

Understanding IGCSE & A-Level Maths

A parent and family guide to qualification-specific preparation and the transition to advanced mathematics.

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Reviewed edition · October 2026

Qualification-specific guidance for families. Confirm the current syllabus, assessment rules and deadlines with the school and awarding body.

This guide offers educational information, not a predicted grade, admissions guarantee or assessment certification.

The qualification code matters

Confirm the awarding body, qualification title, specification code, exam year, tier where applicable, and papers or units entered. A board name alone is not enough.

Examples include Cambridge IGCSE Mathematics 0580 and AS & A Level Mathematics 9709; Pearson International GCSE Mathematics A 4MA1; Pearson International Advanced Level Mathematics; and UK A-Level Mathematics such as Pearson 9MA0. These are not interchangeable structures.

AQA and OCR UK GCSE courses are not IGCSE courses. Core/Extended and Foundation/Higher labels apply to particular qualifications, not every board. Tier and available grades should be confirmed with the school.

IGCSE: foundations and connections

- Fractions, percentages, ratio and number sense.
- Expanding, factorising, rearranging formulae and solving equations.
- Geometry, trigonometry, graphs, probability and data.
- Reading mixed-topic questions and choosing a starting point.
- Calculator and non-calculator practice where the specification requires it.

AS/A-Level: greater depth and independence

Cambridge 9709 AS has three routes: Pure Mathematics only; Pure Mathematics and Mechanics; or Pure Mathematics and Probability & Statistics. Full A-Level routes differ. AS is a qualification, not a universal first-year definition; contribution and progression rules depend on the board. Confirm the actual components and teaching timetable with the school.

Why the transition can be difficult

At advanced level, algebra is used inside many other topics. A top IGCSE grade can coexist with gaps in manipulation or independent method selection. Increased pace and less-scaffolded questions make these visible.

Preparation before Year 12 can strengthen algebra, trigonometry and graph interpretation. It should build understanding rather than only previewing harder content.

Method, accuracy and independent marks

Many schemes distinguish M (method), A (accuracy, often dependent on method) and B (independent) marks. Follow-through may apply where a specific scheme allows it. Use the exact board and question's scheme.

Teaching example: solving $2x + 3 = 11$ can be shown as $2x = 8$, then $x = 4$. This makes the method visible. An illustrative M1/A1 allocation is not an official scheme for every such question.

A correct answer can imply method marks on some questions. 'Show that', 'prove' and specified-method questions require the requested evidence. Valid alternative methods can receive credit unless a method is demanded. There is no universal no-working-equals-zero rule.

Parent questions that help

- What is this question asking you to find?
- Why does this method apply?
- Which step earned or lost credit in this particular scheme?
- Does the final result satisfy the question's conditions, units and precision?

Plan around the actual route

- Early IGCSE: check foundations and discuss tier decisions with the school.
- During the course: combine topic work with mixed questions.
- Before exams: use the correct syllabus-year papers, permitted tools and timings.
- Before AS/A-Level: strengthen prerequisite algebra and trigonometry.
- During advanced study: build regular independent practice; check staged, linear or unit-based entry plans with the school.

Patterns worth discussing

A repeated gap between class exercises and mixed papers, dependence on worked examples, or a decline after the transition merits a closer look. Mechanics and statistics concerns should only be considered where those components are part of the student's route.

Progression

School entry requirements for A-Level and university requirements vary. Some degree programmes require a particular mathematics grade or Further Mathematics. Check the programme's own policy; this guide does not promise entry or advertise additional tutoring coverage.

Sources and the next step

Use the original awarding body's current guidance; course versions and policies can change.

[Cambridge Mathematics 0580](#)

[Cambridge Mathematics 9709](#)

[Pearson marking guidance](#)

The 45-minute diagnostic

30 minutes of live observation plus 15 minutes of independent work. A written report follows within 24 hours. The AED 150 launch price is fully credited if a programme starts within 7 days.

Bring the course details and relevant practice evidence. For assessed work, follow school and qualification rules on outside help.

Read the Diagnostic page for the process, then use the homepage enquiry form to ask about availability. An enquiry does not reserve an appointment.

[Ask about a diagnostic: open the homepage enquiry form](#)

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