7th Grade Math Curriculum

Our goal is to make sure students complete middle school with not only the math skills they need to be successful in their future high school courses, but also with the confidence they need to explore and discover as they continue to learn about the world around them.

A seventh-grade math curriculum is usually a course that gets the student ready for a full *Algebra* course. The following information will explain the steps you should take to meet your child's 7th grade math goals.

What Math Should a 7th Grader Already Know?

A seventh-grade math curriculum covers these main areas of math: a full review of previous math concepts, pre-Algebra, the first half of Algebra 1, and Probability. Students are ready for seventh-grade math when they are very comfortable performing all four operations (additional, subtraction, multiplication, and division) for fractions and decimals, and be fluent in handling ratios, proportion, and percent.

What Do 7th Graders Learn in Math?

The major math concepts covered for a seventh-grade curriculum are:

- Number Sense
- Pre-Algebra: Operations on Integers
- Pre-Algebra: Variables & Expressions
- Algebra: Multi-Step Equations
- Algebra: Rational Numbers
- Algebra: Inequalities
- Algebra: Graphing
- Ratio and proportional relationships
- Experimental & Theoretical Probability
- Dependent & Independent Probability Events
- Real-world Applications & Word Problems

A YEAR AT A GLANCE Be sure to include a bit of wiggle room in case your student needs extra time with a math topic. Also note that students may do Probability at any time during the year. The sequence below is our recommendation for a full year course:

Grade 7: Pre-Algebra, Algebra 1, & Probability

September	October	November	December
Full Review *(in late Aug)* *Algebra Session #1: Operations on Integers*	*Algebra Session #1: Variables, Terms & Expressions*	*Algebra Session #2: Multi-Step Equations*	Two weeks of extra practice if needed.
January *Algebra Session #3 Inequalities*	**February** *Algebra Session #4 Graphing*	**March** *Algebra Advanced Labs #1-3*	**April** *Probability*
May *Review*	**June** *Math Camp*	**July**	**August**

Special Note Regarding *Soft Approach* Middle School Math

The *Soft Approach* Math program allows students to take three years instead of two to cover their math concepts in pre-Algebra, Algebra 1, Geometry, Probability, & Statistics. Students will study the first half of both Algebra 1 and Geometry over a two-year period, which will provide a solid foundation and help the student be more prepared for the full challenges of these subjects in high school.

For 7th Grade, students will start out with a full review of all math concepts covered in Fractions, Decimals, and Percent, start with pre-Algebra, then move into the first half of Algebra 1 (Sessions 1-4), and finish their year with Probability. Students are now ready for the 8th grade year.

For 8th Grade, students will continue their study with a full review of all Algebra concepts covered in the previous year (Sessions 1-4), then move into the first half of Geometry (Sessions 1-5), and finish the year with a course in Statistics. (If you're switching in from another course and starting 8th Grade math with us, please make sure your student has completed the topics covered in 7th grade before starting, as this is a 2-year course for Grades 7-8th.)

For 9th Grade, students will cover the second half of both Algebra 1 and Geometry in a single year. After this three-year cycle, students are ready for Algebra 2.

7th Grade Math Lesson Plan – 31 Weeks

Fall Term (August - December)

- Week 0: Full Lower-Level Review (Sessions 1-4)
- Week 1: Prime Factorization
- Week 2: Number Line, Positive & Negative Numbers
- Week 3: Operations on Integers
- Week 4: Exponents
- Week 5: Equivalent Expressions
- Week 6: Like & Unlike Terms
- Week 7: Order of Operations
- Week 8: Solving One-Step Equations
- Week 9: Solving Two-Step Equations
- Week 10: Solving Two-Step Equations
- Week 11: Word Problems

Winter Term (Jan - Feb)

- Week 12: Rational Numbers & Number Lines
- Week 13: Inequalities & Absolute Value
- Week 14: Solving Inequalities with Absolute Value
- Week 15: Relations & Functions & Review
- Week 16: Cartesian Plane Graphing
- Week 17: Graphing Slope of a Line
- Week 18: Proportional Relationships
- Week 19: Non-Proportional Relationships
- Week 20: Graphing Equations Review

Spring Term (March - May)

- Week 21: Advanced Labs 1 Physics Algebra
- Week 22: Advanced Labs 2 Astronomy
- Week 23: Advanced Labs 3 Physics of Motion
- Week 24: Probability (Simple Probability & Sample Space)
- Week 25: Probability (Experimental & Theoretical Probability)
- Week 26: Probability (Independent & Dependent)
- Week 27: Probability (Review of Probability)
- Week 28: Full Review