

# *International GCSE* **Mathematics**

(9260) Specification



**For teaching** from September 2016 onwards  
**For exams** May/June 2018 onwards  
**For teaching and examination** outside  
the United Kingdom

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## Are you using the latest version of this specification?

- You will always find the most up-to-date version of this specification on our website at [oxfordaqa.com/9260](https://www.oxfordaqa.com/9260)
- We will write to you if there are significant changes to the specification.

# 1 Introduction

## 1.1 Why choose OxfordAQA International GCSEs?

Our International qualifications enable schools that follow a British curriculum to benefit from the best education expertise in the United Kingdom (UK).

Our International GCSEs offer the same rigour and high quality as GCSEs in the UK and are relevant and appealing to students worldwide. They reflect a deep understanding of the needs of teachers and schools around the globe and are brought to you by Oxford University Press and AQA, the UK's leading awarding body.

Providing valid and reliable assessments, these qualifications are based on over 100 years of experience, academic research and international best practice. They have been independently validated as being to the same standard as the qualifications accredited by the UK examinations regulator, Ofqual. They reflect the latest changes to the British system, enabling students to progress to higher education with up-to-date qualifications.

You can find out about OxfordAQA at [oxfordaqa.com](https://oxfordaqa.com)

## 1.2 Why choose our International GCSE Mathematics?

Maths is for everyone. It is diverse, engaging and essential in equipping students with the right skills to reach their future destination, whatever that may be. At OxfordAQA, we design qualifications and support to enable students to engage with, explore, enjoy and succeed in maths. By putting students at the heart of everything we do, our aim is to support teachers to shape what success in maths looks like for every student.

Our question papers are designed with students in mind. We're committed to ensuring that students are settled early in our exams and have the best possible opportunity to demonstrate their knowledge and understanding of maths, to ensure they achieve the results they deserve.

You can find out about all our International GCSE Mathematics qualifications at [oxfordaqa.com/maths](https://oxfordaqa.com/maths)

## 1.3 Recognition

OxfordAQA meet the needs of international students. Please refer to the published timetables on the exams administration page of our website ([oxfordaqa.com/exams-administration](https://oxfordaqa.com/exams-administration)) for up to date exam timetabling information. They are an international alternative and comparable in standard to the Ofqual regulated qualifications offered in the UK.

Our qualifications have been independently benchmarked by UK NARIC, the UK national agency for providing expert opinion on qualifications worldwide. They have confirmed they can be considered 'comparable to the overall GCE A-level and GCSE standard offered in the UK'. Read their report at [oxfordaqa.com/recognition](https://oxfordaqa.com/recognition)

To see the latest list of universities who have stated they accept these international qualifications, visit [oxfordaqa.com/recognition](https://oxfordaqa.com/recognition)

## 1.4 Support and resources to help you teach

We know that support and resources are vital for your teaching and that you have limited time to find or develop good quality materials. That's why we've worked with experienced teachers to provide resources that will help you confidently plan, teach and prepare for exams.

### Teaching resources

You will have access to:

- sample schemes of work to help you plan your course with confidence
- training courses to help you deliver our qualifications
- student textbooks that have been checked and approved by us
- engaging worksheets and activities developed by teachers, for teachers
- command words with exemplars
- mathematics vocabulary with definitions
- a handbook to support practical work.

### Preparing for exams

You will have access to the support you need to prepare for our exams, including:

- specimen papers and mark schemes
- exemplar student answers with examiner commentaries
- a searchable bank of past AQA exam questions mapped to these new International qualifications.

### Analyse your students' results with Enhanced Results Analysis (ERA)

After the first examination series, you can use this tool to see which questions were the most challenging, how the results compare to previous years and where your students need to improve. ERA, our free online results analysis tool, will help you see where to focus your teaching.

Information about results, including maintaining standards over time, grade boundaries and our post-results services, will be available on our website in preparation for the first examination series.

### Help and support

Visit our website for information, guidance, support and resources at [oxfordaqa.com/9260](https://oxfordaqa.com/9260)

You can contact the subject team directly at [maths@oxfordaqa.com](mailto:maths@oxfordaqa.com) or call us on +44 (0)161 696 5995 (option 1 and then 1 again).

**Please note: We aim to respond to all email enquiries within two working days.**

**Our UK office hours are Monday to Friday, 8am – 5pm.**

## 2 Specification at a glance

The title of the qualification is:

- OxfordAQA International GCSE Mathematics.

This qualification is linear. Linear means that students will sit all their exams at the end of the course.

Exams will be available May/June and November.

The guided learning hours (GLH) for this qualification are 120. This figure is for guidance only and may vary according to local practice and learners' experience of the subject.

### 2.1 Subject content

1. Number
2. Algebra
3. Geometry and measures
4. Probability and statistics

### 2.2 Assessments

OxfordAQA International GCSE Mathematics has two tiers, Core (grades 1–5) and Extension (grades 4–9).

Students must take two question papers at the same tier. Core students must take Papers 1C and 2C. Extension students must take Papers 1E and 2E. Both question papers must be taken in the same series.

The subject content shows the content that is assessed in each tier.

## Core

Paper 1C	+	Paper 2C
What's assessed		What's assessed
Content from any part of the specification may be assessed.		Content from any part of the specification may be assessed.
How it's assessed		How it's assessed
Written exam: 1 hour 30 minutes		Written exam: 1 hour 30 minutes
80 marks		80 marks
Scientific calculator allowed (see page 9 for more information on calculators)		Scientific calculator allowed (see page 9 for more information on calculators)
50 % of the International GCSE Mathematics assessment		50 % of the International GCSE Mathematics assessment
Questions		Questions
A mix of question styles, from short, single mark questions to multistep problems.		A mix of question styles, from short, single mark questions to multistep problems.
The mathematical demand increases as a student progresses through the paper.		The mathematical demand increases as a student progresses through the paper.

## Extension

Paper 1E	+	Paper 2E
What's assessed		What's assessed
Content from any part of the specification may be assessed.		Content from any part of the specification may be assessed.
How it's assessed		How it's assessed
Written exam: 2 hours		Written exam: 2 hours
100 marks		100 marks
Scientific calculator allowed (see page 9 for more information on calculators)		Scientific calculator allowed (see page 9 for more information on calculators)
50 % of the International GCSE Mathematics assessment		50 % of the International GCSE Mathematics assessment
Questions		Questions
A mix of question styles, from short, single mark questions to multistep problems.		A mix of question styles, from short, single mark questions to multistep problems.
The mathematical demand increases as a student progresses through the paper.		The mathematical demand increases as a student progresses through the paper.

- Students need a scientific calculator for all papers. Graphical calculators or calculators with built-in symbolic algebra/calculus are not allowed.
- Students should use the value of  $\pi$  from their calculators if it is available. Otherwise, they should use the value of 3.142 given on the front page of the question paper.
- Students should know not to round values during intermediate steps of a calculation.



## 3 Subject content

The content has been organised into broad topic areas and given a reference as follows:

- Number references start with N
- Algebra references start with A
- Geometry and measures references start with G
- Statistics and probability references start with S.

All content can be assessed on the Extension Tier question papers.

Notes are added to exemplify some of the specification references.

In addition to Subject content, students should be able to recall, select and apply mathematical formulae. See the Appendix (Section 6.1) for a list of the formulae that students will need to recall.

The ranges for the weighting of the topic areas are shown in the table. The weightings are for the overall tier of assessment, not for each individual question paper.

Topic area	Core Tier (%)	Extension Tier (%)
Number	25 – 30	20 – 25
Algebra	25 – 30	35 – 40
Geometry and measures	25 – 30	25 – 30
Statistics and probability	15 – 20	10 – 15

### 3.1 Number

#### 3.1.1 Structure and calculation

##### N1

Core content	Extension content
order positive and negative integers, decimals and fractions  use the symbols =, ≠, <, >, ≤, ≥	

**Notes:** including use of a number line.

##### N2

Core content	Extension content
apply the four operations, including formal written methods, to integers, decimals and simple fractions (proper and improper), and mixed numbers – all both positive and negative  understand and use place value (eg when working with very large or very small numbers, and when calculating with decimals)	

**Notes:** including questions set in context.

**N3**

Core content	Extension content
<p>recognise and use relationships between operations, including inverse operations (eg cancellation to simplify calculations and expressions)</p> <p>use conventional notation for priority of operations, including brackets, powers, roots and reciprocals</p>	

**N4**

Core content	Extension content
<p>use the concepts and vocabulary of even, odd and prime numbers, factors (divisors), multiples, common factors, common multiples, highest common factor, lowest common multiple, prime factorisation, including using product notation</p>	

**Notes:** prime factor decomposition including product of prime factor written in index form.

**N5**

Core content	Extension content
<p>use positive integer powers and associated real roots (square, cube and higher), recognise powers of 2, 3, 4, 5</p>	

**N6**

Core content	Extension content
<p>index laws for multiplication and division using integer powers</p>	<p>including fractional powers</p>

**N7**

Core content	Extension content
<p>calculate exactly with fractions</p>	<p>calculate exactly with surds</p> <p>manipulation and simplification of surds including rationalising a denominator</p>

**N8**

Core content	Extension content
<p>calculate with and interpret standard form</p> <p><math>A \times 10^n</math>, where <math>1 \leq A &lt; 10</math> and <math>n</math> is an integer</p>	

**Notes:** interpret calculator displays.

**N9**

Core content	Extension content
use language and notation of sets including $n(A)$ , $A'$ , $A \cup B$ , $A \cap B$ , $\xi$  understand and use Venn diagrams to solve problems	

**N10**

Core content	Extension content
use calculators effectively and efficiently including trigonometrical functions	

**N11**

Core content	Extension content
round numbers and measures to an appropriate degree of accuracy (eg to a specified number of decimal places or significant figures)  apply and interpret limits of accuracy  use estimation to work out approximate answers to calculations	calculate and use upper and lower bounds

**3.1.2 Fractions, decimal and percentages****N12**

Core content	Extension content
understand and use equivalent fractions, understand and use percentages, convert between fractions, terminating decimals and percentages	convert between fractions and recurring decimals

**N13**

Core content	Extension content
interpret fractions, decimals and percentages as operators	

**N14**

Core content	Extension content
express one quantity as a fraction/percentage of another, where the fraction is less than 1 or greater than 1  or  the percentage is less than 100 or greater than 100	

**N15**

Core content	Extension content
solve problems involving percentage change, including increase/decrease, simple interest and compound interest	reverse percentage problems  knowledge and use of the compound interest formula  value of investment = $P(1 + \frac{r}{100})^n$ where  $P$ is the amount invested, $r$ is the percentage rate of interest and $n$ is the number of years of compound interest

**3.1.3 Ratio and proportion****N16**

Core content	Extension content
use ratio notation, including reduction to simplest form and links to fraction notation	

**N17**

Core content	Extension content
divide a quantity in a given ratio	

**N18**

Core content	Extension content
apply ratio to solve problems	

**N19**

Core content	Extension content
use common measures of rate, including calculating rates of pay and best-buy problems	

**N20**

Core content	Extension content
solve problems involving direct and inverse proportion including repeated proportional change	exponential growth and decay

## 3.2 Algebra

### 3.2.1 Notation and manipulation

#### A1

Core content	Extension content
use letters to express generalised numbers and express basic arithmetic processes algebraically	

#### A2

Core content	Extension content
substitute numbers for words and letters in formulae and transform simple formulae	transform complex formulae including when the subject appears twice

#### A3

Core content	Extension content
understand and use the concepts of expressions, equations, formulae, identities, inequalities, terms and factors	

#### A4

Core content	Extension content
collecting like terms and expanding brackets up to expanding products of two linear expressions	expanding products of two or three binomials

#### A5

Core content	Extension content
taking out common factors, factorising quadratic expressions of the form $x^2 + bx + c$ ; including the difference of two squares	factorising quadratic expressions of the form $ax^2 + bx + c$ ; including the difference of two squares

#### A6

Core content	Extension content
index laws for multiplication and division using integer powers	including fractional powers

#### A7

Core content	Extension content
manipulation of rational expressions: use of $+$ $-$ $\times$ $\div$ for algebraic fractions with denominators being numeric	linear or quadratic algebraic expressions

#### A8

Core content	Extension content
argue mathematically to show algebraic expressions are equivalent, and use algebra to support and construct arguments	to include proofs

## 3.2.2 Functions, graphs and calculus

### A9

Core content	Extension content
interpret simple expressions as functions with inputs and outputs	definition of a function, use function notation of the form $f(x) = \dots$ , understand and use the terms domain and range, understand and find the composite function $fg$ and the inverse function $f^{-1}$

### A10

Core content	Extension content
work with coordinates in all four quadrants	

### A11

Core content	Extension content
plot graphs of equations that correspond to straight line graphs in the coordinate plane	find the equation of the line through two given points, or through one point with a given gradient
use the form $y = mx + c$	understand and use the gradients of perpendicular lines
identify and interpret gradients and intercepts of linear functions graphically and algebraically understand the gradients of parallel lines	

### A12

Core content	Extension content
recognise, sketch and interpret graphs of linear functions and quadratic functions including simple cubic functions and the reciprocal function	including exponential functions $y = k^x$ for positive values of $k$ , and the trigonometric functions (with arguments in degrees)
$y = \frac{1}{x}$ with $x \neq 0$	$y = \sin x$ , $y = \cos x$ and $y = \tan x$ for angles of any size

### A13

Core content	Extension content
	understand and use the gradient function $\frac{dy}{dx}$
	differentiation of $kx^n$ where $n$ is a positive integer or 0, and the sum of such functions

**Notes:** including expressions which need to be simplified first.

### A14

Core content	Extension content
	know that the gradient of a function is the gradient of the tangent at that point
	work out the equation of a tangent at any point on a curve

**A15**

Core content	Extension content
	use of differentiation to find stationary points on a curve: maxima, minima and points of inflection  sketch a curve with known stationary points

**A16**

Core content	Extension content
identify and interpret roots, intercepts and turning points of quadratic functions graphically  deduce roots algebraically	deduce turning points by completing the square

**Notes:** including the symmetrical property of a quadratic.

**A17**

Core content	Extension content
plot and interpret graphs, and graphs of non-standard functions in real contexts, to find approximate solutions to problems such as simple kinematic problems involving distance, speed and acceleration  interpret the gradient of a straight-line graph as a rate of change	calculate or estimate gradients of graphs and areas under graphs (including quadratic and other non-linear graphs), and interpret results in cases such as distance-time graphs and velocity-time graphs

**A18**

Core content	Extension content
	express direct and inverse variation in algebraic terms and use this form of expression to find unknown quantities

**3.2.3 Solving equations and inequalities****A19**

Core content	Extension content
solve linear equations in one unknown algebraically  find approximate solutions using a graph	

**Notes:** including use of brackets and those with the unknown on both sides of the equation.

**A20**

Core content	Extension content
solve quadratic equations algebraically by factorising  find approximate solutions using a graph	including completing the square and by using the quadratic formula

**A21**

Core content	Extension content
solve two linear simultaneous equations in two variables algebraically	including one linear and one quadratic
find approximate solutions using a graph	

**A22**

Core content	Extension content
translate simple situations or procedures into algebraic expressions or formulae	
derive an equation (or two simultaneous equations), solve the equation(s) and interpret the solution	

**Notes:** including the solution of geometrical problems and problems set in context.

**A23**

Core content	Extension content
solve linear inequalities in one variable	solve linear inequalities in one or two variable(s), and quadratic inequalities in one variable
represent the solution set on a number line	represent the solution set on a number line and on a graph

**Notes:** students should know the conventions of an open circle on a number line for a strict inequality and a closed circle for an included boundary.

In graphical work the convention of a dashed line for strict inequalities and a solid line for an included inequality will be required.

## 3.2.4 Sequences

**A24**

Core content	Extension content
generate terms of a sequence from either a term-to-term or a position-to-term rule	

**A25**

Core content	Extension content
recognise and use sequences of triangular, square and cube numbers and simple arithmetic progressions	including quadratic sequences

**A26**

Core content	Extension content
deduce expressions to calculate the $n$ th term of linear sequences	including quadratic sequences



## 3.3 Geometry and measures

### 3.3.1 Properties and constructions

#### G1

Core content	Extension content
use conventional terms and notations: points, lines, vertices, edges, planes, parallel lines, perpendicular lines, right angles, polygons and regular polygons  use the standard conventions for labelling and referring to the sides and angles of triangles	

#### G2

Core content	Extension content
recall and use properties of angles at a point, angles at a point on a straight line including right angles and perpendicular lines; vertically opposite angles	

#### G3

Core content	Extension content
understand and use the angle properties of parallel and intersecting lines, triangles and quadrilaterals	

**Notes:** students should know the meaning and properties of ‘alternate’, ‘corresponding’ and ‘interior’ angles. Colloquial terms such as ‘Z angles’ should not be used. Students should know the names and properties of isosceles, equilateral and scalene triangles, and also right-angled, acute-angled and obtuse-angled triangles.

#### G4

Core content	Extension content
calculate and use the sums of the interior and exterior angles of polygons	

**Notes:** students should be able to calculate the values of the interior angle, exterior angle and angle at the centre of regular polygons.

#### G5

Core content	Extension content
recall the properties and definitions of special types of quadrilateral, including square, rectangle, parallelogram, trapezium, kite and rhombus	

#### G6

Core content	Extension content
recognise reflection and rotation symmetry of 2D shapes	

**G7**

Core content	Extension content
understand congruence and similarity calculate lengths of similar figures	understand and use conditions for congruent triangles

**G8**

Core content	Extension content
identify and apply circle definitions and properties, including: centre, radius, chord, diameter, circumference including: tangent, arc, sector and segment	apply the standard circle theorems concerning angles, radii, tangents and chords, and use them to prove related results

**Notes:** including angle subtended by an arc at the centre is equal to twice the angle subtended at any point on the circumference, angle subtended at the circumference by a semicircle is  $90^\circ$ , angles in the same segment are equal, opposite angles in a cyclic quadrilateral sum to  $180^\circ$ , tangent at any point on a circle is perpendicular to the radius at that point, tangents from an external point are equal in length, the perpendicular from the centre to a chord bisects the chord, alternate segment theorem.

**G9**

Core content	Extension content
	geometrical reasoning and proof: use standard theorems to justify results in geometric contexts

**G10**

Core content	Extension content
identify properties of the faces, surfaces, edges and vertices of cubes, cuboids, prisms, cylinders, pyramids, cones and spheres	

**G11**

Core content	Extension content
interpret plans and elevations of 3D shapes construct and interpret plans and elevations of 3D shapes	

**G12**

Core content	Extension content
measure line segments and angles in geometric figures, including interpreting maps and scale drawings and use of scale factors and bearings	

**Notes:** including the eight compass point bearings and three-figure bearings.

**G13**

Core content	Extension content
<p>use the standard ruler and compass constructions (perpendicular bisector of a line segment, constructing a perpendicular to a given line from/at a given point, bisecting a given angle, constructing an angle of <math>60^\circ</math>)</p> <p>use these to construct given figures and solve loci problems</p> <p>know that the perpendicular distance from a point to a line is the shortest distance to the line</p>	

**3.3.2 Mensuration and calculation****G14**

Core content	Extension content
<p>use standard units of measure and related concepts (length, area, volume/capacity, mass, time, money etc); change freely between related standard units (eg time, length, area, volume/capacity, mass) and compound units (eg speed and density)</p>	

**Notes:** 24 and 12 hour clock for times.

**G15**

Core content	Extension content
<p>know and apply formulae to calculate: area of triangles, parallelograms, trapezia; volume of 3D shapes using <math>V = Ah</math> where <math>A</math> is the constant cross sectional area and <math>h</math> is the height/length</p>	

**G16**

Core content	Extension content
<p>know and use the formulae:</p> <p>circumference of a circle = <math>2\pi r = \pi d</math></p> <p>area of a circle = <math>\pi r^2</math></p> <p>calculate perimeters and areas of 2D shapes, including composite shapes</p>	<p>surface area and volume of spheres, pyramids, cones and composite solids including composite shapes and frustums of pyramids and cones</p>

**Notes:** solutions in terms of  $\pi$  may be asked for.

**G17**

Core content	Extension content
	use the relationships between lengths, areas and volumes in similar figures

**G18**

Core content	Extension content
	calculate arc lengths, angles and areas of sectors of circles

**G19**

Core content	Extension content
<p>know the formula for: Pythagoras' theorem,  <math>a^2 + b^2 = c^2</math> and the trigonometric ratios for</p> $\sin \theta = \frac{\textit{opposite}}{\textit{hypotenuse}}$ $\cos \theta = \frac{\textit{adjacent}}{\textit{hypotenuse}} \text{ and}$ $\tan \theta = \frac{\textit{opposite}}{\textit{adjacent}}$ <p>apply them to find lengths and angles in right-angled triangles in two-dimensional figures</p>	including 3D figures

**G20**

Core content	Extension content
	<p>know and apply the sine rule,</p> $\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$ <p>and cosine rule,</p> $a^2 = b^2 + c^2 - 2bc \cos A$ <p>to find unknown lengths and angles</p> <p>know and apply</p> $\text{Area} = \frac{1}{2} ab \sin C$ <p>to calculate the area, sides or angles of any triangle</p>

### 3.3.3 Transformations, Matrices and Vectors

#### G21

Core content	Extension content
describe and transform 2D shapes using single rotations, reflections, translations, or enlargements by a positive scale factor and distinguish properties that are preserved under particular transformations	including combined transformations and enlargements by fractional and negative scale factors

**Notes:** translations will be specified by a vector.

#### G22

Core content	Extension content
	understand and use vector notation; calculate, and represent graphically the sum of two vectors, the difference of two vectors and a scalar multiple of a vector; understand and use the commutative and associative properties of vector addition; solve simple geometrical problems in 2D using vector methods

#### G23

Core content	Extension content
	multiplications of matrices

**Notes:** multiplying a  $2 \times 2$  matrix by a  $2 \times 2$  matrix or by a  $2 \times 1$  matrix, multiplication by a scalar.

#### G24

Core content	Extension content
	the identity matrix, <b>I</b>

**Notes:**  $2 \times 2$  only.

#### G25

Core content	Extension content
	transformations of the unit square in the $x - y$ plane

**Notes:** representation by a  $2 \times 2$  matrix  
transformations restricted to rotations of  $90^\circ$ ,  $180^\circ$  or  $270^\circ$  about the origin, reflections in a line through the origin (ie  $x = 0$ ,  $y = 0$ ,  $y = x$ ,  $y = -x$ ) and enlargements centred on the origin.

#### G26

Core content	Extension content
	combination of transformations

**Notes:** using matrix multiplications

use of **i** and **j** notation is not required.

## 3.4 Statistics and probability

### 3.4.1 Presentation and analysis

**S1**

Core content	Extension content
understand and use qualitative, discrete and continuous data, including grouped and ungrouped data	

**S2**

Core content	Extension content
extract data from printed tables and lists	

**S3**

Core content	Extension content
design and use two-way tables for grouped and ungrouped data	

**S4**

Core content	Extension content
produce charts and diagrams for various data types; scatter graphs, stem-and-leaf, tally charts, pictograms, bar charts, dual and composite bar charts, pie charts, line graphs, frequency polygons, histograms with equal class intervals	histograms with unequal class intervals, cumulative frequency diagrams, box plots

**S5**

Core content	Extension content
calculate median, mean, range, mode and modal class	quartiles and inter-quartile range and percentiles

### 3.4.2 Interpretation

#### S6

Core content	Extension content
read and interpret a wide range of graphs and diagrams and draw conclusions	

#### S7

Core content	Extension content
compare distributions and make inferences	

#### S8

Core content	Extension content
recognise correlation and draw and/or use lines of best fit by eye, understanding what these represent	

**Notes:** students should know and understand the terms: positive correlation, negative correlation, no correlation, weak correlation and strong correlation.

### 3.4.3 Probability

#### S9

Core content	Extension content
understand and use the vocabulary of probability and the probability scale	

#### S10

Core content	Extension content
understand and use estimates or measures of probability from theoretical models (including equally likely outcomes), or from relative frequency	
understand and use expected frequency	

#### S11

Core content	Extension content
compare experimental data and theoretical probabilities	

#### S12

Core content	Extension content
understand that if an experiment is repeated, this may – and usually will – result in different outcomes	

**S13**

Core content	Extension content
understand that increasing sample size generally leads to better estimates of probability and population characteristics	

**S14**

Core content	Extension content
understand and use sample spaces for situations where outcomes are single events and for situations where outcomes are two successive events	

**S15**

Core content	Extension content
<p>identify different mutually exclusive and exhaustive outcomes and know that the sum of the probabilities of all these outcomes is 1</p> <p>know and use that for mutually exclusive events A and B</p> <p><math>P(A \cup B) = P(A) + P(B)</math></p>	

**S16**

Core content	Extension content
understand and use Venn diagrams to work out probabilities	

**S17**

Core content	Extension content
	<p>calculate the probability of independent combined events, including using tree diagrams and other representations</p> <p>know and use that for independent events A and B</p> <p><math>P(A \cap B) = P(A) \times P(B)</math></p>

**S18**

Core content	Extension content
	calculate conditional probabilities including using tree diagrams and other representations



## 4 Scheme of Assessment

Find mark schemes, and specimen papers for new courses, on our website at [oxfordaqa.com/9260](https://www.oxfordaqa.com/9260)

This is a linear qualification. In order to achieve the award, students must complete all assessments at the end of the course and in the same series.

Our International GCSE exams and certification for this specification are available for the first time in May/June 2018 and then every May/June and November for the life of the specification.

All materials are available in English only.

### 4.1 Aims and learning outcomes

Our International GCSE in Mathematics should encourage students to be inspired, motivated and challenged by following a broad, coherent, practical, satisfying and worthwhile course of study. It should encourage students to develop their curiosity about the living world, enable students to engage with mathematics in their everyday lives in order to make informed choices about further study in mathematics and related disciplines.

Our International GCSE in Mathematics should enable students to:

- develop fluent knowledge, skills and understanding of mathematical methods and concepts
- acquire, select and apply mathematical techniques to solve problems
- reason mathematically, make deductions and inferences and draw conclusions
- comprehend, interpret and communicate mathematical information in a variety of forms appropriate to the information and context.

Students should be aware that mathematics can be used to develop models of real situations and that these models may be more or less effective depending on how the situation has been simplified and the assumptions that have been made. Students should also be able to recall, select and apply mathematical formulae.

### 4.2 Assessment Objectives

The exams will measure how students have achieved the following Assessment Objectives.

AO1 Recall and use knowledge of the prescribed content for routine and multistep problems.

AO2 Apply mathematical skills, knowledge and reasoning:

- to solve problems including justification and proof
- to interpret, communicate, infer and deduce.

## 4.2.1 Assessment Objective weightings

Assessment Objective (AOs) Core	Component weightings (approx %)		
	Paper 1C	Paper 2C	Overall weighting of AOs (approx %)
AO1	27.5 – 32.5	27.5 – 32.5	59 – 61
AO2	17.5 – 22.5	17.5 – 22.5	39 – 41
Overall weighting of components (%)	50	50	100

Assessment Objective (AOs) Extension	Component weightings (approx %)		
	Paper 1E	Paper 2E	Overall weighting of AOs (approx %)
AO1	27.5 – 32.5	27.5 – 32.5	59 – 61
AO2	17.5 – 22.5	17.5 – 22.5	39 – 41
Overall weighting of components (%)	50	50	100

## 4.3 Assessment weightings

The assessments are equally weighted.

Component	Maximum raw mark	Scaling factor	Maximum scaled mark
Paper 1C	80	x1	80
Paper 2C	80	x1	80
Total scaled mark:			160

Component	Maximum raw mark	Scaling factor	Maximum scaled mark
Paper 1E	100	x1	100
Paper 2E	100	x1	100
Total scaled mark:			200

## 5 General administration

We are committed to delivering assessments of the highest quality and have developed practices and procedures that support this aim. To ensure that all students have a fair experience, we have worked with other awarding bodies in England to develop best practice for maintaining the integrity of exams. This is published through the Joint Council for Qualifications (JCQ). We will maintain the same high standard through their use for OxfordAQA.

More information on all aspects of administration is available at [oxfordaqa.com/exams-administration](https://oxfordaqa.com/exams-administration)

For any immediate enquiries please contact [info@oxfordaqa.com](mailto:info@oxfordaqa.com)

**Please note: We aim to respond to all email enquiries within two working days.**

**Our UK office hours are Monday to Friday, 8am – 5pm local time.**

### 5.1 Entries and codes

You only need to make one entry for each qualification – this will cover all the question papers and certification.

Qualification title	OxfordAQA entry code
OxfordAQA International GCSE Mathematics	Mathematics Core Tier – 9260C
	Mathematics Extension Tier – 9260E

Please check the current version of the Entry Codes book and the latest information about making entries on [oxfordaqa.com/exams-administration](https://oxfordaqa.com/exams-administration)

Exams will be available May/June and November.

### 5.2 Overlaps with other qualifications

This specification overlaps with the AQA UK GCSE Mathematics (8300).

### 5.3 Awarding grades and reporting results

In line with UK GCSEs, this qualification will be graded on a nine-point scale: 1 to 9 – where 9 is the best grade. Students who fail to reach the minimum standard for grade 1 will be recorded as U (unclassified) and will not receive a qualification certificate.

To find out more about the new grading system, visit our website at [oxfordaqa.com](https://oxfordaqa.com)

A student taking Core Tier assessments will be awarded a grade within the range of 1 to 5. Students who fail to reach the minimum standard for grade 1 will be recorded as U (unclassified) and will not receive a qualification certificate.

A student taking Extension Tier assessments will be awarded a grade within the range of 4 to 9. A student sitting the Extension Tier who just fails to achieve grade 4 will be awarded an allowed grade 3. Students who fail to reach the minimum standard for the allowed grade 3 will be recorded as U (unclassified) and will not receive a qualification certificate.

## 5.4 Resits

Candidates can re-take the whole qualification as many times as they wish. This is a traditional linear specification, individual components cannot be re-sat.

You only need to make one entry for each qualification – this will cover all the question papers and certification.

## 5.5 Previous learning prerequisites

There are no previous learning requirements. Any requirements for entry to a course based on this specification are at the discretion of schools.

## 5.6 Access to assessment: equality and inclusion

Our general qualifications are designed to prepare students for a wide range of occupations and further study whilst assessing a wide range of competences.

The subject criteria have been assessed to ensure they test specific competences. The skills or knowledge required do not disadvantage particular groups of students.

Exam access arrangements are available for students with disabilities and special educational needs.

We comply with the *UK Equality Act 2010* to make reasonable adjustments to remove or lessen any disadvantage that affects a disabled student. Information about access arrangements will be issued to schools when they become OxfordAQA centres.

## 5.7 Working with OxfordAQA for the first time

You will need to apply to become an OxfordAQA centre to offer our specifications to your students. Find out how at [oxfordaqa.com/centreapprovals](https://oxfordaqa.com/centreapprovals)

## 5.8 Private candidates

Centres may accept private candidates for examined units/components only with the prior agreement of OxfordAQA. If you are an approved OxfordAQA centre and wish to accept private candidates, please contact OxfordAQA at: [info@oxfordaqa.com](mailto:info@oxfordaqa.com)

Private candidates may also enter for examined only units/components via the British Council; please contact your local British Council office for details.

## 6 Appendices

### 6.1 Formulae which need to be known

Students are expected to know the formulae below, which will not normally be given in the exam. Please refer to the Subject content section to determine the tier at which these formulae could be required.

#### The quadratic formula

The solutions of  $ax^2 + bx + c = 0$ , where  $a \neq 0$  are  $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$

#### Circumference and area of a circle

Where  $r$  is the radius and  $d$  is the diameter; circumference of a circle  $= 2\pi r = \pi d$

area of a circle  $= \pi r^2$

#### Pythagoras' Theorem

In any right-angled triangle, where  $a$ ,  $b$  and  $c$  are lengths of the sides and  $c$  is the hypotenuse,

$$a^2 + b^2 = c^2$$

#### Trigonometry formulae

In any right-angled triangle, where  $a$ ,  $b$  and  $c$  are lengths of the sides and  $c$  is the hypotenuse,

$$\sin A = \frac{a}{c}, \quad \cos A = \frac{b}{c}, \quad \tan A = \frac{a}{b}$$

In **any** triangle  $ABC$  where  $a$ ,  $b$  and  $c$  are lengths of the sides

$$\text{sine rule: } \frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

$$\text{cosine rule: } a^2 = b^2 + c^2 - 2bc \cos A$$

$$\text{Area} = \frac{1}{2}ab \sin C$$

#### Area and volume

$$\text{Area of a trapezium} = \frac{1}{2}(a + b)h$$

Volume of a prism = area of cross section  $\times$  length

**Other formula will be given in the examination in the question for which they are needed.**

## Fairness *first*

**Thank you for choosing OxfordAQA,  
the international exam board that puts  
fairness first.**

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## Get in touch

You can contact us at [oxfordaqa.com/contact-us](https://oxfordaqa.com/contact-us)  
or email [info@oxfordaqa.com](mailto:info@oxfordaqa.com)

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