

All Things Algebra®

MATH 7 CURRICULUM

Unit 1: Number Operations

- Integers
- Adding & Subtracting Integers
- Multiplying & Dividing Integers
- Absolute Value
- Simplify Fractions
- Convert between Mixed and Improper Form
- Adding & Subtracting Fractions
- Multiplying & Dividing Fractions
- Fraction/Decimal/Percent Conversion
- Exponents
- Perfect Squares & Square Roots
- Scientific Notation (positive exponents only)
- Comparing & Ordering Numbers

Unit 2: Expressions

- Order of Operations
- Evaluating Expressions
- Translating Expressions
- Combining Like Terms
- Distributive Property
- Simplify Expressions (Distribute & Combine)
- Adding & Subtracting Expressions
- Simplify vs. Factor
- *Multiplying Monomials (Product Rule)
- *Dividing Monomials (Quotient Rule)
- *Powers of Monomials (Power Rule)
- Properties
- *Positive exponents only.

Unit 3: Equations & Inequalities

- One-Step Equations (Addition/Subtraction)
- One-Step Equations (Multiplication/Division)
- Rational Equations
- Two-Step Equations
- Multi-Step Equations
- Variables on Both Sides
- Translating Equations
- Equation Word Problems
- Translating & Writing Inequalities
- Graphing Inequalities
- One-Step Inequalities
- Two-Step Inequalities
- Inequality Word Problems

Unit 4: Ratio, Proportion, and Percent

- Ratios, Rates, Unit Rates
- Proportional vs. Nonproportional Relationships
- Solving Proportions
- Proportion Word Problems
- Scale Drawings and Models
- Indirect Measurement
- Similar Figures
- Percent Proportion
- Percent Equation
- Discount, Mark-Up, Sales Tax, Tip
- Percent of Change
- Simple Interest

Unit 5: Functions and Graphing	Unit 6: Introduction to Geometry
<ul style="list-style-type: none"> • Parts of the Coordinate Plane • Graphing Relations • Graphing Functions by Table • Multiple Representations: Tables, Graphs, Equations, Words • Slope from a Graph • Slope-Intercept Form • Slope-Intercept Form Applications • Proportional Relationships (tables, graphs, equations) 	<ul style="list-style-type: none"> • Types of Angles • Vertical & Adjacent Angles • Complementary & Supplementary Angles • Classifying Triangles • Triangle Sum Theorem • Constructing Triangles • Properties of Quadrilaterals • Classifying Quadrilaterals • Congruent Polygons • Reflections • Translations
Unit 7: Measurement (Area and Volume)	Unit 8: Probability and Statistics
<ul style="list-style-type: none"> • Perimeter & Area of Plane Figures • Area & Circumference of Circles • Area & Perimeter of Composite Figures • Surface Area of Rectangular and Triangular Prisms (nets and formulas) • Surface Area of Cylinders (nets and formula) • Volume of Rectangular and Triangular Prisms • Volume of Cylinders • Surface Area & Volume Applications 	<ul style="list-style-type: none"> • Outcomes & Events • Theoretical Probability • Experimental Probability • Tree Diagrams • Fundamental Counting Principle • Compound Probability (independent events only) • Measures of Center & Range • Dot Plots • Stem-and-Leaf Plots • Histograms • Box-and-Whisker Plots