



Arithmetic 4th – 8th

Scope and Sequence

Once a concept, skill, or fact has been introduced, it will be reviewed for the remainder of the year.

As much as possible, 4th-8th will be related to the concepts being learned in K-3rd.

Throughout the year, calculating automatically and accurately with addition, subtraction, multiplication, and division will be emphasized.

Concepts in italics are emphasized for grades 7-8 only.

Weeks 1-3 – Whole Numbers

- Addition with carrying
- Subtraction with borrowing
- Multiplication with a 2-digit factor
- Division by a 2-digit divisor
- Place value through billions
- *Ratios*

Weeks 4-5 – Measures

- English and metric (linear, capacity, weight)
- Time
- Converting measures within a system
- Measurement equations
- Greater than, less than
- Roman numerals
- Problem solving strategies

Weeks 6-14 – Fractions

- Concepts of fractions
- Remainders as fractions
- Common and uncommon denominators
- Mixed numbers
- Factoring
- Reducing fractions
- Proper and improper fractions
- Cross multiplication
- Multiples
- Subtraction of fractions with borrowing



- Multiplying fractions
- Cancellation
- Divisibility Rules
- Probability
- Estimation in problem solving

Weeks 15-16 – Algebraic Equations

- Axioms for addition, subtraction, multiplication, and division
- Symbols of inequality
- Problem solving with unnecessary facts
- *Simplifying algebraic expressions*
- *Multiplying and dividing monomials*

Weeks 18-20 – Decimals

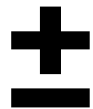
- Decimals and place value
- Comparing decimals
- Addition, subtraction, and multiplication with decimals
- Decimal-fractions equivalents
- Annexing zeros in the product
- Estimation with decimals
- Rounding off whole numbers and decimals
- Problem solving with decimals

Weeks 21-25 – Graphs

- Pictographs, bar graphs, line graphs, graphing ordered pairs, scale drawings, temperature
- Problem solving with missing facts
- Measurement conversions
- Order of operations (algebra)
- Negative numbers
- Making organized lists and reading charts
- *Statistics (mean, median, mode)*

Weeks 26-27 – Dividing Fractions

- Dividing whole numbers by fractions
- Problem solving with division with fractions
- Dividing fractions by fractions
- Dividing mixed numbers by fractions
- Dividing fractions by whole numbers
- Dividing fractions by mixed numbers
- Comparing numbers by division
- Finding a part of a whole



Weeks 28-31 – Geometry

- Shapes
- Angles and triangles
- Perimeters of rectangles and squares
- Area of a rectangle and square
- Problem solving with geometry
- Concepts of percent
- Squares and square roots
- Problem solving with trial and error
- *Circles*
- *Geometric constructions*
- *Surface area and volume*
- *Pythagorean rule and trigonometric ratios*

Weeks 32-36 – Decimals and Division

- Dividing a decimal
- Adding zeros to dividends to find exact quotients
- Division with rounding off
- Changing fractions to decimals
- Repeating decimals
- Dividing by a decimal
- Rounding off decimals
- Rounding off mixed numbers
- Multiplying and dividing by powers of 10
- Problem solving with division and decimals
- *Scientific notation*