap of two numerical data distributions with similar variabilities, measuring the difference between the centers by expressing it as a multiple of a measure of variability.
- **Standard 7.SP.B.4:** Use measures of center and measures of variability for numerical data from random samples to draw informal comparative inferences about two populations.
- **Standard 7.SP.C.5:** Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring.
- **Standard 7.SP.C.6:** Approximate the probability of a chance event by collecting data on the chance process that produces it and observing its long-run relative frequency.
- **Standard 7.SP.C.7:** Develop a probability model and use it to find probabilities of events.
- **Standard 7.SP.C.8:** Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation.

4th 9 Weeks

During this time we will be practicing for the TCAP Test which will be given April 12th - 30th. We will have 3 weeks left after TCAP at which time we will be doing STEM

Activities.

Case Benchmark Testing:

1st Test - Oct. 1st - Oct.9th

2nd Test - Dec. 9th - Dec. 17th

3rd Test - March 2nd - March 12th

Grading Policy

- 90-100 A
- 80-89 B
- 70-79 C
- 60-69 D
- Below 59 F

Grades will be taken on the following:

- Mastery Connect Test
- Edulastic Spiral Review
- Study Island Practice Sessions

Classroom Expectations

- **Be Respectful:** Treat your classmates, your teacher, and the classroom with respect.
- **Be Responsible:** Come to class prepared with all necessary materials and be on time.
- **Be Engaged:** Participate actively in discussions and activities. Ask questions and share your ideas.

Materials Needed

* Notebook specifically for math

- Pencil
- Loose-leaf paper
- Optional: Colored pencils or markers

This syllabus is subject to change at the teacher's discretion.