

All Accelerated Math libraries are based on the scope and sequence generally found in popular textbooks for that grade or subject. You're sure to find objectives that reinforce the skills you are teaching, regardless of what instructional materials you use. Accelerated Math makes it easy to select and organize objectives to suit your textbook and your own teaching approach. This Accelerated Math library provides the following scope and sequence of instruction:

**Topic 1 – Grade 6: Statistics, Data Analysis, and Probability**

---

- Means of data sets
- Medians of data sets
- Modes of data sets
- Evaluate validity of claims
- Find possible outcomes
- Probability of single events
- Probability of compound events
- Forms of probabilities
- Complement of probability of an event
- Independent and dependent events

**Topic 2 – Grade 7: Statistics, Data Analysis, and Probability**

---

- Frequency distributions and line plots
- Bar graphs
- Histograms
- Circle graphs
- Line graphs
- Misleading graphs
- Choose best type of graph
- Scatter plots

**Topic 3 – Grade 7: Number Sense**

---

- Scientific notation
- Add and subtract integers
- Multiply and divide integers
- Add and subtract positive/negative decimals
- Multiply and divide positive/negative fractions and mixed numbers
- Multiply and divide positive/negative decimals
- Positive rational numbers to whole number powers
- Fractions and mixed numbers to decimals
- Fractions to percents
- Percents to fractions
- Word Problems: Percent
- Decimals to fractions
- Word Problems: Percent change
- Word Problems: Discount or markup
- Word Problems: Simple interest
- Word Problems: Compound interest
- Word Problems: Commission
- Decimals to percents
- Percents to decimals
- Negative exponents
- Multiply and divide with negative exponents

- Add and subtract positive/negative fractions and mixed numbers
- Prime factorization
- Least common multiple
- Raise integers to power
- Raise rational numbers to power
- Multiply and divide rational numbers with exponents
- Square roots of perfect squares
- Estimate square roots between integers
- Absolute values of rational numbers
- Distance on number lines between integers

**Topic 4 – Grade 7: Measurement and Geometry**

---

- Convert customary units
- Convert metric units
- Convert between measurement systems
- Convert units of area and volume
- Convert time and temperature
- Scale drawings
- Measures as rates and products
- Perimeter of quadrilaterals
- Circumference of circles
- Area of rectangles and squares
- Area of parallelograms
- Area of triangles
- Area of trapezoids
- Area of circles
- Surface area of prisms
- Surface area of cylinders
- Volume of rectangular solids
- Volume of cylinders
- Area of complex figures
- Volume and surface area of complex rectangular solids
- Ratios of length, area, and volume
- Change in measurement with scale or units
- Translations, rotations, reflections, and dilations
- Coordinate geometry to find length and area of polygons
- Pythagorean Theorem, determine right triangles
- Pythagorean Theorem, solve sides
- Corresponding parts of congruent figures

**Topic 5 – Grade 7: Mathematical Reasoning**

---

- Arithmetic sequences
- Geometric sequences
- Geometric patterns
- Too much/too little information
- Formulate and justify conjectures

- Estimate to verify reasonableness of results
- Estimate quantities graphically
- Use inductive and deductive reasoning
- Generalize and extend strategies

**Topic 6 – Grade 7: Algebra and Functions**

- Translate with expressions and equations
- Translate with inequalities
- Evaluate expressions with order of operations
- Evaluate expressions with exponents
- Sketch and interpret real-life graphs
- Powers as repeated multiplication
- Negative exponents as repeated division or multiplication
- Take a power to a power
- Multiply monomials
- Divide monomials
- Roots of monomial perfect squares
- Graph basic quadratics and cubics
- Graph ordered pairs
- Make x-y table and graph a line
- Find slope from a graph
- Find slope from 2 points
- Graph lines from slope and point
- Function tables
- Real-life linear graphs and slope
- Solve 2-step equations (integers)
- Solve 2-step equations (decimal and fraction)
- Solve 2-step inequalities
- Word Problems: Solve 2-step equations

**Topic 7 – Algebra 1**

- Inverses of rational numbers
- Solve absolute value equations
- Solve absolute value inequalities
- Simplify expressions before solving

- Combine like terms with parentheses
- Solve multi-step equations
- Word Problems: Solve multi-step equations
- Solve inequalities
- Word Problems: Inequalities
- Find lines' intercepts from equations
- Graph lines, slope-intercept form
- Graph lines, standard form
- Word Problems: Interpret slope and intercept in context
- Write equations given slope and y-intercept
- Write equation from graphs
- Write equation given 2 points or point and slope
- Verify a point lies on a line
- Write equations parallel to a line
- Graph independent systems
- Solve independent systems, substitution
- Solve independent systems, elimination
- Solve systems of linear inequalities by graphing
- Add polynomials
- Subtract polynomials
- Multiply monomials by polynomials
- Multiply 2 binomials,  $(x + a)(x + b)$
- Multiply 2 binomials,  $(ax + b)(cx + d)$
- Square a binomial
- Divide a polynomial by a monomial
- Divide a polynomial by a polynomial
- Word Problems: Multiply and divide polynomials
- Word Problems: Mixture problems
- Word Problems: Motion (rate) problems
- Word Problems: Work problems
- Word Problems: Solve systems, motion problems
- Word Problems: Solve systems, investment problems
- Word Problems: Solve systems, mixture problems

---

**Accelerated Math Libraries** include an almost unlimited supply of dynamic algorithm-generated problems for both assisted-response (multiple-choice) and free-response assignments. Eleven California-aligned libraries are available:

- Grade 1
- Grade 2
- Grade 3
- Grade 4
- Grade 5
- Grade 6
- Grade 7
- Algebra 1
- Algebra 2
- Geometry
- California High School Exit Exam

**Please call us toll-free at 1-866-492-6284** to order this Accelerated Math library or to request the Scope and Sequence for other libraries.

<u>Accelerated Math Library</u>	<u>Stock No.</u>
AM California High School Exit Exam	AMCAHSEE