



Cambridge Assessment
International Education

Getting ready to teach

Cambridge O Level Mathematics
(Syllabus D) 4024



Learn • Discover • Achieve



First assessment from 2025

We review our syllabuses regularly to make sure they continue to meet the needs of our schools.

To make it easier for teachers and students who use more than one syllabus, we have improved accessibility and clarity by considering our Cambridge Upper Secondary Mathematics suite as a whole.

In updating our Cambridge O Level Mathematics courses, we have worked with experienced maths teachers and subject experts to make them well structured and easier to understand, while keeping familiar features that teachers and schools value.

We have focused on the breadth and depth of the content to cover fundamental mathematical knowledge and preparing students for the demands of the next stage of learning, if they choose to progress to further study.

Changes to content

We have:

- updated the wording of the learning objectives to align with other Cambridge Upper Secondary Mathematics qualifications
- updated the Notes/Examples column to make the depth of teaching and learning required clearer
- introduced a new section – Presentation of responses – which gives guidance on mathematical conventions to help students communicate clearly.

We are using consistent learning objectives where appropriate across our Cambridge Upper Secondary Mathematics syllabuses to support teachers who deliver more than one course within the suite.



We have updated the aims and assessment objectives. The wording has been updated but the meaning is the same. The new syllabus will also include details of how it helps students develop the Cambridge learner attributes – confident, responsible, reflective, innovative and engaged.

We have balanced the amount of content added with content removed (in terms of teaching time). The revised subject content reinforces the learning of fundamental mathematical topics and supports overall progression to the next level of study.



We have removed:

- Loci (whole sub-topic)
- Matrices (whole sub-topic)
- Proper subsets
- Increasing and decreasing a quantity by a given ratio
- Showing that two shapes are congruent (knowledge of congruence itself is **still** in the syllabus)
- Constructions of simple shapes and bisectors (construction of a triangle is **still** in the syllabus).



We have added:

- Surds (whole sub-topic)
- Exponential growth and decay (whole sub-topic)
- Recurring decimal notation and conversion
- Expanding more than two brackets
- Finding roots graphically
- Draw and interpret graphs for exponential growth and decay
- Composite functions
- Recognising and sketching graphs (up to quadratic)
- Knowing the alternate segment theorem for circles.



Most additions represent a formalisation or extension of skills already in the syllabus, rather than completely new material.



Changes to assessment

We have balanced the two papers:

The duration, total number of marks, weighting and style will be the same:

	 Paper 1 (non-calculator)	 Paper 2 (calculator)
Duration	2 hours	2 hours
Total marks	100 marks	100 marks
Item types	Structured and unstructured questions	Structured and unstructured questions
Other information	Calculator not allowed Externally assessed AO1: 40–50% AO2: 50–60%	Calculator required Externally assessed AO1: 40–50% AO2: 50–60%



How does this affect teaching?

- The teaching time is not affected by these changes.
- Teachers need to update their scheme of work to reflect changes in content. They should look at the Notes/Example column in the syllabus for new detail.
- Teachers should become familiar with equally balanced papers and updated mark schemes.
- Learners will need to practise:
 - selecting the correct formula from the formula sheet and knowing when to use them
 - working with a range of different question types across Paper 1 and Paper 2
 - working with equally balanced papers.

We have introduced a formula sheet for all papers:

There will be a formula sheet included at the front of each question paper, which will be the same for each series.



First assessment from 2025

What **support** will be available to help teachers deliver the updated course?

July 2022

Scheme of work

September 2022

Syllabus

March 2023

Specimen paper answers

April 2023

Endorsed textbooks to support the revised syllabus

July 2023

Classroom teaching materials including a teacher guide

Early 2026, after first examination in 2025

Example Candidate Responses

These materials will be available through our **School Support Hub**, which also includes details of endorsed resources for this syllabus, and access to a subject forum.

Resource Plus

Resource Plus for Cambridge IGCSE™ Mathematics (0580) is already available through the School Support Hub. Designed to help you deliver engaging lessons and explain challenging topics, it has many resources you can use for Cambridge O Level Mathematics (Syllabus D) (4024).

Previously available by subscription only, Resource Plus is now available to all Cambridge International Schools at no extra cost through our **School Support Hub**.

Learn more: www.cambridgeinternational.org/olevel



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