



CHELTENHAM
LADIES'
COLLEGE

SIXTH FORM ENTRY IN SEPTEMBER 2027

MATHEMATICS

Mathematics topics and concepts that we would anticipate most SFC entrance candidates will have met by the time they take the entrance papers are stated below.

Note that the use of a calculator is **not allowed** on this paper. The level of difficulty of the questions will vary, but all candidates should attempt all questions.

Candidates will be asked to state which course (A level, Further Maths A-level, IB Standard Level or IB Higher Level) if known. The same assessment paper will be used for all course applications.

Applying number

- ▶ Powers and roots
- ▶ Percentages
- ▶ Standard form

Equations, formulae and identities

- ▶ Use of symbols
- ▶ Algebraic manipulation
- ▶ Expressions and formulae
- ▶ Linear equations
- ▶ Proportion
- ▶ Simultaneous linear equations
- ▶ Quadratic equations
- ▶ Inequalities

Sequences and Graphs

- ▶ Sequences
- ▶ Functions
- ▶ Linear and curved graphs

Shape, space and measures

- ▶ Circle properties
- ▶ Geometrical reasoning
- ▶ Trigonometry and Pythagoras
- ▶ Mensuration i.e. finding perimeters and areas of shapes, surface area and volume.
- ▶ Similarity
- ▶ Vectors

Handling data

- ▶ Graphical representation of data
- ▶ Statistical measures
- ▶ Probability

It should be noted that our entrance papers aim to be more a test of potential than a test of memory and so students should attempt as many questions (or parts thereof) as they can, even if the topic in the questions does not look familiar. There will be questions that require both knowledge and problem-solving skills. Students will be expected to apply these skills within contexts that may be unfamiliar to them.

We will be looking for:

- ▶ clearly presented workings
- ▶ logical structure of solutions
- ▶ succinct methods
- ▶ accuracy in calculations; and
- ▶ attempting all questions