

A Grades 1-8 Math Curriculum Overview

— First Grade —

Quality of numbers.
Counting forward and backward up until 100.
Number dictations.
Rhythmical counting.
Estimating.
The four processes – introduction.
Learning the “easy” addition facts.

— Second Grade —

Addition and subtraction facts (up until 24).
Times/division tables (up until the 12’s table).
The four processes. Keep in the horizontal!
Place value.
Estimating.
Time orientation (days of the week and months).

— Third Grade —

Measurement (distance, weight, and volume).
Learning all of the arithmetic facts by heart!!
The four processes. Mostly in the horizontal!
Intro to carrying and borrowing.
Intro to vertical (long) multiplication.

— Fourth Grade —

Factors, multiples, prime numbers, etc.
The arithmetic facts. Frequent review and practice.
Practice carrying, borrowing, and long multiplication.
Introduction to long division.
Fractions. The foundation, but not too much!
Measurement. Further practice and conversions.

— Fifth Grade —

Practice four processes – vertically.
Arithmetic facts. Review and practice still important.
Fractions. Regular practice is needed.
Decimal fractions – introduction.
Measurement. Review and intro to the metric system.
Freehand geometric drawing.
The Wonder of Number.
Puzzle problems.

— Sixth Grade —

Practice four processes – vertically.
Repeating decimals; Decimal/fraction conversions.
Mental math & math tricks (Casting out nines).
Exponents; Divisibility; Prime factorization.
Business math, including an introduction to percents, (statistical) graphs, and formulas.
Currency exchange rates.
Geometric drawing (compass & straight edge).
Basic geometric constructions.
Measurement review & introduction to area.
Ratios – brief introduction.
Puzzle problems.

— Seventh Grade —

Mental math & math tricks.
Exponents & square roots.
Percents, including percent increase and decrease.
Ratios. Whole number and decimal form; similar figures; ratio in a square; ratio in a circle (π).
Algebra. Keep it simple! Negative numbers; simplifying expressions; solving equations.
Area. Rectangles, parallelograms, non-right triangles; the shear and stretch; (further) geometric drawing & construction.
The pentagon & the golden ratio.
The Pythagorean Theorem, and angle theorems.
Rates. Distance, time, speed problems.
Puzzle problems.

— Eighth Grade —

Number Bases.
Square root algorithm.
Pythagorean Theorem with calculations.
Percents & Growth.
Dimensional analysis (converting metric \leftrightarrow U.S.)
Proportions and ratios.
Algebra. Order of operations; distributive property.
Mensuration. Area and volume.
Stereometry. Platonic & Archimedean solids.
Loci. Drawing conic sections; Cassini Curves.
Puzzle problems.