MathX

BY

Nool and Numbers Academy

Endless Learning

GRADE 8 CURRICULUM

Aligned with CBSE Curriculum

Aligned with ICSE Curriculum

Designed with International learning Standards (IB & IGCSE) in mind

MathX Program – Grade 8

From Strong Foundations to Advanced Problem Solving

At Nool and Numbers Academy, we prepare students not only to perform well in exams, but to think like true mathematicians.

Our **MathX – Grade 8** program sharpens analytical skills, strengthens conceptual clarity, and builds the foundation for Olympiad, NTSE, and future competitive exams like JEE.

Through an integrated approach combining Academic Math, Real-Life Math, Logical Math, and Competitive Math, students develop the skills and confidence to handle any mathematical challenge.

1. Academic Math – Strengthening the Core for Higher Grades

The Academic Math syllabus for Grade 8 focuses on deeper algebra, geometry, data handling, and mensuration concepts.

Our structured lessons ensure conceptual understanding, logical flow, and practical application — preparing learners for high school math.

Syllabus Overview – Grade 8

Numbers and Numeration: Rational and irrational numbers-Real numbers: operations, properties, Factors and multiples, HCF and LCM-Approximation and estimation.

Algebra: Algebraic expressions and identities-Linear equations in one variable, Simultaneous linear equations (basic)-Factorization of algebraic expressions-Word problems based on equations

Ratio, Proportion, and Percentage: Ratio and proportion-Percentage: profit & loss, simple interest, discount, tax-Conversion between fractions, decimals, percentages.

Geometry: Lines and angles: types and properties-Triangles: similarity, Pythagoras Theorem-Quadrilaterals and polygons-Circles: radius, diameter, circumference, area-Constructions using compass and ruler, Symmetry, reflection, rotation, position

Mensuration: Perimeter and area of plane figures: square, rectangle, triangle, parallelogram, trapezium, circle-Surface area and volume of cube, cuboid, sphere, cone, cylinder, prism-Compound figures: basic problems

Data Handling and Probability: Collecting, organizing, and representing data-Pictographs, bar graphs, histograms-Mean, median, mode, range-Introduction to probability (simple)

Integers, Fractions, and Decimals: Operations on integers, fractions, decimals-Word problems and real-life applications

Outcome: *Builds a strong conceptual base, logical fluency, and readiness for high school and competitive math levels.*

2. Real-Life Math – Applying Math to Everyday Problems

Our Real-Life Math connects textbook concepts to practical applications — from financial literacy and budgeting to speed-distance problems and geometry in design.

Students learn how math supports fields like architecture, business, data science, and technology.

Outcome: *Helps students appreciate the usefulness of math in the real world and future careers.*

3.Logical Math – Advanced Reasoning and Analysis

MathX for Grade 8 offers an advanced logical reasoning journey crafted by math experts, featuring problem-solving tasks. Students engage with analytical reasoning, logical deductions, complex arrangements, mathematical relationships, data analysis, and high-speed mental math drills.

This program transforms students into confident, fast, and logical thinkers ready for higher studies and competitive exams.

Outcome: *Sharpens critical thinking and analytical ability — essential for advanced academics and Olympiads.*

4. Competitive Math – Gateway to Olympiads & Beyond

The Competitive Math component trains students for higher-level contests like SOF IMO, NSTSE, and Math Kangaroo.

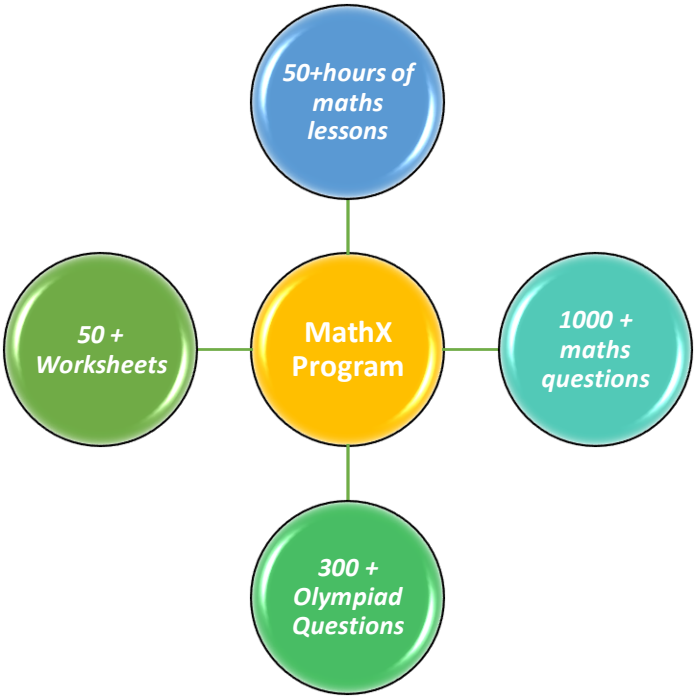
It includes Olympiad-style question sets, speed drills, and logical reasoning tests that challenge students to think beyond the textbook.

We emphasize smart strategies, accuracy, and time management to prepare them for advanced math competitions and future exams like NTSE and JEE.

Outcome: Builds mathematical maturity, exam confidence, and problem-solving excellence.

Why Choose MathX – Grade 8?

- ✅ Strengthens algebraic and geometric foundations
- ✅ Develops speed, accuracy, and strategy for competitions
- ✅ Enhances reasoning and real-world problem-solving skills
- ✅ Builds early readiness for NTSE, Olympiads, and JEE-level exams
- ✅ Encourages curiosity, persistence, and confidence in learning



How Our MathX Program Work?

1:1 Personal Attention

Interactive live sessions - not recorded

Logical thinking & Problem Solving focus

Expert Teacher for every subject

Affordable & Flexible timings

Our Teaching Methodology

MathX follows an Integrated Learning Model where every concept is taught in four connected layers:

- ✓ Academic Understanding – Concept clarity aligned with school curriculum
- ✓ Real-Life Application – Connecting math to everyday experiences
- ✓ Logical Reasoning – Developing thinking and observation skills
- ✓ Olympiad Exposure – Encouraging advanced and creative problem-solving

Each topic is completed only after the child demonstrates understanding across all four layers.

In a Simple Way;

"We always teach Academic Math first.

Once the child understands the concept clearly, we immediately apply the same topic in three ways:

- ✓ Real-life situations
- ✓ Logical thinking activities
- ✓ Olympiad-style questions

For example, when we teach addition:

- ✓ First, we teach how to add numbers properly
- ✓ Then we show how addition is used in daily life (shopping, toys, money)
- ✓ Then we give thinking-based and Olympiad-style questions on the same addition

This way, children don't just learn 'how to do', they understand why and where to use it."

***At Nool and Numbers Academy**; Where Learners Grow from Confidence to Competence in Math…!*