Grade 6
Math
4th Edition

Number Sense
- Recognize and write 0–100,000,000,000 as numerals and words; Roman numerals I–C
- Place value: ten thousandths to hundred billions; comparing; expanded form; even/odd, positive/negative, prime/composite numbers; number line; expressions and equations
- Part-whole relationships; inverse operations

Addition & Subtraction
- Basic facts (fact families and other strategies); nine-digit column addition
- Mental compensation
- Properties: commutative, associative, identity; zero principle

Multiplication
- Basic facts (fact families and other strategies); multiples; repeated addition; vertical form; one to three digits times two to four digits; renaming; factor trees; prime/composite numbers; GCF; LCM
- Properties: commutative, associative, identity, zero, distributive

Division
- Basic facts (fact families and other strategies); equal sets; measurement/partition; fraction form; equations; mental division by 10; two to four digits by one or two digits; remainders; mixed number and decimal quotients; decimal equivalent for a fraction

Equations
- Inverse operations; compensation; simplify expressions; evaluate expressions; if-then statements; solve for an unknown

Pre-Algebra
- Missing addend/subtrahend/minuend/factor; add, subtract, multiply, and divide integers; positive/negative numbers
- Variables in expressions and equations; solve for a variable in an equation

Fractions
- Part of a whole; part of a set; equivalent fractions; comparing; ordering; lowest terms; renaming improper fractions and mixed numbers
- Add, subtract, multiply, and divide like and unlike fractions; cross-products; cancellation; pictorial representations or journal entries to express understanding of operations

Decimals
- Read and write tenths, hundredths, thousandths; write as fractions and mixed numbers; comparing; ordering; renaming to thousandths; word forms
- Add and subtract
- Multiply a decimal by a whole number, by a decimal, and by a power of 10
- Divide a decimal by a one-digit whole number; divide a whole number by a whole number with a decimal quotient; divide to rename a fraction as a decimal; divide a decimal by a power of 10

Geometry
- Points; lines: parallel, intersecting, perpendicular; line segments; rays; symmetry; similar/congruent; constructions; angles: right, acute, obtuse; measure angles; sum of angles in a triangle = 180°
- Plane figures: regular/irregular; polygons; triangles: scalene, isosceles, equilateral; quadrilaterals; parallelograms; transformations: translation, reflection, rotation; perimeter; area
- Solid figures: sphere, cone, cylinder, polyhedron, cube, prism, pyramid; face, edge, vertex, curved surface; nets; surface area; volume
- Circle: center point, radius, diameter, chord, central angles, circumference

Estimating
- Round whole numbers and decimals to a given place; round fractions to the nearest half or whole; front-end estimation
- Round to estimate a sum, difference, product, and quotient

Measurement
- Length; capacity; weight; mass
- Temperature: Fahrenheit; Celsius
- Time: elapsed time; time zones; timeline; 24-hour clock; wages
- Rename within the metric and customary systems to add, subtract, multiply, and divide

Problem Solving
- Graphs; tables; charts; schedule; map skills; probability; money; Venn diagram
- Using a problem-solving plan; multistep problems; problems with too little or too much information; group planning
- Strategies: patterns; logic; guess and check; diagram/model; simpler problem; formulas; working backwards; writing an equation

Statistics & Graphs
- Pictograph; bar/double bar graph; line/double line graph; histogram; circle graph; coordinate graph
- Tables; charts; tallies; frequency table; line plot; stem-and-leaf plot; box-and-whisker plot
- Mean, median, mode; range; frequency; scale; interval

Ratios, Proportions, Percents
- Equivalent ratios; unit rate; scale drawings; map scale
- Percents as fractions and decimals; writing fractions and decimals as percents; comparing percents to decimals and fractions; finding the percent of a number; determining the sales price given a discount as a percent
- Proportionate geometric figures

Additional content
- Introduction of speed, distance, and time; unit multipliers; comparing types of graphs, independent and dependent events; patterns; squares and square roots; Roman numerals through M (1,000); additional multistep problems

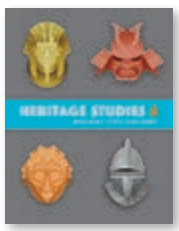
Grade 7
Fundamentals of Math
3rd Edition

- **Whole numbers and decimals:** ordering, rounding and comparing; operations and estimating; exponents; roots of perfect squares; approximating square roots; order of operations
- **Integers:** numbers sets and subsets; opposite numbers and absolute value; ordering and rounding; operations; order of operations involving integers
- **Numerical and Algebraic Expressions:** variables and expressions; properties of addition and multiplication; factoring common factors; combining like terms; adding linear expressions; properties of exponents; scientific notation
- **Fraction theory:** divisibility; factors; prime and composite numbers; GCF and LCM; renaming fractions; rational numbers; comparing and ordering rational numbers
- **Fractions:** operations; order of operations involving rational numbers; evaluating algebraic expressions involving rational numbers
- **Algebra:** Writing equations; solving one- and two-step equations; solving equations with grouping symbols; solving one- and two-step inequalities
- **Ratios and proportion:** ratios and rates; simplifying complex ratios; solving proportions; scale models; proportional relationships
- **Percents:** proportions and percent; percent equations; enlargements and reductions; percent change; sales tax; discounts; sale price; simple interest
- **Measures:** customary units of length, capacity, and weight; SI (metric) units of length, capacity, and mass; relating metric and customary units; converting rates
- **Introduction to Geometry:** basic terms; measuring angles; pairs of angles; perpendicular and parallel lines; characteristics and area of triangles and quadrilaterals; exploring triangle theorems
- **Exploring area and volume:** circles; areas of similar polygons; surface area of prisms, cylinders, and pyramids; volume of prisms and cylinders
- **Probability:** simple events; theoretical and experimental probabilities; compound events: simulations
- **Statistics:** populations and samples; descriptive measures (mean, median and mode); mean absolute deviation; comparing populations using line graphs, histograms, box-and-whisker plots, stem-and-leaf plot; visualizing data
- **Relations and functions:** coordinate plane; functions and function rules; graphing linear functions; slope; sequences

Grades 7–8
Pre-Algebra
2nd Edition

- **Integers:** absolute value; operations; exponents; order of operations; scientific notation
- **Expressions:** real-number properties; evaluating and simplifying expressions; translating word phrases; rounding and estimating results of operations
- **Equations:** solving two-step equations; removal of parentheses; subsets of the real numbers; irrational numbers; solving linear inequalities; applying equations and inequalities
- **Number theory:** prime factorization; GCD and LCM; arithmetic and geometric sequences; number bases other than 10, including hexadecimal; operations in other bases
- **Rational numbers:** forms of; ordering fractions and decimals; decimal equivalents of fractions; conversion of repeating decimals to fractions; ratios and proportions; subsets and properties of real numbers
- **Operations on rational numbers:** operations; evaluating and simplifying expressions; solving equations involving rationals; operations in scientific notation
- **Percents:** solving percent equations; applying percents; scales; discount, markup, commissions, tips, and interest (including compound); percent change
- **Applications:** equations with variables on both sides; writing and solving equations and inequalities
- **Relations and functions:** coordinate plane; functions; graphing linear functions and linear inequalities; slope; direct variation
- **Statistics and probability:** population and sample; mean, median, and mode; scatterplot; quartiles; box-and-whisker; stem-and-leaf; histograms; choosing the correct type of graph; permutations; combinations; probability
- **Radicals:** square roots; radical equations; equations with radicals; equations of the form $ax^2 + b = c$; Pythagorean theorem; operations with radicals; cube roots
- **Geometry:** pairs of angles; polygons; perimeter and circumference; congruence and similarity; 30–60 and 45–45 right triangle ratios; distance and midpoint formulas; symmetry and transformation
- **Areas and volumes:** areas of quadrilaterals, triangles, and circles; relation of lengths and areas of similar regions; surface areas of prisms, cylinders, pyramids, cones, and spheres
- **Polynomials:** definition of a polynomial; operations with polynomials, including multiplying binomials and dividing a polynomial by a monomial

Grade 6
Heritage Studies
Ancient Civilzations
4th Edition



Focus
- Developing a Christian worldview of ancient civilizations (Creation to AD 1500)

Geography
- Map skills
- Climate; natural resources
- Topography
- Comparison of characteristics of ancient civilizations with the modern regions

World History
- Historical events
- Conflicts between nations
- Archaeological findings

Government
- Empires and kingdoms
- Rulers
- Development of cities

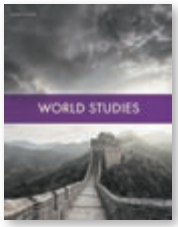
Economics
- Trade
- Currency
- Job specialization

Culture
- Religions and philosophies
- Ancient customs and traditions
- Languages
- Arts and music
- Food and clothing

American History
- Ancient influences on American government and economy

Social Studies Skills
- Cause and effect
- Timeline
- Costs and benefits
- Primary sources

Grade 7
World Studies
4th Edition



Topic
- World cultures (1100 AD to the present)

Geography
- Influence of geography on the development of civilizations

History
- Chronological and cultural approach to world studies

Government
- Comparative world governments in history

Economics
- Comparative economics historically and geographically

Religion
- Historical comparison of world religions (especially Islam) to Christianity

Culture
- Arts; sciences; ways of life in the past and the present

Grade 8
The American Republic
5th Edition

Topic
- American history

Geography
- Geographic development of the United States through land acquisition; profiles of major geographic regions

History
- Chronological survey of important events in American history

Government
- Republican form of government under the Constitution

Economics
- Development and effects of inventions and industries; successes and problems of the free market

Religion
- Influence of Christianity on American history; influences of religious diversity

Culture
- Interaction of people, ideas, and cultures in America