

# Mathematics Entrance Examination Guide

**Application Period:** 

5 - 23 May 2025

# **Mathematics Entrance Examination**

All Year 8, Year 9, and Year 10 applicants must take the Mathematics Entrance Examination, which is conducted online via Zoom.

Note: Calculators are not permitted.

### **Practice Resources for Mathematics**

Platforms like <u>Khan Academy</u> and <u>Transum Mathematics</u> offer free online learning and practice resources.

#### (i) Year 8 Applicants

#### - Cambridge Lower Secondary Mathematics Stage 7

Numbers	Geometry
<ul> <li>Types of numbers</li> <li>Comparing, ordering &amp; operations</li> <li>Factors &amp; multiples, HCF &amp; LCM</li> <li>Integers</li> <li>Fractions, decimals</li> <li>Percentages including profit &amp; loss, discount, percentage increase, decrease</li> <li>Ratios &amp; rates</li> </ul>	<ul> <li>Different types of angles - Vertically opposite angles, supplementary &amp; complementary angles, linear pair, adjacent angles.</li> <li>Triangles &amp; properties</li> <li>Quadrilaterals &amp; properties</li> <li>Area &amp; perimeter of plane figures</li> <li>Measurements &amp; conversion of units</li> </ul>
Algebra	Statistics
<ul> <li>Combining like terms</li> <li>Expansion &amp; factorisation of expressions</li> <li>Linear equations &amp; applications</li> </ul>	<ul> <li>Calculate the mean, median, mode</li> <li>Interpret graphs</li> <li>(bar graphs, pictographs, pie charts)</li> <li>Simple probability</li> </ul>

#### (i) Year 9 Applicants

- Cambridge Lower Secondary Mathematics Stage 7 & 8

Numbers	Geometry
<ul><li>Types of numbers</li><li>Comparing, ordering &amp; operations</li><li>Fractions, decimals</li></ul>	<ul> <li>Different types of angles - Vertically opposite angles, supplementary &amp; complementary angles, linear pair, adjacent angles</li> </ul>

<ul> <li>Percentages including profit &amp; loss, discount, reverse percentages</li> <li>Ratios</li> <li>Indices &amp; standard form</li> </ul>	<ul> <li>Triangles &amp; properties</li> <li>Quadrilaterals &amp; properties</li> <li>Polygons</li> <li>Area &amp; perimeter of plane figures</li> <li>Area &amp; volume of prisms and cylinder</li> <li>Measurements &amp; conversion of units</li> <li>Coordinate geometry</li> </ul>
Algebra	Statistics
<ul> <li>Expansion &amp; factorisation of expressions</li> <li>Algebraic fractions</li> <li>Linear, simultaneous equations &amp; formulae</li> <li>Arithmetic &amp; Geometric sequence</li> </ul>	<ul> <li>Calculate the mean, median, mode</li> <li>Interpret graphs</li> <li>(pie charts, stem-and-leaf diagrams)</li> <li>Probability</li> </ul>

(i) Year 10 Applicants

## - Cambridge Lower Secondary Mathematics Stage 7, 8, & 9

Numbers	Geometry
<ul> <li>Types of numbers</li> <li>Comparing, ordering &amp; operations</li> <li>Upper &amp; lower bounds, approximation &amp; estimation</li> <li>Percentages including profit &amp;loss, discount</li> <li>Ratios</li> <li>Indices &amp; standard form</li> <li>Surds</li> <li>Money, finance &amp; time</li> </ul>	<ul> <li>Different types of angles - Vertically opposite angles, supplementary &amp; complementary angles, linear pair, adjacent angles</li> <li>Polygons</li> <li>Similarity &amp; congruence</li> <li>Area &amp; perimeter of plane figures</li> <li>Area &amp; volume of prisms and cylinder</li> <li>Surface area &amp; volume</li> <li>Measurements &amp; conversion of units</li> <li>Coordinate geometry</li> </ul>
Algebra	Statistics
<ul> <li>Expansion &amp; factorisation of expressions</li> <li>Algebraic fractions</li> <li>Linear, simultaneous equations &amp; formulae</li> <li>Linear inequalities</li> <li>Sequences &amp; functions</li> </ul>	<ul> <li>Calculate the mean, median, mode</li> <li>Interpret graphs (scatter diagrams, stem-and-leaf diagrams)</li> <li>Probability of single event</li> </ul>









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