

# Mathematics

Choosing the best qualifications for your students



# Whatever your route through maths...

## ...we can guide and support you and your students.

At AQA we work in partnership with teachers to offer a range of maths qualifications. We develop specifications that:

- engage and inspire students
- encourage students to realise their full potential
- are easy to deliver.

This brochure provides an introduction to all our maths qualifications, from Entry level to A-level. You will find different paths that ensure a successful and rewarding experience for students of all abilities and learning styles. For the most up to date information see our website [aqa.org.uk/maths](http://aqa.org.uk/maths)

### *Support and resources*

At AQA, we believe everyone can be successful in maths, that's why we offer many support services and products to help schools and colleges, including:

- a wide variety of printed and online support materials
- Maths Advisers
- instant exam results analysis
- an inspiring programme of Continuing Professional Development (CPD)
- ensuring open lines of communication to our subject experts so you can ask us questions and tell us what you need
- free face to face training meetings with senior examiners when launching new specifications.

Mathematics

# Our qualifications

**We provide a broad range of qualifications to suit the needs and interests of every student, at every stage of their education.**

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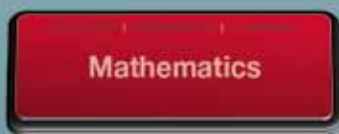
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# Pathways through maths

**Whatever path a student takes through maths, our qualifications are designed so that appropriate routes can be found easily.**

We offer a wide range of options tailored to different types of learners. This enables you to equip your students with the mathematical skills and knowledge that best meet their needs.

*Examples of routes – for more, see our interactive Maths Pathfinder*

## Key Stage 3 (Year 9)

Functional Skills qualifications focus on process skills, rather than mathematical content. They require students to assess the maths required and work in a realistic context.

By the end of Key Stage 3, most students are capable of attaining a Level 1 Functional Skills qualification.

Students who hope to achieve grade A or higher at GCSE should be able to achieve Level 2.

Students who hope to achieve grade F or G at GCSE at the end of Key Stage 4 could take Entry Level Functional Mathematics at Entry 3 before moving on to GCSE.

## Key Stage 4

Some students may follow an Entry Level Certificate (ELC) instead of, or alongside, the Foundation Tier of GCSE. The eight ELC units can be structured to link with GCSE units. Alternatively, a decision on GCSE entry can be deferred until later in the course and a linear GCSE taken. Functional Mathematics at Entry 1, 2 and 3 is also available to support teaching maths process skills.

### Teaching over two years

A unitised two-year course starting in September can prepare learners for Unit 2 in March and Unit 1 in June of the first year. Unit 3, which completes the qualification, can be added in March or June of the second year.

### Teaching over three years

Many schools start preparing for GCSEs in Year 9 and students may be ready for the first unit in November of Year 10; either Unit 1 or Unit 2. This can be followed by a second unit in March or June, with a view to completing the third unit and the qualification in the November or March of Year 11.

Another approach is to start the course in Year 9 without early entry but adding breadth to the curriculum by:

- teaching GCSE Statistics alongside Units 1 and 2 of GCSE Mathematics
- and*
- entering Functional Mathematics at level 1 or 2
- or*
- adding a Foundation (level 1) or Higher (level 2) FSMQ in an area of maths that supports other subjects.

### Adding GCSE Statistics

For those who prefer linear GCSE Mathematics, this can also be studied alongside GCSE Statistics, where Statistics is completed after the first year and maths after two years.

Students expected to achieve A or A\* in GCSE Mathematics by the end of Year 10 can then take any of the following subjects in Year 11:

- GCSE Statistics at the Higher Tier
- AQA Level 2 Certificate in Further Mathematics (iGCSE)
- Advanced FSMQs (Level 3)
- AS Use of Mathematics.

This will provide excellent preparation for A-level Mathematics and Further Mathematics.

## Key Stage 5

Beyond Key Stage 4, A-levels in Mathematics, Further Mathematics and Statistics are available for those who have achieved good grades at GCSE. These qualifications will provide excellent preparation for those planning to undertake further study, particularly in Science, Technology, Engineering and Mathematics (STEM) subjects.

Another option is the AS-level Use of Mathematics or the A-level Use of Mathematics pilot. These qualifications encourage more students to study maths beyond the age of 16. They provide support for other subjects (eg, sciences), strengthen university applications and improve opportunities in the employment market.

Free-Standing Mathematics Qualifications (FSMQs) are available at Foundation, Higher and Advanced levels and offer a flexible approach to engaging students in maths. FSMQs are stand-alone qualifications that offer practical and relevant maths, can be tailored to the needs of other subjects and can support students' aspirations for higher education.

The table below shows three routes through **Key Stage 5**. For more ideas, see our interactive Maths Pathfinder at [aqa.org.uk/mathspathfinder](http://aqa.org.uk/mathspathfinder)

Prior attainment	Key Stage 5 study	Possible progression
Entry 3 or GCSE grades F – G	Foundation FSMQ then Higher FSMQ leading to AQA Certificate in Use of Mathematics <b>plus</b> Functional Mathematics	Level 2 and 3 qualifications in Further Education – possibly vocational in nature
GCSE grades B – C	Advanced FSMQ leading to AS or A-level in Use of Mathematics  In many schools and colleges, A-level Mathematics with a GCSE grade B	Degree course where some maths is required
GCSE grades A* – A iGCSE Further Mathematics possibly with GCSE Statistics	A-level Mathematics <b>plus</b> A-level Further Mathematics	Degree course requiring a high level of maths (STEM)

	Year 9			Year 10			Year 11			Progression
	June	November	January	March	June	November	January	March	June	
<b>ELC</b>	<b>ELC Portfolio</b>									
<b>Common additional qualification</b>					Functional Skills Entry 2				GCSE Foundation Tier OR Foundation FSMQ	Students looking for other qualifications in the post-16 environment could look to ELC Adult Numeracy and the AQA Certificate in Use of Mathematics.
<b>GCSE</b>	<b>Unitted</b>	GCSE in three years	Unit 1		Unit 2	Unit 2			Unit 3	Students wishing to re-sit GCSE could also consider the AQA Certificate in Use of Mathematics or Higher FSMQs as an alternative.  GCSE Grade B or better is generally considered suitable preparation for A-level Mathematics. For students who enjoy maths but do not want to embark on AS, other qualifications at Key Stage 5 include Advanced FSMQs, and AS Use of Mathematics.  Students with the iGCSE qualification are ideally prepared for A-level Mathematics and Further Mathematics.
		'semi linear'			Units 1 and 2			Unit 3		
		Unit 2 first		Unit 2		Unit 1		Unit 3		
		Unit 1 first	Unit 1	Unit 2	Unit 2		Unit 3			
<b>Linear</b>	with Functional Skills				Level 2 Functional Skills				GCSE linear	
	Early entry GCSE at Higher Tier with iGCSE						GCSE linear		iGCSE	
<b>Common additional qualification</b>	Level 1 Functional Skills				GCSE Statistics		Level 2 Functional Skills	Unit 3 GCSE early entry	GCSE Statistics and/or iGCSE	

<b>GCSE in one year</b>				
	November	January	March	June
<b>Unitted</b>			Unit 1 and 2	Unit 3
<b>Linear</b>				Linear GCSE

Entry Level

# Entry Level Certificates in Mathematics and Adult Numeracy



## Mathematics

This qualification is designed for students who are unlikely to reach Grade G at GCSE. This qualification is an excellent choice for many students because it:

- gives teachers flexibility in the order and timing of units to allow co-teaching with the Foundation Tier of GCSE (final entry decisions can be deferred until February in the final year of the course)
- allows students to work in short programmes due to the unit-based structure, helping them to gain a sense of achievement throughout the course and gain recognition of each unit of work via the Unit Award Scheme.

### The assessment

The Entry Level Certificate (ELC) in Mathematics consists of eight units with a choice of externally-set and internally-set assessments that:

- conveys the knowledge, skills and understanding needed to apply mathematical concepts to real-life situation
- builds a firm foundation for further study.

Each unit covers a range of outcomes at Entry levels 1, 2 and 3 and the portfolio of work is moderated by AQA.

## Adult Numeracy

This qualification provides an opportunity for adult learners who may have missed out on essential numeracy skills and knowledge in the past, to achieve a recognised qualification. This qualification enables learners to:

- improve job prospects or enter the world of work
- gain the most out of life, learning and work
- progress to Level 1 and 2 studies, particularly in Functional Mathematics.

### The assessment

The ELC in Adult Numeracy offers real flexibility.

- One question paper at each level, which is available when learners are ready to be tested.
- Tests are on-demand so they can be held on a date convenient to you.
- Learners can re-sit the qualification as many times as they want.

**Functional Skills at Entry 3 or Level 1 represent some natural progression for ELC Mathematics learners.**

For more information on ELC Mathematics

web:

[aqa.org.uk/maths](http://aqa.org.uk/maths)

e-mail:

[mathematicsgcse@aqa.org.uk](mailto:mathematicsgcse@aqa.org.uk)

phone:

0161 957 3852

For more information on ELC Adult Numeracy

web:

[aqa.org.uk/maths](http://aqa.org.uk/maths)

e-mail:

[ondemand2@aqa.org.uk](mailto:ondemand2@aqa.org.uk)

phone:

01483 556 100



Entry Level

# Entry Level Functional Mathematics



By studying Entry Level Functional Maths, students can progress to Functional Maths, Level 1 and 2.

For more information

web:

[aqa.org.uk/maths](http://aqa.org.uk/maths)

e-mail:

[mathematicsgcse@aqa.org.uk](mailto:mathematicsgcse@aqa.org.uk)

phone:

0161 957 3852

## Functional Skills qualifications in Mathematics at Entry 1, 2 and 3 are available from September 2011.

Entry Level Functional Mathematics enables students to:

- acquire mathematical and other transferable skills relevant to everyday life and the world of work
- develop mathematical thinking through an engaging, active approach
- progress to the next level of Functional Mathematics or to the Foundation Level of GCSE Mathematics.

### The assessment

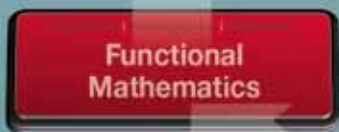
The assessment for Entry Level Functional Mathematics:

- is all internally assessed and moderated by AQA
- involves one-to-one practical tasks at Entry 1 and 2
- involves written tasks at Entry 3.



Discover the best route  
for your students at  
[aqa.org.uk/mathspathfinder](http://aqa.org.uk/mathspathfinder)





# Functional Mathematics Level 1 (4367) and Level 2 (4368)



**Functional Mathematics is based on the same skills developed in our GCSE Mathematics specifications.**

Our Functional Mathematics:

- teaches useful mathematical skills that can be applied to everyday life and work
- promotes mathematical thinking and transferable skills
- develops problem-solving ability
- builds confidence
- offers flexibility.

*'It's about improved, general, transferable skills, which they can apply to anything, whatever they choose to study, whatever direction they want to go in.'*

**Phil Eadie,  
Maths Teacher,  
The Thomas Hardy  
School, Dorchester**

## The assessment

Functional Mathematics assesses the skills of representing, analysing and interpreting, with unlimited re-sit opportunities.

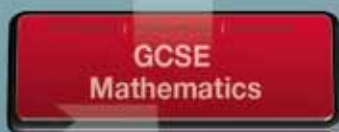
		Calculator	Duration	Marks
<b>Level 1</b>	Single written paper	Allowed	1 hour 30 mins	60
<b>Level 2</b>	Single written paper	Allowed	1 hour 30 mins	60



**Students with this qualification will be familiar with the problem-solving approaches that feature in GCSE Mathematics, at both tiers. The real-life nature of questions also represents sound preparation for FSMQ units.**

**For more information**

web:  
**[aqa.org.uk/maths](http://aqa.org.uk/maths)**  
e-mail:  
**[mathematicsgcse@aqa.org.uk](mailto:mathematicsgcse@aqa.org.uk)**  
phone:  
**0161 957 3852**



# GCSE Mathematics (4360)



**Our GCSE Mathematics gives you an exciting opportunity to teach maths the way you've always wanted to. It's less about 'teaching to the test' and more about process skills and problem-solving.**

Three assessment opportunities a year and the ability to mix and match tiers means there's plenty of flexibility to motivate students and get the best possible outcome.

Teachers tell us of the importance of sound technique in working with numbers and understanding fractions, decimals, percentage and basic ratio. So these features are applied across all three units, giving students opportunities to apply essential skills in a variety of ways, including everyday contexts, statistical problems and more abstract mathematical scenarios.

**GCSE Mathematics provides excellent preparation for most level 3 studies.**

**Students who are re-sitting GCSE Mathematics, might be more successful with the AQA Certificate in Use of Mathematics (see page 13).**

**Higher Tier students may want to enhance their studies at Key Stage 4 with the iGCSE in Further Mathematics specification.**

**For more information**

web:  
[aqa.org.uk/maths](http://aqa.org.uk/maths)  
 e-mail:  
[mathematicsgcse@aqa.org.uk](mailto:mathematicsgcse@aqa.org.uk)  
 phone:  
 0161 957 3852

## The assessment

All units are available in November, March and June. They can be taken in any order and the qualification can be delivered as a modular or linear course.

		Calculator	Duration	Total % of marks
<b>Unit 1</b>	Statistics and Number	Allowed	1 hour	26.7%
<b>Unit 2</b>	Number and Algebra	Not allowed	1 hour 15 mins	33.3%
<b>Unit 3</b>	Geometry and Algebra	Allowed	1 hour 30 mins	40.0%

You'll be supported throughout your teaching with a range of training, advice and free resources, which will save you time and money, including:

- advice and guidance – Maths Subject Team and regional Maths Advisers
- *AQA All About Maths* – including past question papers and mark schemes, assessment guidance and Exampro to create your own question papers from a bank of past questions
- regular e-mail updates
- analysis of your results with Enhanced Results Analysis (ERA).





# GCSE Mathematics (Linear) (4365)



**Our GCSE Mathematics (Linear) qualification includes more emphasis (50%) on applying maths, process skills and problem-solving, as well as introducing functional elements of maths.**

The specification and exams will motivate your students and give them the best chance of success because:

- the qualification can be taken over one or two years
- all question papers are less than 2 hours (1 hour 45 mins for Foundation Tier)
- this specification focuses on relevant mathematical knowledge and applications
- clear, straightforward question papers make maths accessible to all levels of ability
- students have time to develop understanding, proficiency and confidence before being assessed
- the approach encourages students to see connections, apply their knowledge, reason mathematically and communicate clearly across different topics within maths.

The subject content is organised into three broad areas:

- Number and algebra
- Geometry and measures
- Statistics and probability.

**GCSE Mathematics provides excellent preparation for most level 3 studies.**

**Students who are re-sitting GCSE Mathematics, might be more successful with the AQA Certificate in Use of Mathematics (see page 13).**

**Higher Tier students may want to enhance their studies at Key Stage 4 with the iGCSE in Further Mathematics specification.**

**For more information**

web:  
[aqa.org.uk/maths](http://aqa.org.uk/maths)  
 e-mail:  
[mathematicsgcse@aqa.org.uk](mailto:mathematicsgcse@aqa.org.uk)  
 phone:  
 0161 957 3852

## The assessment

There are two question papers, at both tiers, which cover all assessment objectives and are taken in the same series: January or June, from June 2012. All content may be assessed on either paper.

	Assessment	Foundation Tier	Higher Tier	Total % of marks
<b>Paper 1</b>	Written paper (calculator not allowed)	1 hour 15 mins	1 hour 30 mins	40%
<b>Paper 2</b>	Written paper (calculator allowed)	1 hour 45 mins	2 hours	60%

Free support includes:

- advice and guidance – Maths Subject Team and regional Maths Advisers
- *AQA All About Maths* – including past question papers and mark schemes, assessment guidance and Exampro to create your own question papers from a bank of past questions
- regular e-mail updates
- analysis of your results with Enhanced Results Analysis (ERA).



# AQA Level 2 Certificate in Further Mathematics (iGCSE)



**The iGCSE in Further Mathematics is excellent preparation for A-levels in Mathematics and Further Mathematics.**

For more information

web:

[aqa.org.uk/maths](http://aqa.org.uk/maths)

e-mail:

[mathematicsgcse@aqa.org.uk](mailto:mathematicsgcse@aqa.org.uk)

[@aqa.org.uk](mailto:mathematicsgcse@aqa.org.uk)

phone:

0161 957 3852

**The AQA Level 2 Certificate in Further Mathematics offers the stretch and challenge required by our best and brightest young mathematicians.**

This qualification enables students to:

- develop knowledge, skills and understanding of higher order mathematical methods and concepts
- acquire and use problem-solving strategies, including using algebra to solve problems
- select, apply and link mathematical techniques and methods to solve challenging and non-routine problems
- reason mathematically, make deductions and inferences, and draw conclusions
- interpret and communicate mathematical information in a variety of forms including rigorous use of algebraic argument and formal proof.

Our specification has been designed to:

- award achievement at A\* to C, with an additional Distinction grade (A\* with distinction) for students who achieve above A\*
- provide excellent preparation for AS and A-level by introducing students to AS topics, without infringing upon AS-level
- be delivered alongside, instead of, or after GCSE Mathematics.

## The assessment

The AQA Level 2 Certificate in Further Mathematics:

- can be taken over a one or two-year course of study
- provides assessment opportunities in January and June from June 2012.

The scheme of assessment is linear, with two question papers to be taken in the same exam series.

	Assessment	Duration	Marks	Total % of marks
<b>Paper 1</b>	Written paper (calculator not allowed)	1 hour 30 mins	70 marks	40%
<b>Paper 2</b>	Written paper (calculator allowed)	2 hours	105 marks	60%





# GCSE Statistics (4312)



**GCSE Statistics has been developed with the help of AQA teachers to make sure it offers learners an interesting and stimulating programme of study.**

Students who study GCSE Statistics will develop a knowledge and understanding of:

- statistical thinking and practice
- how to use statistics in the real world.

GCSE Statistics can be studied alongside GCSE Mathematics, where students can gain an additional GCSE qualification, based on much of the material already covered.

This specification enables students to:

- acquire transferable skills and knowledge which enhance their career opportunities
- progress to a wide range of A-level subjects outside of maths, including psychology and business studies.

**Statistics students are also prepared for a range of A-level subjects, including Psychology, Biology and Geography.**

**For more information**

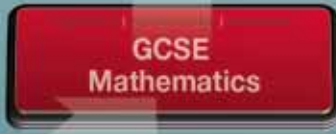
web:  
[aqa.org.uk/maths](http://aqa.org.uk/maths)  
 e-mail:  
[mathematicsgcse@aqa.org.uk](mailto:mathematicsgcse@aqa.org.uk)  
 phone:  
 0161 957 3852

## The assessment

A two-tier assessment with a Controlled Assessment task covering both tiers.

	Assessment	Duration	Marks	Total % of marks
<b>Unit 1</b>	Written paper	<b>Foundation Tier</b>		75%
		1 hour 30 mins	80 marks	
		<b>Higher Tier</b>		
		2 hours	100 marks	
<b>Unit 2</b>	Controlled Assessment: Statistics in Practice	Not tiered	Total 40 marks: <ul style="list-style-type: none"> <li>• 20 for the investigation</li> <li>• 20 for the written assessment</li> </ul>	25% <ul style="list-style-type: none"> <li>• 12.5% investigation</li> <li>• 12.5% written assessment</li> </ul>





# GCSE Mathematics Linked Pair pilot



Keep up to date with news about this important pilot – register for e-mail updates at [aqa.org.uk/mathsupdates](http://aqa.org.uk/mathsupdates)

**For more information**

web:

[aqa.org.uk/maths](http://aqa.org.uk/maths)

e-mail:

[mathematicsgcse@aqa.org.uk](mailto:mathematicsgcse@aqa.org.uk)

phone:

0161 957 3852

**The GCSE Mathematics Linked Pair pilot consists of two qualifications which are studied alongside each other.**

- **GCSE Methods in Mathematics** concentrates on maths as a discipline in its own right and as a powerful vehicle for developing the skills of thinking, reasoning and problem-solving.
- **GCSE Applications of Mathematics** concentrates on the skills and content required in our everyday lives and in gaining a mathematical understanding of the world around us.

If the pilot, which started in September 2010, is successful it will become available nationally.

- These qualifications will appeal to students with a passion for maths and those who simply want to learn more about maths.
- The success of the pilot relies on the involvement and input of practising teachers, while enabling schools and colleges to influence national policy.
- Together, the two GCSEs cover the entire content of the single GCSE Mathematics, with the opportunity to study in greater depth, providing a strong foundation for further study.
- Grade A\* to C in either of these GCSEs meets the mathematics requirement for five A\* to C grades, including English and maths, in attainment tables and the English Baccalaureate.

To be kept up to date on the progress of the pilot, including feedback from teachers and students, register to receive e-mail updates at [aqa.org.uk/mathsupdates](http://aqa.org.uk/mathsupdates)

This qualification is suitable for all GCSE students.



AQA Certificate  
in Use of Mathematics

# AQA Certificate in Use of Mathematics (4350)



**Use of Mathematics is a great alternative to re-sitting GCSE Mathematics. By studying AQA Certificate in Use of Mathematics Higher Tier, students could progress to AS Use of Mathematics and Advanced Level FSMQ Mathematics.**

#### For more information

web:  
[aqa.org.uk/maths](http://aqa.org.uk/maths)  
e-mail:  
[mathematics-gce@aqa.org.uk](mailto:mathematics-gce@aqa.org.uk)  
phone:  
**01483 477 752**

**The AQA Certificate in Use of Mathematics is equivalent in both level and standard to GCSE Mathematics and is designed to engage students who are less comfortable with abstract maths.**

This qualification can be a fresh start for students who have previously had difficulties with mathematics. It is built from two FSMQs plus a core unit. This qualification helps students to:

- develop knowledge, skills and understanding of mathematical methods and concepts
- enhance their mathematical reasoning skills and solve open-ended problems
- use maths as a model of reality and be aware of its limitations
- communicate clearly, using logical reasoning and appropriate notation
- interpret, summarise and draw conclusions using maths.

## The assessment

The AQA Certificate in Use of Mathematics is built from a compulsory core unit plus two FSMQs, selected from a range of seven. Units can be taken at Foundation Level or Higher Level. Combinations of units must assess different topics. Each unit is assessed by a written exam.

Subject	Calculator	Exam length
Foundation Level FSMQ	Allowed	1 hour
Higher Level FSMQ	Allowed	1 hour 15 mins
Core unit (both levels)	Allowed	1 hour 15 mins


Each unit is 60 guided learning hours.

*'This GCSE equivalent qualification helps the learners see that maths is relevant to their world.'*

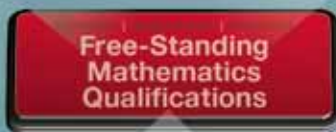
**Sally Barton,**  
National Association  
for Numeracy and  
Mathematics in Colleges  
(NANAMIC)

*'I am happy to confirm Brighton's position in accepting this as broadly equivalent, as this new qualification will line up appropriately with the new assessment criteria within the GCSE Mathematics exam.'*

**Carol Plater,**  
Principal Lecturer,  
School of Education, University of Brighton



Discover the best route  
for your students at  
[aqa.org.uk/mathspathfinder](http://aqa.org.uk/mathspathfinder)



# Free-Standing Mathematics Qualifications (FSMQs)



**These qualifications are available at Foundation, Higher and Advanced levels.**

Our FSMQs:

- encourage students to apply mathematical principles in their studies, work or interests
- are practical and relevant to the real world, training students not only in mathematical skills, but also in problem-solving and modelling
- are flexible as they can be taken alongside other studies pre-16 or post-16
- offer a wide choice of relevant, context-based courses to meet the needs of every student.

Students can study FSMQs alongside other mathematics or non-mathematics qualifications.

For more information

web:  
[aqa.org.uk/maths](http://aqa.org.uk/maths)  
 e-mail:  
[mathematics-gce@aqa.org.uk](mailto:mathematics-gce@aqa.org.uk)  
 phone:  
 01483 477 752

## Foundation FSMQs (Level 1)

- Money Management (4981)
- Using Spatial Techniques (4982)
- Using Data (4983)

## Advanced FSMQs (Level 3)

- Using and Applying Statistics (6990)
- Working with Algebraic and Graphical Techniques (6991)
- Modelling with Calculus (6992)
- Using and Applying Decision Mathematics (6994)

## Higher FSMQs (Level 2)

- Financial Calculations (4984)
- Shape and Space (4985)
- Data Handling (4986)
- Algebra and Graphs (4988)

Each unit at	Grades	Guided learning hours	Internally assessed	Externally assessed	Assessment
Foundation	A – E	60		One written paper with a pre-release data sheet	1 hour (calculator allowed)
Higher	A* – D	60		One written paper with a pre-release data sheet	1 hour 15 mins (calculator allowed)
Advanced	A – E	60	One coursework portfolio	One written paper with a pre-release data sheet	1 hour 30 mins (calculator allowed)



AS-level

## AS Use of Mathematics (5351)



**A great alternative to AS Mathematics, especially to support other non-mathematics studies.**

### For more information

web:

[aqa.org.uk/maths](http://aqa.org.uk/maths)

e-mail:

[mathematics-gce@aqa.org.uk](mailto:mathematics-gce@aqa.org.uk)

phone:

**01483 477 752**

**This qualification promotes mathematical study beyond the age of 16 and especially among ‘non-mathematicians’ – although the qualification is not age restricted.**

It is particularly useful to those working in or studying technology (including engineering), science, economics and business studies.

AS Use of Mathematics helps students to:

- apply maths to their studies, work and other interests
- solve real-world problems using maths, including open-ended problems
- develop mathematical modelling and reasoning skills
- enjoy and gain confidence in using maths.

### *The assessment*

The assessment for AS Use of Mathematics is made up of:

- Applying Mathematics – two written papers
- FSMQ Working with Algebraic and Graphical Techniques – 50% coursework and 50% written paper.

Plus one FSMQ chosen from the following three (each one has 50% coursework and 50% written paper):

- Using and Applying Statistics
- Modelling with Calculus
- Using and Applying Decision Mathematics.

Each FSMQ and the AS Use of Mathematics is graded A – E.

Discover the best route  
for your students at  
[aqa.org.uk/mathspathfinder](http://aqa.org.uk/mathspathfinder)

A-level

# Advanced level FSMQ pilot and AS/A-level Use of Mathematics pilot



Join an increasing number of schools and colleges, and get involved in these exciting pilots.

For more information

phone:  
**01483 477 752**

## Since 2007, AQA has been involved in creating and piloting a new suite of Level 3 FSMQs and AS/A-level Use of Mathematics pilot.

This innovative suite of qualifications is designed to promote maths in various topic areas and, although not age restricted, is particularly suitable for post-16 students.

The topic areas are designed to help students engage with real-life situations in statistics, dynamics, personal finance, hypothesis testing, calculus and decision maths. This is done through short and extended exam questions.

The Advanced (pilot) FSMQs are available as free-standing qualifications as well as contributing towards AS/A-level Use of Mathematics.

### *The assessment*

The assessment for the **AS Use of Mathematics pilot** comprises three equally weighted units – a compulsory Algebra unit plus two pilot Advanced FSMQs chosen from:

- Data Analysis
- Dynamics
- Decision Maths
- Hypothesis Testing
- Mathematical Principles for Personal Finance.

The above written papers are all 1 hour.

The assessment for the **A-level Use of Mathematics pilot** comprises the AS Use of Mathematics pilot (above) plus a further three equally weighted units:

- Advanced pilot FSMQ Calculus (1 hour written paper)
- Mathematical Applications (a portfolio unit)
- Mathematical Comprehension (a synoptic unit – 1 hour 30 minutes written paper).

Each FSMQ and the AS Use of Mathematics is graded A – E. The A-level Use of Mathematics is graded A\* – E.

Schools and colleges are invited to join the AS/A-level Use of Mathematics pilot. Contact **mathematics-gce@aqa.org.uk** for further information.

A-level

# AS (5360) and A-level Mathematics (6360)



**To progress to AS and A-level mathematics, students should have studied GCSE Mathematics Higher Tier or AQA Level 2 Certificate in Further Mathematics.**

#### For more information

web:  
[aqa.org.uk/maths](http://aqa.org.uk/maths)

e-mail:  
[mathematics-gce@aqa.org.uk](mailto:mathematics-gce@aqa.org.uk)

phone:  
**01483 477 752**

**A-level Mathematics provides a thorough grounding in the mathematical tools and techniques often needed in the workplace. It provides a foundation for further studies in a variety of subjects including science and engineering subjects.**

The logic and reasoning skills developed by studying A-level Mathematics makes sure the qualification is widely respected even in non-mathematical arenas.

## AS Mathematics

The Pure Core makes up two-thirds of the AS and A-level qualification and provides the techniques in algebra, geometry, trigonometry and calculus that form the fundamental building blocks of the subject.

Mathematical applications make up the remaining third of the qualification and there are various options to suit the particular needs of individual students.

The applications fall into three strands:

- Decision – networks, algorithms, sorting.
- Mechanics – forces, energy, motion.
- Statistics – probability, data handling, testing hypotheses.

Students can focus on one strand or study a mixture of any two.

## A-level Mathematics

- Is made up of six units – three at AS and three at A2.
- May be assessed through six different combinations of units.
- Has optional coursework in Statistics 1.
- All units are available in January and June.
- Maximum duration of exams is 1 hour 30 minutes.
- Graphics calculator allowed in all units except Pure Core 1.

Discover the best route  
for your students at  
[aqa.org.uk/mathspathfinder](http://aqa.org.uk/mathspathfinder)

A-level

## AS and A-level Further Mathematics (6370)



**A-level Further Mathematics gives students a deeper understanding of maths and provides a good progression to degrees in maths subjects. It may be studied alongside or after taking A-level Mathematics.**

#### For more information

web:

[aqa.org.uk/maths](http://aqa.org.uk/maths)

e-mail:

[mathematics-gce@aqa.org.uk](mailto:mathematics-gce@aqa.org.uk)

phone:

01483 477 752

**A-level Further Mathematics is designed to broaden and deepen the mathematical knowledge and skills developed when studying A-level Mathematics. It may be studied alongside or after taking A-level Mathematics and provides a stimulating experience for those who enjoy the subject.**

Topics such as matrices and complex numbers are introduced for the first time, while others, such as algebra, calculus and trigonometry are studied in greater depth. Students planning for a degree in areas such as maths, physics, engineering or economics will benefit from taking AS or A-level Further Mathematics.

The choice of units available in A-level Further Mathematics is far wider than for A-level Mathematics. For AS Further Mathematics students must take at least one further pure unit. For the full A-level students must take at least two further pure units. Beyond this there is a wide range of mathematical application units (Decision, Mechanics and Statistics) and additional further pure units available.

A-level Further Mathematics offers:

- six units – three AS units and three A2 units
- optional coursework in Statistics 1
- all exams are 1 hour 30 minutes, with graphics calculator allowed
- most units available in January and June (not all A2 exams are available in January).



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A-level

## AS and A-level Statistics (6380)



**A-level Statistics provides students with a wide range of techniques for understanding and analysing data, which are increasingly important skills in a world of constant change.**

The emphasis of the qualification is on understanding the implications and limitations of the various techniques in the context of practical situations. The course provides useful support for a variety of other subjects, including many of the social sciences.

AQA is currently the only awarding body offering a full A-level qualification in Statistics.

A-level Statistics offers:

- six units – three AS units and three A2 units
- optional coursework in Statistics 1
- all exams are 1 hour 30 minutes, with graphics calculator allowed
- most units available in January and June (not all A2 exams are available in January).



**GCSE Statistics provides a good grounding for progression to AS and/or A-level Statistics but isn't essential.**

For more information

web:

[aqa.org.uk/maths](http://aqa.org.uk/maths)

e-mail:

[mathematics-gce@aqa.org.uk](mailto:mathematics-gce@aqa.org.uk)

phone:

01483 477 752

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## Resources and support

We're committed to providing comprehensive support for teachers, including the materials below. Remember, you can always contact us directly for guidance or advice.

Resource	ELC	GCSE	A-level
<b>AQA All About Maths</b>		✓	
<b>Maths Adviser</b>		✓	
<b>e-mail updates</b>	✓	✓	✓
<b>Ask AQA</b>	✓	✓	✓
<b>On-screen progress tests</b>		✓	
<b>Enhanced Results Analysis</b>	✓	✓	✓
<b>On-site support</b>	✓	✓	✓
<b>Direct contact with our subject team</b>	✓	✓	✓
<b>Printed copy of the specification</b>	✓	✓	✓
<b>Question papers and mark schemes</b>	✓	✓	✓
<b>Online information</b>	✓	✓	✓
<b>Free training and support meetings</b>	✓	✓	✓

### AQA All About Maths

AQA *All About Maths* is the online home of our free GCSE resources [aqamaths.aqa.org.uk](http://aqamaths.aqa.org.uk). It harnesses the knowledge and expertise of the teachers who set and mark our question papers. It's filled with activities and resources to stretch and inspire students of all abilities, while saving you time and money.

Teaching resources include:

- assessment guidance – detailed guidance for every topic in the specification
- lesson plans and starters
- interactive route maps to help you plan
- homework sheets.

Exam resources include:

- practice question papers and mark schemes
- past question papers and mark schemes
- exemplar student answers
- mock Exams Analyser – for comparing results when using past papers as mock exams.

You also have free access to Exampro where you can make your own targeted revision, topic tests and homework.

*'The Mock Exams Analyser is absolutely brilliant.'*

**Mr Jahangir Akbar,**  
Head of Maths

### GCSE Mathematics

To make sure you have access to all resources and support we offer, you just need to let us know that you're teaching GCSE Mathematics with AQA by completing an online form at [aqa.org.uk/signupmaths](http://aqa.org.uk/signupmaths)

### Maths Advisers

Our GCSE Mathematics experts provide personal guidance and advice whenever you need it. They are available to give you help that's tailored to your school's specific needs.

### E-mail updates

Register to receive regular e-mail updates and be the first to hear about the latest news, deadlines and training for all our maths qualifications at [aqa.org.uk/mathsupdates](http://aqa.org.uk/mathsupdates)

### Ask AQA

Ask AQA is our free, online bank of frequently asked questions that's available 24/7. You can search for instant answers to your own questions, whether general or maths-specific.

If you can't find what you need you can submit your own question and receive a personal reply.

Visit [aqa.org.uk/askaqa](http://aqa.org.uk/askaqa) to see how easy it is to use.

## On-screen progress tests

There are 26 on-screen progress tests, each containing 15 auto-marked questions for all three units across Foundation and Higher Tiers of GCSE Mathematics.

The tests are designed to:

- help your students build confidence and knowledge
- give you a new insight into your students' performance with immediate, auto-marked results
- give you flexibility as the tests can be taken at any time – in the classroom or elsewhere.

You can buy the tests from the AQA shop, visit **shop.aqa.org.uk**

To try a sample test or for more information see **aqa.org.uk/on-screen**

## Continuing Professional Development (CPD)

We work with a team of expert tutors to provide high quality, reasonably priced training throughout your teaching career.

Each course will enable you to:

- enhance your skills and knowledge
- invigorate your teaching
- give the best chance of success to your students
- share new expertise and strategies with colleagues.

To see current courses and to book, visit **aqa.org.uk/cpd**

## On-site support

Our on-site support provides a cost-effective and simple way of addressing issues specific to your school, enabling groups of staff to benefit from AQA training. You choose the format and venue that suits you and our experienced tutors come to you.

For more information, visit **aqa.org.uk/qual/cpd**  
e-mail: **cpdonsitesupport@aqa.org.uk**

## Enhanced Results Analysis

Enhanced Results Analysis (ERA) is a free, online tool that provides an instant breakdown of exam results. Using clear and simple snapshots it shows how your school, subject, class and individual students performed.

ERA helps you to:

- review – on results days you can immediately see and analyse your students' maths results. You can also instantly compare the average mark your students received to the previous year, similar schools or to all AQA schools
- provide feedback – use the mark scheme and examiners' report to explain to students where and why they lost marks
- you can also identify students who would benefit from a re-sit
- address areas for improvement – use this insight gained to deliver personalised revision plans or amend your lesson plans
- target set and plan for next year – with year-on-year comparisons you can easily identify trends and areas for improvement.

Get started at: **aqa.org.uk/era**

If you have any questions or need help, please contact the e-AQA Helpdesk:

phone: **08442 096 614**

e-mail: **e-aqahelpdesk@aqa.org.uk**

## Nelson Thornes

We've worked with Nelson Thornes to create printed resources aligned with our specifications.

Resources are available for GCSE Foundation and Higher Tiers, including:

- student textbooks Units 1 – 3
- teacher books Units 1 – 3
- revision guides.

For additional information on resources and support provided by Nelson Thornes, please contact:

e-mail: **cservices@nelsonthornes.com**

phone: **01242 267 287**

website: **nelsonthornes.com/aqa2010**

Mathematics

## Your next step

To find out more about how our maths qualifications can help your students and fit your teaching programme, contact our team of experts. Alternatively, view our interactive Maths Pathfinder online and see the best options for your students at [aqa.org.uk/maths](http://aqa.org.uk/maths)

To keep up to date with all AQA maths qualifications and news, register for e-mail updates at [aqa.org.uk/mathsupdates](http://aqa.org.uk/mathsupdates)

We have all the information you need and the experience to answer your specific questions.

### GCSE Maths Subject Team

(GCSE Mathematics, Statistics, ELC, iGCSE and Functional Skills)

e-mail: [mathematicsgcse@aqa.org.uk](mailto:mathematicsgcse@aqa.org.uk)

phone: **0161 957 3852**

post: **AQA GCSE Maths  
Devas Street  
Manchester  
M15 6EX**

### A-level Maths Subject Team

(A-level Mathematics, Further Mathematics, Statistics, FSMQs and Use of Mathematics)

e-mail: [mathematics-gce@aqa.org.uk](mailto:mathematics-gce@aqa.org.uk)

phone: **01483 477 752**

post: **AQA A-level Maths  
Stag Hill House  
Guildford  
Surrey GU2 7XJ**

### ELC Adult Numeracy

e-mail: [ondemand2@aqa.org.uk](mailto:ondemand2@aqa.org.uk)

phone: **01483 556 100**

### Useful websites and links

All maths qualifications: [aqa.org.uk/maths](http://aqa.org.uk/maths)

GCSE resources *AQA All About Maths*: [aqamaths.aqa.org.uk](http://aqamaths.aqa.org.uk)

FSMQ resources: [www.fsmq.org](http://www.fsmq.org)

Enhanced Results Analysis: [aqa.org.uk/era](http://aqa.org.uk/era)

e-AQA: [aqa.org.uk/help/eaqa](http://aqa.org.uk/help/eaqa)

Ask AQA: [aqa.org.uk/askaqa](http://aqa.org.uk/askaqa)