

# Your guide to Edexcel International GCSE (9–1) Mathematics



# Welcome

We have launched a new suite of Edexcel International GCSE (9–1) qualifications, available for first teaching in September 2017.

This guide has been designed provide you with in-depth information about the key features of the new Edexcel International GCSE (9–1) Mathematics A, Mathematics B and Further Pure Mathematics.

Before we go into detail about Mathematics, we wanted to give you an overview of what the overall changes to the Edexcel International GCSE (9–1) suite of qualifications are.

# Why choose Edexcel International GCSEs (9–1)?

With over 3.4 million students studying Pearson qualifications worldwide, we are the world's leading learning company and offer internationally recognised qualifications to schools, colleges and employers globally. We are also the UK's largest academic and vocational Awarding Organisation.

As a result of our scale and reach, we are able to drive innovation in Edexcel International GCSE (9–1) design, through our world-class qualifications principles framework and panel of education experts from across the world. The framework ensures that through the development process, the qualifications are globally relevant, represent world-class best practice and maintain a consistent standard.

## Reward outstanding academic achievement

Grade 9 represents a new level of attainment for the very top performers and is higher than an A\* grade. This means there is greater differentiation of the most able at the top end of the grading scale.

## Designed for international students

Edexcel International GCSE (9–1) qualifications have been specifically designed for international students. As a result, they include more international content.

## Contain fully integrated Progression Map tools

Embedded in the textbooks and online learning materials, so teachers can conduct a quick and easy formative assessment of student progress.

## Offer a wider range of teaching and learning materials, resources and training

Support includes schemes of work, exemplar materials, ExamWizard, comprehensive textbooks, interactive resources and tailored teacher training.

## Provide detailed exam analysis with ResultsPlus

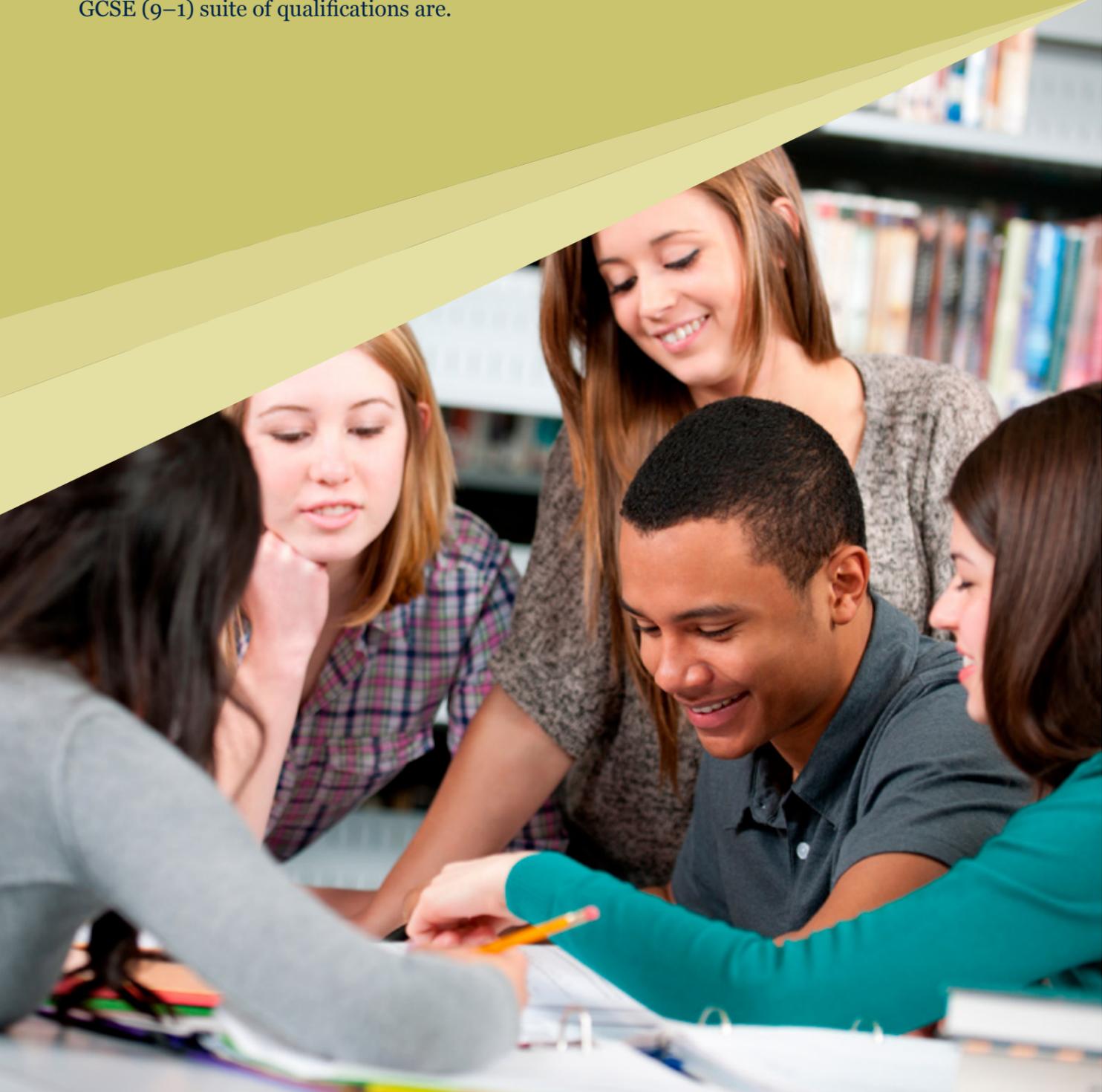
ResultsPlus is a service unique to Pearson that provides free online in-depth mock and actual exam performance analysis, supporting teachers to plan improvements in teaching and learning, driving attainment.

## Support progression to further study

Developed with the help of teachers and higher education representatives, they provide seamless progression to further study, including A levels and beyond.

## Contains embedded transferable skills

Developing students' core competencies, such as problem-solving and verbal reasoning, skills needed to progress to higher-level study and that are valued by employers.



# Why choose Edexcel International GCSE (9–1) Mathematics qualifications?

We've listened to feedback from all parts of the international school community, including a large number of teachers. We've made changes that will engage students and give them skills that will support progression to further study of Mathematics and a wide range of other subjects.

## Clear and straightforward question papers

Our Mathematics A, Mathematics B and Further Pure Mathematics question papers are clear and accessible for students of different ability ranges. Our mark schemes for all specifications are straightforward, so that the assessment requirements are clear.

## Broaden and deepen students' skills

We have designed the Edexcel International GCSE (9–1) Mathematics A, B and Further Pure Mathematics qualifications to extend students' knowledge by broadening and deepening skills, for example:

- Students develop their problem-solving skills by translating problems in mathematical or non-mathematical contexts.
- Students will develop reasoning skills through exercises such as presenting arguments and proofs, and making deductions and drawing conclusions from mathematical information.

## Rewards outstanding academic achievement

As mentioned earlier, with 9 levels of performance rather than 8, high achievers have the opportunity to achieve a top grade 9.

There is also greater differentiation of middle performers, with three grades (4, 5 and 6) aligned to the current C and B grades. This means that the 9–1 grading scale rewards top grade C students with a new grade 5, and top B grade students with a new grade 6.

## Comparable to GCSE

We have designed our Edexcel International GCSE (9–1) Mathematics A, B and Further Pure Mathematics qualifications to be of a broad equivalent standard to Pearson's regulated Edexcel GCSE qualifications. This ensures that Edexcel International GCSEs (9–1) are recognised globally and provide learners with the same progression routes.

## Supports progression to A Level

Our Edexcel International GCSE (9–1) Mathematics A, B and Further Pure Mathematics qualifications enable successful progression to A Level and beyond. Through our world-class qualification development process, we have consulted with International Advanced Level and GCE A Level teachers, as well as university professors to validate the appropriateness of this qualification including the content, skills and assessment structure.

At Edexcel, we offer Mathematics A, B and Further Pure Mathematics qualifications to offer teachers the choice and flexibility to select a specification that best meets the needs of their learners. Each Mathematics specification has been designed to develop and stretch students in different ways.

# Why choose Edexcel International GCSE (9–1) Mathematics A, B and Further Pure Mathematics?

## Unique features across all 3 Edexcel International GCSE (9–1) Mathematics specifications

Mathematics A	Mathematics B	Further Pure Mathematics
<p><b>Tiered papers:</b> Provided at two tiers of entry (Higher and Foundation) that allow students to be entered for a level appropriate to them with questions in each tier that are accessible to students of all abilities within that tier.</p>	<p><b>Higher tier only:</b> To stretch and challenge high-achieving students.</p>	<p><b>Higher tier only:</b> To stretch and challenge high-achieving students.</p>
<p><b>Equally weighted papers:</b> Feedback from teachers indicates that this is a popular assessment model so we have retained this feature in the new Mathematics A specification to ensure a continuity and familiarity of approach.</p>	<p><b>Alternative assessment model, which provides excellent preparation for A level:</b> Paper 1 is 1.5 hours in length with shorter questions. Paper 2 is 2.5 hours in length with extended answers to more in-depth questions, which is very useful preparation for extended problems encountered at the A Level standard.</p>	<p><b>Provides further development for talented students:</b> Provides an opportunity to stretch strong students and enable them to gain an additional Mathematics qualification. It extends and deepens knowledge covered in the Edexcel International GCSE (9–1) Mathematics A and B specifications.</p>
<p><b>Exam resources:</b> A calculator is used and a formulae sheet provided at each tier for both papers, with a small increase in problem-solving and mathematical reasoning in the assessment.</p>	<p><b>Exam resources:</b> A calculator is used and a formulae sheet provided for paper 2.</p>	<p><b>Excellent preparation for A level:</b> Usually taken by Mathematically gifted students who will progress to GCE A level or International Advanced Level Mathematics. This is because the specification topics cover elements of the content that can be found in Core/Pure units of the GCE A level and International Advanced Level Mathematics.</p> <p>Topics include: number, algebra and calculus, geometry and trigonometry. However, it is important to note that this qualification is not compulsory for progression to GCE A level or International Advanced Level Mathematics.</p>



### Feedback from teachers on the Mathematics B specification

**“Students passing this qualification could easily progress to Level 3 academic study.”**

Professor Alison Halstead is the Pro Vice Chancellor for Strategic Academic Developments at Aston University.

### Feedback from teachers on the Mathematics A specification

**“The proposed model and assessment questions would certainly support progression to higher levels and secure these qualifications as being rigorous and challenging.”**

Professor Alison Halstead is the Pro Vice Chancellor for Strategic Academic Developments at Aston University.

**“Transformations of graphs and solving trigonometric equations are topics that are brand new to this syllabus and will also provide stretch and challenge for higher ability students. These topics however will give students wishing to study A-level Maths a stronger foundation and close the gap between A level and International GCSE.”**

Jenny Shek, Maths Teacher at Kelletts International School, Hong Kong.

### Feedback from teachers on the Further Pure Mathematics specification

**“Students would make the transition to AS and A2 further maths very easily. If students were not going to pursue their maths beyond L2 this qualification would be a significant asset in most other subjects.”**

Debbie Kennedy, Maths Teacher at an International School.

**“I particularly welcome a formula sheet for this level as it assesses the students’ using and applying skills rather than just recall and knowledge.”**

Jenny Shek, Maths Teacher at Kelletts International School, Hong Kong.

# At a glance

## The differences between Edexcel International GCSE (9–1) Mathematics A and B

Mathematics A (4MA1)	Mathematics B (4MB1)
Foundation tier (levels 1 – 5) and Higher tier (levels 4 – 9) with an allowable level 3	Higher tier only (levels 4 – 9) with an allowable level 3
2 × 2 hour papers	1 × 1 hour 30 mins paper (Paper 1) 1 × 2 hour 30 mins paper (Paper 2)
Each paper contributes 50% of the qualification	Paper 1 contributes 33⅓% of the qualification Paper 2 contributes 66⅔% of the qualification
2 similar papers with approximately 20 – 25 questions on each paper, with varying marks – those more challenging questions at the end of the paper generally have 6 marks maximum	<b>Paper 1</b> 26 – 30 questions with varying marks <b>Paper 2</b> 11–12 questions with varying mark allocations; those at the end can have several parts amounting to 10 – 16 marks as the total for the question
2 similar papers with approximately 20 – 25 questions on each paper, with varying marks – those more challenging questions at the end of the paper generally have 6 marks maximum.	
AO2 (assessment objective 2 – shape, space and measures) has a weighting of 22 – 28% [ <b>slightly less</b> ]	AO2 (assessment objective 2 – shape, space and measures) has a weighting of 27 – 33% [ <b>slightly more</b> ]
AO3 (assessment objective 3 – handling data) has a weighting of 12 – 18% [ <b>slightly more</b> ]	AO3 (assessment objective 3 – handling data) has a weighting of 7 – 13% [ <b>slightly less</b> ]
<b>Higher tier:</b> Cumulative frequency	No cumulative frequency
No matrices	Matrices
No factor theorem or algebraic division of a cubic by a linear factor, Can be asked to expand eg $(x + 3)(x + 2)(x - 1)$	Factor theorem and algebraic division of a cubic by a linear factor
<b>Higher tier:</b> Sequences; know and use nth term = $a + (n - 1)d$ and find sum of first n terms of an arithmetic series ( $S_n$ )	Sequences - Being able to recognise sequences with a common difference or common integer sequences, and to continue a given sequence
<b>Higher tier:</b> apply to the graph of $y = f(x)$ the transformations $y = f(x) + a$ , $y = f(ax)$ , $y = f(x + a)$ , $y = af(x)$ for linear, quadratic, sine and cosine functions & interpret and analyse transformations of functions and write the functions algebraically	Functions but not transformations of graphs

# Your guide to assessment timelines

The table below shows each assessment opportunity for Edexcel International GCSE (9–1) Mathematics A, B and Further Pure Mathematics specifications.

Mathematics A					
	May/June 2017	Jan 2018	May/June 2018	Jan 2019	May/June 2019
Current specification: 4MA0	Assessment window	Assessment window	Final May/June series assessment window	<b>Final ever assessment opportunity</b>	Not available
New specification 4MA1	Not available	Not available	Optional first assessment	January series available	<b>May/June series available (Compulsory assessment window for all centres)</b>

Mathematics B					
	May/June 2017	Jan 2018	May/June 2018	Jan 2019	May/June 2019
Current specification: 4MB0	Assessment window	Assessment window	Final May/June series assessment window	<b>Final ever assessment opportunity</b>	Not available
New specification: 4MB1	Not available	Not available	Optional first assessment	January series available	<b>May/June series available (Compulsory assessment window for all centres)</b>

Further Pure Mathematics					
	May/June 2017	Jan 2018	May/June 2018	Jan 2019	May/June 2019
Current specification: 4PM0	Assessment window	Assessment window	Final May/June series assessment window	<b>Final ever assessment opportunity</b>	Not available
New specification: 4PM1	Not available	Not available	Not available	Not available	<b>May/June series available (Compulsory assessment window for all centres)</b>

# Offer a wider range of teaching and learning materials, resources and training

We understand that delivering first-class qualifications takes time and careful planning, which is why we strive to provide you with an unparalleled level of support alongside our high-quality Edexcel International GCSE (9–1) Mathematics qualifications.

At a glance: support for you at every stage		
Planning	Free support	<ul style="list-style-type: none"> <li>✓ Support from your Subject Advisor</li> <li>✓ Face-to-face and online training events</li> <li>✓ Getting started guide</li> </ul>
	Published resources	<ul style="list-style-type: none"> <li>✓ Curriculum matched, endorsed resources*</li> <li>✓ ActiveLearn Digital (online subscription service) brings together planning, teaching and assessment resources all in one place*</li> <li>✓ Online Teacher Support Materials*</li> </ul>
Teaching & Learning	Free support	<ul style="list-style-type: none"> <li>✓ Getting started guides and schemes of work</li> <li>✓ Sample assessment material</li> <li>✓ Examiner reports</li> <li>✓ An additional set of sample assessment materials</li> <li>✓ Lesson plans</li> </ul>
	Published resources	<ul style="list-style-type: none"> <li>✓ Student Books with free, accompanying ActiveBooks*</li> <li>✓ ActiveLearn Digital (online subscription service)*</li> <li>✓ Online Teacher Support Materials*</li> </ul>
Assessment & Progression	Free support	<ul style="list-style-type: none"> <li>✓ Exam preparation resources</li> <li>✓ Exemplar marked responses</li> <li>✓ Past exam papers</li> <li>✓ Community support</li> <li>✓ Free online result analysis tool, ResultsPlus</li> <li>✓ Free past paper questions with ExamWizard</li> </ul>
	Published resources	<ul style="list-style-type: none"> <li>✓ Student Books and ActiveBooks, contain chapter summaries and exam practice questions*</li> <li>✓ ActiveLearn Digital (online subscription service)*</li> <li>✓ Online Teacher Support Materials*</li> </ul>

\*See pages 13-14 for full details

## Your subject support

### Subject Advisors

Offer fast, reliable, expert help on a specific subject area of your choice. We aim to answer all emailed questions within 48 hours and resolve 90% of issues phoned in on the first call.

### Ask the Expert

Find answers to questions about teaching and delivering our Edexcel qualifications quickly using our database.

### Communities

Connect with other tutors around the world, share ideas and resources and stay up to date with the latest subject developments. You can also join our highly regarded Maths Emporium, for the latest subject information and advice from Maths experts.

### Free teaching resources with instant access to:

- A library of past exam papers that will be collated once live assessments start, which you can use to prepare mock exams and to gain a better understanding of the assessment standard.
- Getting started guides and schemes of work, to support with lesson planning and delivery.
- Examiners reports and additional sample assessment materials, available to both teachers and students completely free of charge, to provide a better understanding of the standard.

## Your training support

Our up-to-date and relevant training events are designed to deepen your understanding and share best practice, and can be tailored to your specific needs.

### Face-to-face

Engaging and informative training to help you develop exciting and inclusive learning programmes.

### Online

Simple to set-up, live and fully interactive training options for staff no matter where they're located.

# Your exam preparation and assessment support

## ResultsPlus

A free online results analysis tool that provides information to help raise student attainment. By providing detailed, digestible information on exam performance, teachers can help their students improve their performance by highlighting potential focus areas.

ResultsPlus also enables teachers to compare the results of their cohort with schools across the world.

## Exam preparation resources

We offer a range of resources to help students better understand what is required of them so they can plan their revision effectively and be well prepared for their exams, including: past papers, textbooks and other resources plus exam revision tips.



One of the good features of ResultsPlus is that it provides the top ten questions that students scored poorly in, so we as the lecturers can actually identify the topics that students found difficult and can incorporate a different approach when teaching our current students.”

Dr Khong Yoke Kum, Chemistry Lecturer,  
A levels Department, HELP Academy, Malaysia.



Because of ResultsPlus, students can learn about their mistakes and rectify.”

Kanagambigai, Chief Counsellor, Chemistry Lecturer,  
A levels Department, HELP Academy, Malaysia  
commenting on the ResultsPlus mocks service.



# Published resources



## Edexcel International GCSE (9–1) Published Resources

Developed for Mathematics A and Further Pure Mathematics, these completely new resources have progression, international relevance and support at their core. They provide comprehensive coverage of the new specifications and are designed to support students with the best preparation possible for the examination.

- **Specifically developed for international learners**, with appropriate international content.
- The **new 9–1 grading scale** ensures a consistent international standard of qualification, allowing learners to progress further and achieve their full potential.
- The new **ActiveLearn Digital Service** (for Mathematics A) brings together your planning, teaching and assessment across one service, saving you valuable time. Online teacher resource (Further Pure Mathematics) provide easy access to additional support.
- Each Student Book will provide access to an **ActiveBook**, a digital version of the Student Book, which can be accessed online, anytime, anywhere, ideal for learning beyond the classroom, revision and exam practice.
- **Transferable skills**, needed for **progression** into higher education and employment, are embedded throughout and explicitly signposted, allowing students to understand, and engage with, the skills they're gaining.
- **English language** focused content, checked by an EAL (English as an Additional Language) specialist, addresses the needs of EAL students with carefully graded writing to B2/C1 level (CEFR) and a glossary provided of specialist vocabulary.
- **Exam Practice tests and exam-style questions** cover the whole chapter and provide quick, effective feedback on students' progress and gets them accustomed to what they'll see in the exam.
- **Chapter summaries** state the most important points in each chapter and aid revision.

## Edexcel International GCSE (9–1) Mathematics A

Title	ISBN
Student Book and ActiveBook 1	978 0 435181 44 4
Student Book and ActiveBook 2 (available April–May 2017)	978 0 435183 05 9
ActiveLearn Digital Service Subscription: Small*	978 0 435183 09 7
ActiveLearn Digital Service Subscription: Medium*	978 0 435183 08 0
ActiveLearn Digital Service Subscription: Large*	978 0 435183 07 3
ActiveLearn Digital Service Subscription: Extra Large*	978 0 435183 06 6
ActiveLearn Digital Service Subscription: Super*	978 0 435183 11 0

## Edexcel International GCSE (9–1) Further Pure Mathematics

Title	ISBN
Further Pure Mathematics Student Book and ActiveBook (available September 2017)	978 0 435188 54 2

\*Identify which tier your school size matches: Small school is fewer than 100 pupils, medium school is 101–300 pupils, large school is 301–500 extra large school is 501–999 pupils and super school is 1000+ pupils.

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[www.pearsonglobalschools.com](http://www.pearsonglobalschools.com)





It is like a global passport,  
it offers me worldwide  
recognition and I can go  
anywhere with my  
Edexcel qualifications...  
I would definitely  
recommend Edexcel.”

Nikita Jha, Edexcel International GCSE  
student at Sayfol International  
School, Malaysia.

## Find out more

To find out more about our new Edexcel International GCSE (9–1)  
Maths qualifications, visit our **website** or **complete our online form**  
to request a local consultant to contact you.