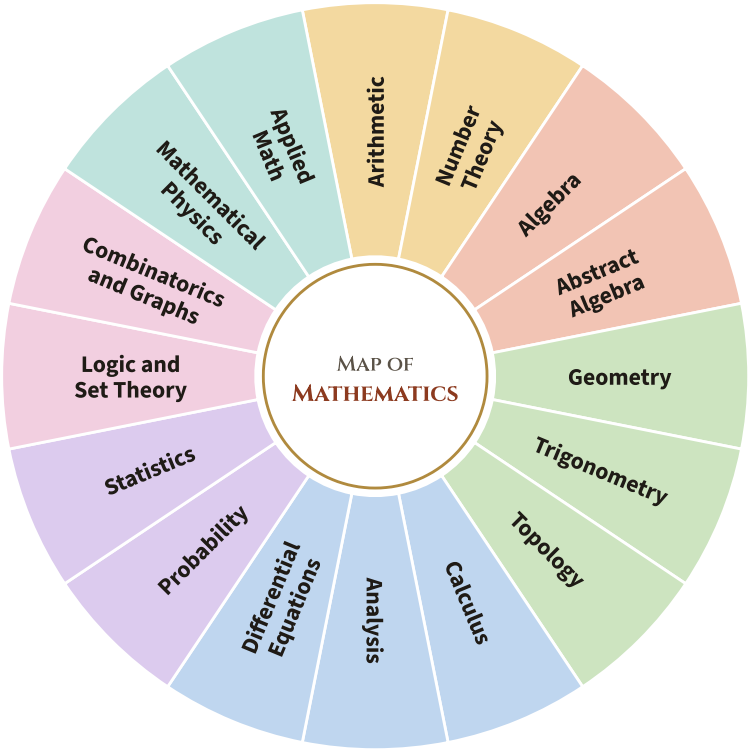
Map of Mathematics

Sixteen main areas in seven families. Read more at schoollaunch.org/courses/math/map/



Numbers · Structure · Shape and space · Change · Chance and data · Reasoning · Math at work

Arithmetic
Arithmetic is counting and working with numbers: adding, taking away, multiplying and sharing.

Number Theory
Number theory is the study of whole numbers themselves: which are even, which are prime and what patterns they make.

Algebra
Algebra uses letters to stand for numbers we do not know yet, so we can find them.

Abstract Algebra
Abstract algebra looks at the rules numbers follow, like "order does not matter when you add," and finds the same rules in other places.

Geometry
Geometry is the study of shapes, sizes and positions: lines, angles, triangles, circles and solids.

Trigonometry
Trigonometry uses the angles of triangles to find lengths we cannot measure directly, like the height of a tree.

Topology
Topology studies what stays the same when a shape is stretched or bent without tearing, like how many holes it has.

Calculus
Calculus is the mathematics of change: how fast something is moving and how much piles up over time.

Analysis
Analysis is the careful "why" behind calculus: it proves that the methods of calculus really work.

Differential Equations
A differential equation is a rule about how something changes, and solving it predicts what happens next.

Probability
Probability measures how likely something is, from impossible to certain.

Statistics
Statistics is collecting and reading data to learn something true, and to spot when numbers are being used to mislead.

Logic and Set Theory
Logic is the study of good reasoning: how to tell when a conclusion really follows from what we know.

Combinatorics and Graph Theory
This part of math is about counting arrangements and studying networks of dots and lines.

Mathematical Physics
Mathematical physics uses math to describe how the world works: motion, light, sound and electricity.

Applied Mathematics
Applied mathematics puts math to work on real problems: planning, building, deciding and sending messages.