Spark Learn Tutoring
Digital Learning Center

Syllabus	Grade 7 Mathematics

Course Description: In the Grade 7 Mathematics course, students will build upon their foundational knowledge of mathematical concepts to develop a deeper understanding of numbers, operations, algebraic thinking, geometry, measurement, and data analysis. Through problem-solving and critical thinking activities, students will explore real-world applications of mathematical principles, enhancing their skills in number sense, proportional relationships, expressions, equations, and statistics. The course will foster the development of mathematical fluency, reasoning, and communication skills, equipping students with the tools necessary for success in higher-level mathematics and everyday problem-solving situations.

Time Commitment: This 30-week (60 lesson) course includes 2 in-class hours each week and 1-2 hours of homework each lesson, corresponding to a full-year course.

Grading: Grades in this course will be computed using a percentage-based system. All assignments completed by students will be categorized into the following weight categories:

- 10% Classwork
- 15% Homework
- 25% Quizzes (2 lowest scores are dropped)
- 40% Assessments (1 lowest score is dropped)
- 10% Final Exam

Note: If a student misses class, it is his or her responsibility to (1) view or request the recording of the previous lesson and (2) complete any missed work. **NO MAKEUP LESSONS** will be provided for any reason.

Content:

Unit	Name	Lessons		Length
0	Place Value & Rounding	Lesson 0-1	Student/Parent Orientation	1 Lesson
1	Order of Operations	Lesson 1-1	Multiplication and Division	2 Weeks
		Lesson 1-2	Fractions & decimals	
		Lesson 1-3	Ratios & Rates	
		Lesson 1-4	Unit Review and Assessment	
2	Operations with Signed Numbers	Lesson 2-1	The Rational Number System	3.5 Weeks
		Lesson 2-2	Adding Signed Numbers	
		Lesson 2-3	Subtracting Signed Numbers	
		Lesson 2-4	Subtraction with Graphs and Distance	
		Lesson 2-5	Multiplication and Division of Signed Numbers	
		Lesson 2-6	Reviewing 2-5 and Order of Operations	
		Lesson 2-7	Unit Review and Assessment	
3	Proportional Relationships	Lesson 3-1	Ratios and Complex Fractions	3 Weeks
		Lesson 3-2	Fractions, Algebra, and Ratios	
		Lesson 3-3	Proportional Relationships	
		Lesson 3-4	Exploring Proportional Relationships and their Graphs	
		Lesson 3-5	Equations of Proportions and Further Work	
		Lesson 3-6	Unit Review and Assessment	
4	Percents	Lesson 4-1	Finding Fractions of Quantities	3 Weeks
		Lesson 4-2	Percent Basics and Decimals	
		Lesson 4-3	Percentages, Decimals, and Part Representations	
		Lesson 4-4	Percentages & % Increase and Decrease	

		Lesson 4-5	Applications of Percent's & Finding the Whole (Algebra)	
		Lesson 4-6	Unit Review and Assessment	
5	Linear Expressions	Lesson 5-1	Intro to Algebra	2.5 Weeks
		Lesson 5-2	Equivalent Expressions	
		Lesson 5-3	Like Terms & Simplifying Complex Expressions	
		Lesson 5-4	Factoring Binomials and % Increase and Decrease Review	
		Lesson 5-5	Unit Review and Assessment	
6	Linear Equations and Inequalities	Lesson 6-1	Solutions to Equations & 2 Step Equations	3 Weeks
		Lesson 6-2	Two Step Equations & Manipulating Expressions	
		Lesson 6-3	2 Step Equations & Inequalities	
		Lesson 6-4	Solving Word Problems with Two Step Equations	
		Lesson 6-5	Properties and Modeling of Inequalities	
		Lesson 6-6	Unit Review and Assessment	
7	Statistics	Lesson 7-1	Statistical Measures, Populations, and Samples	3 Weeks
		Lesson 7-2	Means (and Mean Absolute Deviation)	
		Lesson 7-3	Quartiles, Box Plots, and Choosing Appropriate Stats	
		Lesson 7-4	Box and Whisker Plots	
		Lesson 7-5	Samples of 1 and 2 Populations and Comparing Samples	
		Lesson 7-6	Unit Review and Assessment	
8	Probability	Lesson 8-1	Measuring Chance with Ratios & Predicting Outcomes	2.5 Weeks
		Lesson 8-2	Probability, Percent, Probability Terminology	
		Lesson 8-3	Compound Events	
		Lesson 8-4	Sums of Dice and Simulating Compound Events	
		Lesson 8-5	Unit Review and Assessment	
9	Geometry of Angles and Triangles	Lesson 9-1	Points, Lines, Rays Segments, and Angles	2 Weeks
		Lesson 9-2	Angle Types and Pairs	
		Lesson 9-3	Algebra, Triangles, and their Angles	
		Lesson 9-4	Unit Review and Assessment	
10	Geometric Measurement	Lesson 10-1	Geometric Formulas and Areas of Trapezoid	2.5 Weeks
		Lesson 10-2	Scaled Drawings and Circles	
		Lesson 10-3	Circumference and Area of a Circle	
		Lesson 10-4	Solids, Cross Sections, SA, Volume of Right Prisms	
		Lesson 10-5	Unit Review and Assessment	
11	Standardized Exam Prep & Course Conclusion	Lesson 11-1	Gr7 Math Review 1	2 Weeks
		Lesson 11-2	Gr7 Math Review 2	
		Lesson 11-3	Gr7 Math Review 3	
		Lesson 11-4	Final Exam	