

11+ MATHS

Introduction:

With thanks to
Piacademy
Exam Papers Plus

- WHEN:
the tests take place
 - WHAT:
is in the curriculum
-
- HOW:
the school prepares the children
 - HOW:
you can support your child at home



11+ MATHS

Introduction:
The
Curriculum

NUMBER

ALGEBRA

RATIO

SHAPE AND SPACE

MENTAL MATHS

ADVANCED PROBLEM SOLVING

With thanks to
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Exam Papers Plus

THE 11+ MATHS SYLLABUS GENERALLY FOLLOWS THAT OF THE NATIONAL CURRICULUM, SO IT IS NECESSARY TO ENSURE THAT YOUR CHILD IS COMFORTABLE WITH ALL OF THE FOLLOWING CONCEPTS: ADDITION, MULTIPLICATION, SUBTRACTION AND DIVISION; FRACTIONS; DECIMALS; TIME; AREA AND PERIMETER; PRIME NUMBERS AND PRIME FACTORS; AVERAGES; DISTANCE, SPEED AND TIME; GRAPHS AND CHARTS; CALCULATING ANGLES; REFLECTION AND ROTATION; PERCENTAGES; SIMPLE RATIO AND PROBABILITY; SEQUENCES AND NUMBER PATTERNS; NETS OF SHAPES AND WORKING OUT THE VOLUME OF CUBES AND CUBOIDS.

THE 11+ MATHS TEST COVERS QUESTIONS BASED ON TOPICS AND CONCEPTS COVERED IN THE KEY STAGE 2 CURRICULUM.

HOWEVER, SOME QUESTIONS ARE ASKED FROM TOPICS NOT COVERED IN THE KS2 CURRICULUM, SUCH AS ALGEBRA AND LOGIC QUESTIONS AND SOME ARE ASKED IN AN UNFAMILIAR WAY.

Most **11+ Maths exams** cover material from the UK National Curriculum up to the end of **Year 5** and the early part of **Year 6**, **but they may test on later Year 6 content.**

Click on any of the topic links here
to view I I+ questions from Pi
Academy on that topic:

I I Plus Maths Syllabus

[Numbers](#)

[Algebra](#)

[Measurement](#)

[Geometry](#)

[Statistics](#)

[Ratio & Proportion](#)

[Permutation & Combinations](#)

[Logical Problems](#)

[Train Timetables](#)

[Speed Distance Time](#)

[Age Problems](#)

[Probability](#)

[Temperature](#)

[Network](#)

[Alphabet codes](#)

Do all schools have the same test?

No, the test you take will depend on the school / schools you are going for.
There are now several different formats to testing:

The format of the **11+ Maths exams** varies depending on the schools you're applying to. Many schools are moving towards **computerised testing**, though traditional written formats are still used.

Here are the main types of 11+ Maths exams:

- **CAT4 Test:** A non-adaptive cognitive abilities test, typically taken online.
- **Individual School Papers:** Some schools create their own written assessments.
- **ISEB Common Pre-Test:** An online adaptive test widely used by independent schools.
- **GL Assessment:** Written tests commonly used by grammar schools in the UK.

Each format comes with its own style and requirements, so it's essential to research the specific exams your child will face.

To look at the testing approach of a school of interest to you, click on the Exam Papers Plus link:

[Exam Papers Plus](#)

What we do within the school setting:

ESSENTIALLY, YOUR CHILD WILL NEED STRONG CALCULATION AND COMPUTATIONAL STRATEGIES ACROSS THE FOUR FUNCTIONS OF: ADDITION, SUBTRACTION, MULTIPLICATION AND DIVISION.

You will find our school's recommended methods for calculating through the year groups listed in the Calculation Policy. Scroll down to find examples of the methods for years 4,5 and 6 in the policy link below.

[Click here for a link to The Roche School Calculation Policy](#)

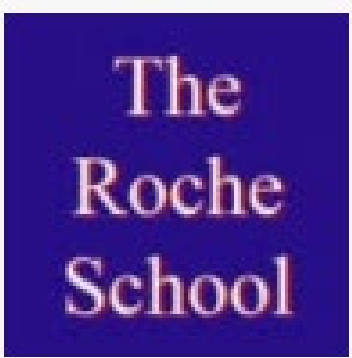
Lower school and up to end of Year 5: building skills

Year 5: From Spring Term – beginning to practice test papers

Year 6: Weekly 11+ papers in timed conditions on a Wednesday (from a variety of schools) – developing a more bespoke approach to cater the level of challenge to your child's school-choice needs. We then review the tests on a Friday.

Year 6: We have a Mock Exams week to familiarize the children with physical exam conditions in schools.

We have adapted our testing methods to reflect the changing formats of tests now being used in independent schools, e.g. more on-line testing (for familiarization AND approaches to calculating)



How you can help at home:

II Plus Maths Syllabus

(including a strong emphasis on working with fractions, decimals and percentages)

[Numbers](#)

[Algebra](#)

[Measurement](#)

[Geometry](#)

[Statistics](#)

[Ratio & Proportion](#)

[Permutation & Combinations](#)

[Logical Problems](#)

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Click on the links below to access helpful support and question examples:

Topics

For definitions and explanations of unfamiliar terms, visit:<https://www.mathsisfun.com/>

Read and Write Numbers, Order and Compare Numbers, Place Value, Counting, Rounding, Roman Numbers, Addition, Subtraction, Multiplication, Division, Fractions, **Pattern & Sequences**, Decimals, Percentages, **Multi-Level Word Problems**, Multiples, LCM, Factors, HCF, Prime Numbers, Composite Numbers (A whole number that can be made by multiplying together other whole numbers.), Square Numbers, Cube Numbers, Triangular Numbers (a number that can make a triangular dot pattern.), Even Numbers, Prime Factorization (finding which prime numbers multiply together to make the original number), Word Problems, Unitary Methods (find the value of a single unit and then multiply the value of a single unit to the number of units to get the necessary value), Decimal Manipulation, Number Line, Odd Numbers, Indices (powers)

Algebraic Equations, Simplifying Expressions, Simultaneous Equations, Algebra Inverse Problems, Algebra Dependent Problems, BIDMAS (order of operations), Function Machines, Quadratic equations (any equation containing one term in which the unknown is squared), substitution, Linear Equations, Number Patterns & Sequences, Balancing of equations

Unit Conversions, Currency Conversions, Capacity, Area and Perimeter

Identification of shapes, Shapes, Angles, Perpendiculars, Bisectors, Nets of Solids, Volume, Symmetry, Cubes and Cuboids, Cylinders, Prisms, Rectangle, Circle, Parallelogram, Square, Rhombus, Pythagoras theorem, Trapezium, Compound Shapes, Polygons, Coordinates, Reflection, Translations, Rotations, Lines of Symmetry, Bearings, 3D shapes, 2D shapes, Rotational Symmetry, Triangles, Speed, Slicing, Circumference, Directions

Line Graph, Tables, Bar charts, Charts, Pictograms, Time Graph, Mean Median Mode Range, Tally Marks, Venn Diagrams, Time and Distance Tables, Pie Chart, Data Collection and Presentation

Scale Drawing, Recipe Problems

Seating Arrangement

Recommended 11+ Maths Books

- Bond 11+: English, Maths, Non-verbal Reasoning, Verbal Reasoning
- 11+ CEM Ages 10-11 Practice Book & Assessment Tests Bundle

[Bond 11+ Maths 10 Minute Tests with Answer Support 10-11 Years](#)

Ace the ISEB

17th and 19th October | 4.30pm-5.30pm

This course is designed to equip your child with the skills, strategies and confidence needed to excel in the ISEB Common Pre-Test. Over two sessions, we'll delve into the format, content and structure of the ISEB and walkthrough tricky questions from all four subjects:

- Tuesday 17th: English and Maths
- Thursday 19th: Verbal and Non-Verbal Reasoning

Each session is one hour long and will strengthen your child's confidence through targeted practice exercises and expert guidance.

[Book now](#)

Atom Live Lessons

11+ Preparation

23-26 October

Year 6

Ace the ISEB

17 & 19 October 2023



11+ Preparation

23rd-26th October | 10-10:30am and 11-11.45am

Whether your child is at the start of their 11+ journey, or preparing to sit their exam next autumn, Atom's Live Lessons can help build your child's confidence and knowledge.

[Book for Year 3 and 4](#)

[Book for Year 5](#)

Recommended books for word problems in 11 Plus Exam

- [11+ Essentials Mathematics: Worded Problems Book 1](#)
- [11+ Essentials Mathematics: Worded Problems Book 2](#)
- [Letts 11+ Problem Solving](#)

Thank you for Zooming in and listening. Any questions?