

GCSE (9-1)

MATHEMATICS

Helping you make the most of the new approach –
a brief guide to our exciting new specifications
for first teaching in September 2015



ocr.org.uk/gcsemaths

WHAT REFORM MEANS FOR YOU

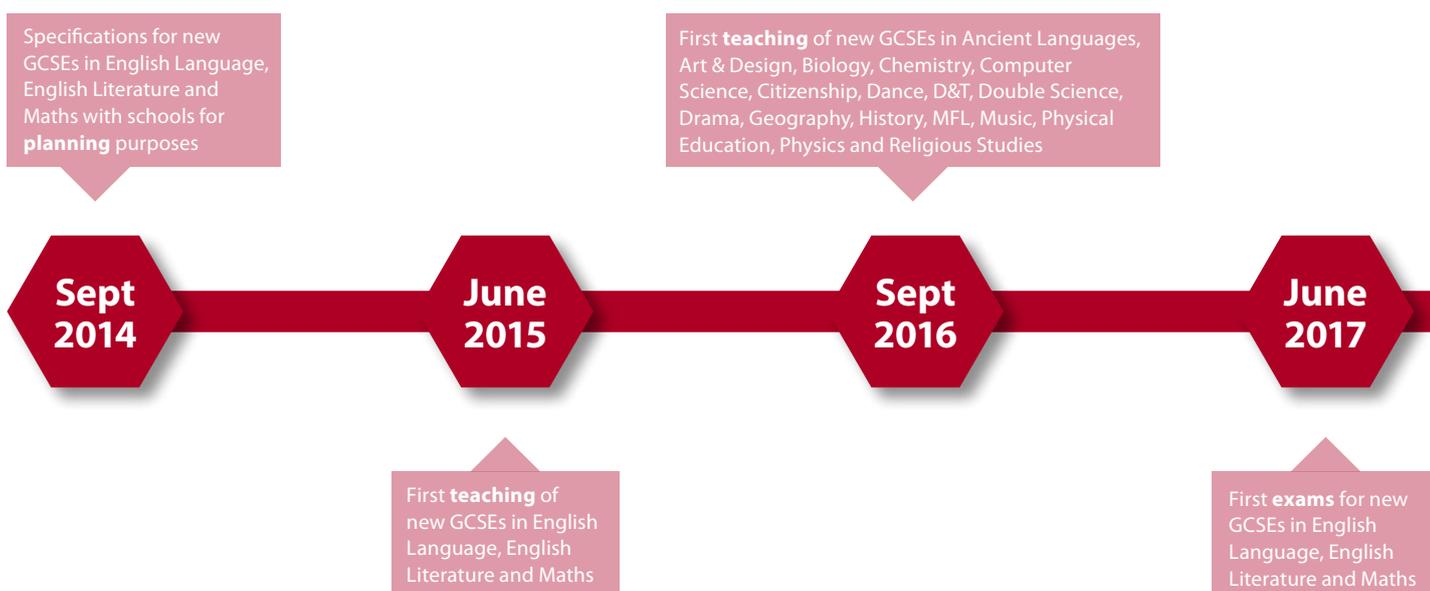
In February 2013 the former Secretary of State for Education, Michael Gove, asked Ofqual to implement changes leading to new GCSEs.

We now know that, for first teaching in September 2015, we'll have reformed GCSEs in English and Maths – followed by more subjects for first teaching a year later.

We've been busy developing specifications to engage and enthuse you and your students, and we're working hard to create high-quality resources.

This summary brochure introduces you to the new qualifications and shows you how we can help make the transition to these new qualifications easier.

GCSE TIMELINE



Changes to assessment

Key structural features of the new GCSEs confirmed by Ofqual include:

- A new grading scale that uses the numbers 1–9 to identify levels of performance (with 9 being the top level).
- Tiering used for subjects where ‘untiered papers will not allow students at the lower end of the ability range to demonstrate their knowledge and skills, or will not stretch the most able’. Maths will be tiered with an ‘improved overlapping tiers model’, with a Foundation tier covering grades 1-5 and a Higher tier covering grades 4-9.
- Linear GCSEs, with assessment to be taken at the end of the course in June. Re-sit opportunities in November for Maths and English Language only.
- Assessment by external exam only, except where non-exam assessment is the only way to provide valid assessment of the skills required. Maths will be entirely externally assessed.
- The first assessment of the new two-year GCSE course that starts in September 2015 will be in June 2017.

For more information refer to ocr.org.uk/gcsereform and why not take a look at our informative video from one of our Maths Subject Specialists to learn more about key changes at ocr.org.uk/maths

First **teaching** of new GCSEs in a range of further subjects (Ofqual is consulting on the principles for other subjects to be included as GCSEs)

**Sept
2017**

**June
2018**

First **exams** in new GCSEs in Ancient Languages, Art & Design, Biology, Chemistry, Computer Science, Citizenship, Dance, D&T, Double Science, Drama, Geography, History, MFL, Music, Physical Education, Physics and Religious Studies

First **exams** for new GCSEs in other subjects

**June
2019**

WHY CHOOSE OCR?

Choose OCR and you've got the reassurance that you're working with one of the UK's leading awarding bodies. Our new GCSE qualifications have been developed in consultation with teachers, employers and higher education to provide students with qualifications that are relevant to them and meet their needs.

We're part of the Cambridge Assessment Group, Europe's largest assessment agency and a department of the University of Cambridge. Cambridge Assessment plays a leading role in developing and delivering assessments throughout the world, operating in over 150 countries.

We work with a range of education providers, including schools, colleges, workplaces and other institutions in both the public and private sectors. Over 13,000 centres choose our A Levels, GCSEs, and vocational qualifications including Cambridge Nationals, Cambridge Technicals and Cambridge Progression.

We believe in developing specifications that help you bring the subject to life and inspire your students to achieve more. They're designed to be straightforward and accessible, so you can tailor the delivery of the course to suit your students' needs.

MEET THE MATHS TEAM

We have a dedicated team of people working on our new maths qualifications, including:

Eddie Wilde

Maths Team Leader

Neil Ogden

Subject Specialist

Darren Macy

Subject Specialist

Ruth Wroe

Subject Specialist

Jo Deko

Subject Specialist

Will Hornby

Subject Specialist

Steve Walker

Subject Specialist

Find out more about our maths team at:

ocr.org.uk/mathsteam

HAVE ANY QUESTIONS AND WANT TO TALK TO US? WANT TO FIND OUT MORE?

Our aim is to assist you however we can. As well as giving you a toolkit of support services and resources to choose from, we're also here to help you with specialist advice, guidance and support for those times when you simply need a more individual service. Here's how to reach us:

By phone: **01223 553998**

By email: maths@ocr.org.uk

INTRODUCING...

GCSE (9-1) MATHEMATICS

(FROM SEPTEMBER 2015)

OUR VISION

We have developed an inspiring, motivating and coherent maths syllabus for the entire ability range, which emphasises and encourages:

- Sound understanding of concepts
- Fluency in procedural skill
- Competency to apply mathematical skills in a range of contexts
- Confidence in mathematical problem solving.

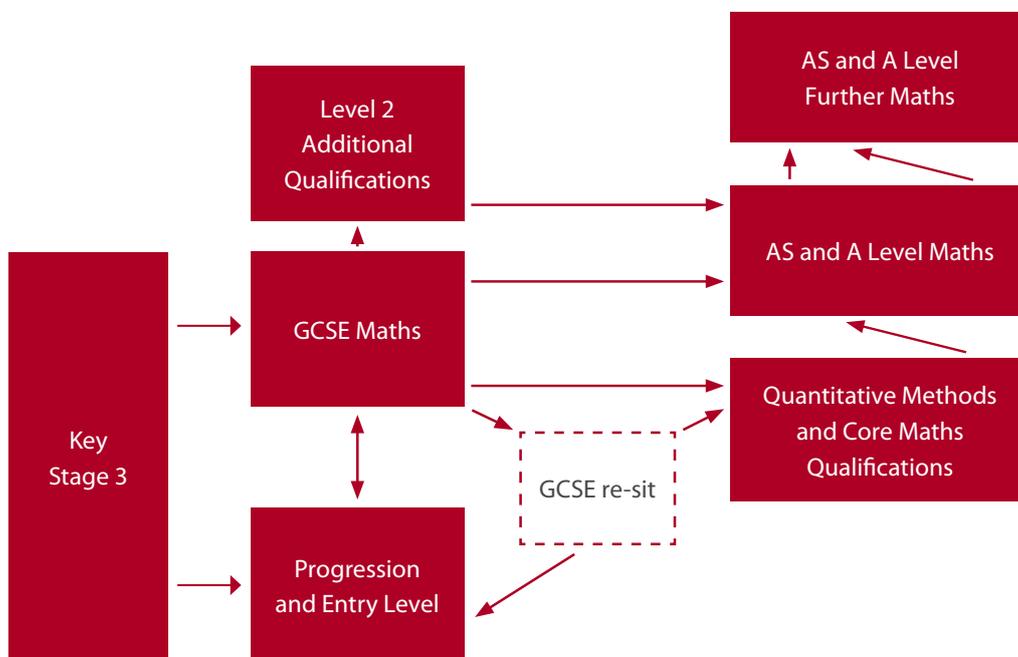


PROGRESSION PATHWAYS

We offer a range of qualifications across Key Stages 4 and 5, from bite-sized opportunities for those with the greatest need to substantial, challenging qualifications for the most able. There are clear progression routes from one end of the ability range to the other. At each stage, the qualifications provide students with the foundations to progress to the next stage with confidence.

We can offer you our exclusive Progression qualifications suitable for those needing to acquire/improve specific skills, and Entry Level qualifications targeting those for whom the GCSE qualifications are not yet appropriate. The GCSE qualifications are well defined and other Level 2 qualifications complement these.

Beyond Level 2, the new, innovative Quantitative Methods Level 3 Certificate, AS Level qualifications and our two new Core Maths qualifications support the study of other subjects. Two complete suites of A Level Mathematics qualifications are available in the OCR A Level and the OCR (MEI) A Level, both of which offer a full range of Mathematics and Further Mathematics qualifications appropriate to individual students' needs.



WHY CHOOSE OCR GCSE (9-1) MATHEMATICS?

Features of our new qualification include:

- 100 marks per paper, giving us a large scope for awarding more method marks within questions. This means candidates can be better rewarded for each correct step on the way towards an answer.
- A column of required content suitable for 'initial learning' is set out in the specification, ensuring that the basics can be established with students before moving on to more difficult areas.
- Mathematical formulae will be provided in each question when relevant, rather than on a formulae sheet at the front of the paper where candidates have to identify and choose the correct formula.
- It's designed to be straightforward and accessible so you can tailor how you deliver the course to suit your students' needs.
- It's also backed up by high-quality resources to support you.

Here are some of the key benefits of our new GCSE Maths specification for you and your students.

It's worthwhile

- Research, international comparisons and engagement with both teachers and the wider education community have been used to enhance the reliability, validity and appeal of our assessment tasks in maths.

It's student-focused

- Our syllabus and assessment consists of maths fit for the modern world and presented in authentic contexts.
- It allows students to develop mathematical independence built on a sound base of conceptual learning and understanding.
- We are continually targeting support and resources to help develop students' fluency, reasoning and problem-solving skills.
- It is a springboard for future progress and achievement.

It's teacher-centred

- We'll provide clear communication about the changes and an extensive teacher support package, including high-quality, flexible resources, particularly for the new subject areas and Assessment Objectives (AOs).
- Our support and resources focus on empowering teachers, exploring teaching methods and classroom innovation alongside more direct, content-based resources.
- Our assessment will be solid and dependable, recognising positive achievement in student learning and ability.
- We use sophisticated online marking systems that ensure a greater degree of reliability as individual questions are marked by separate Assessors, so you can have greater confidence your students will receive the results they deserve.

It's dependable

- Our high-quality assessments are backed up by sound educational principles and a belief that the utility, richness and power of maths should be made evident and accessible to all students.
- There is an emphasis on learning and understanding mathematical concepts underpinned by a sound, reliable and valid assessment.

It's reassuring

- We'll maintain continuity with the old GCSE where appropriate and we've kept many parts of the 'old' specification you liked, as well as providing support to guide you through the requirements of the changes.

WHAT STAYS THE SAME, WHAT CHANGES?

In addition to the changes affecting all new GCSEs listed on page 3, a number of changes more specific to Maths are being brought in.

- The minimum assessment time will now be a total of four and a half hours for both Foundation and Higher tiers. Of this, between one-third and a half must be completed without access to a calculator.
- The new Maths GCSE will be double weighted in the Progress 8 secondary school performance measures from 2016.
- A new list of required content has been published by the Department for Education (DfE), which includes much more content than has ever been required at GCSE before and also the requirement for candidates to memorise many more formulae than previously.
- The DfE has also provided a revised set of Assessment Objectives, with an increased emphasis on problem solving, often requiring multi-step solutions and with less emphasis on rote learning.
- Questions in assessments will be less clearly structured and more open-ended, frequently set within real-world contexts.
- GCSE Maths will no longer have marks allocated to Quality of Written Communication (QWC) in selected questions, but 'communicate information accurately' is a part of the new AO2.
- A new content area has been added, 'Ratio, proportion and rates of change' and the weightings of each content area are set by Ofqual at each tier as below ($\pm 3\%$):

	Foundation tier	Higher tier
Number	25%	15%
Algebra	20%	30%
Ratio, proportion and rates of change	25%	20%
Geometry and measures	15%	20%
Probability	15%	15%
Statistics		

GCSE (9-1) MATHEMATICS AT A GLANCE

Here's a brief look at some of the course content and the Assessment Objective changes that been brought in for new GCSE (9-1) Maths qualifications. For the full list of content, please see our new GCSE (9-1) Maths specification available from ocr.org.uk/gcsemaths

Subject content introduced in the new GCSE:

- Know the exact values of $\sin\theta$ and $\cos\theta$ for $\theta = 0^\circ, 30^\circ, 45^\circ, 60^\circ$ and 90° ; know the exact value of $\tan\theta$ for $\theta = 0^\circ, 30^\circ, 45^\circ$ and 60° (Foundation and Higher tiers).
- Use inequality notation to specify simple error intervals due to truncation or rounding (Foundation and Higher tiers).
- Use Venn diagrams (Foundation and Higher tiers).
- Work with percentages greater than 100% (Foundation and Higher tiers).
- Recognise and use the equation of a circle with centre at the origin; find the equation of a tangent to a circle at a given point (Higher tier only).
- Find approximate solutions to equations numerically using iteration (Higher tier only).
- Interpret the gradient at a point on a curve as the instantaneous rate of change; apply the concepts of average and instantaneous rate of change (gradients of chords and tangents) in numerical, algebraic and graphical contexts (Higher tier only).

Foundation tier now includes previously Higher tier content:

- Using trigonometric ratios
- Calculating with and interpreting standard form ($A \times 10^n$), where $1 \leq A < 10$ and n is an integer
- Applying addition and subtraction of vectors, multiplication of vectors by a scalar, and diagrammatic and column representations of vectors
- Factorising quadratic expressions of the form $x^2 + bx + c$, including the difference of two squares
- Using $y = mx + c$ to work with straight lines on graphs.



GCSE (9-1) MATHEMATICS AT A GLANCE CONTINUED

Formulae required at the Foundation tier that are **not** to be provided on a formula sheet include, but are not limited to:

- Pythagoras' theorem $a^2 = b^2 + c^2$
- Trigonometric ratios $\sin \theta = \frac{o}{h}$, $\cos \theta = \frac{a}{h}$, $\tan \theta = \frac{o}{a}$
- Area of a trapezium $\frac{1}{2}(a+b)h$
- Volume of a prism (area of cross section) \times length

Formulae required at the Higher tier that are **not** to be provided on a formula sheet include, but are not limited to:

- The quadratic formula $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$
- The sine rule $\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$
- The cosine rule $a^2 = b^2 + c^2 - 2bc \cos A$
- Area of a triangle $\frac{1}{2}absinC$

GCSE (9-1) MATHEMATICS

ASSESSMENT OBJECTIVES

Assessment Objectives		Weighting	
		Higher	Foundation
AO1	<p>Use and apply standard techniques</p> <p>Students should be able to:</p> <ul style="list-style-type: none"> • Accurately recall facts, terminology and definitions • Use and interpret notation correctly • Accurately carry out routine procedures or set tasks requiring multi-step solutions. 	40%	50%
AO2	<p>Reason, interpret and communicate mathematically</p> <p>Students should be able to:</p> <ul style="list-style-type: none"> • Make deductions, inferences and draw conclusions from mathematical information • Construct chains of reasoning to achieve a given result • Interpret and communicate information accurately • Present arguments and proofs • Assess the validity of an argument and critically evaluate a given way of presenting information. <p>Where problems require candidates to 'use and apply standard techniques' or to independently 'solve problems', a proportion of those marks should be attributed to the corresponding Assessment Objective.</p>	30%	25%
AO3	<p>Solve problems within mathematics and in other contexts</p> <p>Students should be able to:</p> <ul style="list-style-type: none"> • Translate problems in mathematical or non-mathematical contexts into a process or a series of mathematical processes • Make and use connections between different parts of mathematics • Interpret results in the context of the given problem • Evaluate methods used and results obtained • Evaluate solutions to identify how they may have been affected by assumptions made. <p>Where problems require candidates to 'use and apply standard techniques' or to 'reason, interpret and communicate mathematically', a proportion of those marks should be attributed to the corresponding Assessment Objective.</p>	30%	25%

SPECIFICATION

- A syllabus developed by teachers specifically for teachers, laying out the required content clearly in terms of both topic area and difficulty, facilitating candidates' progression through the content.
- Foundation and Higher tier topic content set out next to each other on the same page, so the progression of content is clear.
- A column of required content suitable for initial learning is set out, ensuring that the basics can be established with students before moving on to more difficult areas.
- The J560 specification is now available to download from ocr.org.uk/gcsemaths

GCSE (9-1) content Ref.	Subject content	Initial learning for this qualification will enable students to...	Foundation tier students should also be able to...	Higher tier students should additionally be able to...	DfE Ref.
2.04	ORDERING FRACTIONS, DECIMALS AND PERCENTAGES				
2.04a	Ordinality	Order integers, fractions, decimals and percentages e.g. $\frac{4}{5}$, $\frac{3}{4}$, 0.72, -0.9			N1, N2, R9
2.04b	Symbols	Use <, >, ≤, ≥, =, ≠			N1
OCR 3	INDICES AND SURDS				
3.01	POWERS AND ROOTS				
3.01a	Index notation	Use positive integer indices to write, for example, $2 \times 2 \times 2 \times 2 = 2^4$	Use negative integer indices to represent reciprocals.	Use fractional indices to represent roots and combinations of powers and roots.	N6, N7
3.01b	Calculation and estimation of powers and roots	Calculate positive integer powers and exact roots e.g. $2^4 = 16$ $\sqrt{9} = 3$ $\sqrt[3]{8} = 2$ Recognise simple powers of 2, 3, 4 and 5 e.g. $27 = 3^3$ [see also <i>Inverse operations, 1.04a</i>]	Calculate with integer powers e.g. $2^{-3} = \frac{1}{8}$ Calculate with roots.	Calculate fractional powers e.g. $16^{-\frac{3}{4}} = \frac{1}{\sqrt[4]{16^3}} = \frac{1}{8}$ Estimate powers and roots. e.g. $\sqrt{51}$ to the nearest whole number.	N6, N7
3.01c	Laws of indices	[see also <i>Simplifying products and quotients, 6.01c</i>]	Know and apply: $a^m \times a^n = a^{m+n}$ $a^m \div a^n = a^{m-n}$ $(a^m)^n = a^{mn}$ [see also <i>Calculations with numbers in standard form, 3.02b, Simplifying products and quotients, 6.01c</i>]		N7, A4

GCSE (9-1) content Ref.	Subject content	Initial learning for this qualification will enable students to...	Foundation tier students should also be able to...	Higher tier students should additionally be able to...	DfE Ref.
6.06	SEQUENCES				
6.06a	Generate terms of a sequence	Generate a sequence by spotting a pattern or using a term-to-term rule given algebraically or in words e.g. Continue the sequences 1, 4, 7, 10, ... 1, 4, 9, 16, ... Find a position-to-term rule for simple arithmetic sequences, algebraically or in words e.g. 2, 4, 6, ... $2n$ 3, 4, 5, ... $n + 2$	Generate a sequence from a formula for the n th term e.g. n th term = $n^2 + 2n$ gives 3, 8, 15, ... Find a formula for the n th term of an arithmetic sequence e.g. 40, 37, 34, 31, ... $43 - 3n$	Use subscript notation for position-to-term and term-to-term rules e.g. $x_n = n + 2$ $x_{n+1} = 2x_n - 3$ Find a formula for the n th term of quadratic sequence e.g. 0, 3, 10, 21, ... $u_n = 2n^2 - 3n + 1$	A23, A25
6.06b	Special sequences	Recognise sequences of triangular, square and cube numbers, and simple arithmetic progressions.	Recognise Fibonacci and quadratic sequences, and simple geometric progressions (r^n where n is an integer and r is a rational number > 0).	Generate and find n th terms of other sequences e.g. 1, $\sqrt{2}$, 2, $2\sqrt{2}$, ... $\frac{1}{2}$, $\frac{2}{3}$, $\frac{3}{4}$, ...	A24
OCR 7	GRAPHS OF EQUATIONS AND FUNCTIONS				
7.01	GRAPHS OF EQUATIONS AND FUNCTIONS				
7.01a	x- and y-coordinates	Work with x- and y-coordinates in all four quadrants.			A8
7.01b	Graph of equations and functions	Use a table of values to plot graphs of linear and quadratic functions e.g. $y = 2x + 3$ $y = 2x^2 + 1$	Use a table of values to plot other polynomial graphs and reciprocals e.g. $y = x^3 - 2x$ $y = x + \frac{1}{x}$ $2x + 3y = 6$	Use a table of values to plot exponential graphs e.g. $y = 3 \times 1.1^x$	A9, A14

QUESTION PAPERS

- A simple assessment model.
- 3 papers at each tier, all equal length and equally weighted towards the qualification.
- Subject content and AO weightings are equal across papers at each tier.
- Two papers at each tier where candidates are allowed access to a calculator.
- One non-calculator paper at each tier.
- 100 marks per paper, giving us a large scope for awarding more method marks within questions, so candidates can be rewarded for each correct step on the way towards an answer, even if their final answer is incorrect.

FOUNDATION TIER	PAPER 1 1½ hour Calculator Grades 1-5	PAPER 2 1½ hour Non-calculator Grades 1-5	PAPER 3 1½ hour Calculator Grades 1-5
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HIGHER TIER	PAPER 4 1½ hour Calculator Grades 4-9	PAPER 5 1½ hour Non-calculator Grades 4-9	PAPER 6 1½ hour Calculator Grades 4-9
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- Professional language modifiers review all OCR GCSE Maths papers and attend setting meetings to ensure that wording used is as clear and simple as possible for students.
- Contexts used are kept succinct, without excess wording.
- All OCR GCSE Maths papers begin with the simpler questions targeting the lower grades at each tier, before moving on and building steadily through the paper to questions targeting the upper grades at each tier, developing candidate's confidence as they go.
- Mathematical formula that can be provided to candidates in question papers will be provided to them when relevant in each question in OCR GCSE Maths papers; they won't be all supplied together on a formula sheet at the front of the question paper booklet for the candidate to then have to pick and choose from.
- Specimen papers are now available for both Foundation tier and Higher tier, available to download from ocr.org.uk/gcsemaths

GCSE (9-1) MATHEMATICS SAMPLE QUESTIONS

FOUNDATION TIER

1(a) Insert one of the symbols $<$, $>$ or $=$ to make each statement true.

$$-5 \quad \underline{\hspace{2cm}} \quad -7$$

$$6^2 \quad \underline{\hspace{2cm}} \quad 3^2 + 3^3$$

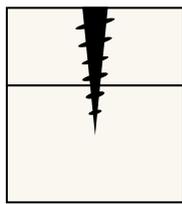
$$4.3 \times 10^3 \quad \underline{\hspace{2cm}} \quad 4.1 \times 10^4$$

(b) Calculate:

$$5^{-2} \times 10^2$$

(b) _____

2 A $\frac{3}{4}$ inch-thick piece of wood is placed on top of a $\frac{1}{8}$ inch-thick piece of wood and a screw inserted to hold them together, as shown in the diagram below.



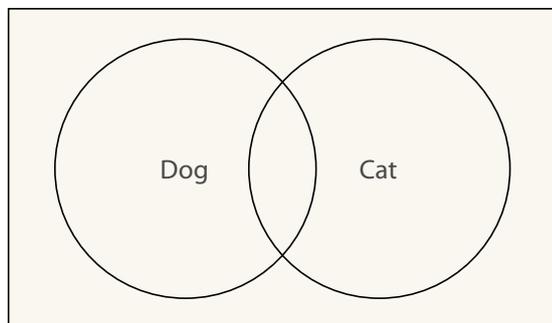
(a) What is the total thickness of the two pieces of wood together? (a) _____

(b) The screw holding them together is $\frac{1}{4}$ inch long.

How far from the bottom of the wood is the point of the screw when fully screwed in? (b) _____

FOUNDATION/HIGHER OVERLAP

3 Here is a Venn diagram.



30 students are asked if they have a dog or a cat.

- 21 have a dog.
- 16 have a cat.
- 8 have a dog, but do not have a cat.

(a) Complete the Venn diagram.

(b) One student is chosen at random. What is the probability that:

(i) they have a dog?

(b) (i) _____

(ii) they do not have a cat?

(b) (ii) _____

GCSE (9-1) MATHEMATICS

SAMPLE QUESTIONS CONTINUED

FOUNDATION/HIGHER OVERLAP CONTINUED

4 Bethany says that $(2x)^2$ is always greater than or equal to $2x$.

Decide whether she is correct or not.

Show your working to support your decision.

HIGHER TIER

5 At constant temperature, the volume of a gas ($V \text{ cm}^3$) is inversely proportional to its pressure (p Pascal).

At a pressure of 30 Pascal, a gas has a volume of 45 cm^3 .

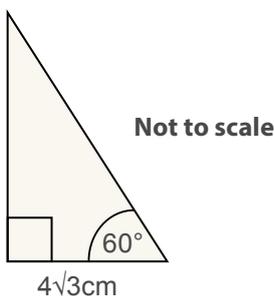
Find an equation that links p and V and hence find its new volume when the pressure in the gas is increased to 50 Pascal.

_____ cm^3

6(a) Write down the exact value of $\tan 60^\circ$.

(a) _____

(b) Find the exact area of this triangle.



(b) _____ cm^2

ANSWERS:

1(a) $>, =, <$ 1(b) 4 2(a) $17/8$ 2(b) $5/8$

3(a) diagram with 6 outside the sections, 13 in the intersection, 3 in the Cat space and 8 in the Dog space.

(b)(i) $7/21$ or $10/30$ (ii) $7/14$ or $15/30$ (iii) 4 not true when $0 < x < 1/2$

5 $p = 1350/V, 27\text{cm}^3$ 6(a) $\sqrt{3}$ 6(b) $24\sqrt{3}$

SUPPORTING YOU ALL THE WAY

We recognise that the introduction of a new specification can bring challenges for implementation and teaching. Our aim is to help you at every stage and we're working hard to provide a practical package of support in close consultation with teachers and other experts so we can help you to make the changes. For a start, we'll provide a range of high-quality creative resources. Tailored to the needs of each subject, their focus is on supporting creative teaching approaches and progression for all students. We see our resources as a body of knowledge that will grow throughout the lifetime of the specifications. They are built on the best practice we've identified from our ongoing discussions with the teaching community.

We are also developing exciting new digital tools to help you explore and use our resources. The Scheme of Work Builder will allow you to construct personalised schemes of work and you'll be able to add in the specification content, our wide range of resources and teaching suggestions and add your own content and materials.

Please visit our website at ocr.org.uk/reformresources for details of the new tools we are developing and to take a look at the types of resources on offer.

Along with subject-specific resources and tools, you'll also have access to a selection of generic resources that focus on skills development, professional guidance for teachers and results data analysis. These include the following:

Skills Guides – we've produced a set of Skills Guides which cover topics that could be relevant to a range of qualifications – for example communication, legislation and research. Download the guides at ocr.org.uk/skillsguides

Active Results – our free online results analysis service helps you review the performance of individual students or your whole cohort. It provides access to detailed results data, enabling more comprehensive analysis of results to give you a more accurate measurement of the achievements of your centre.

For more details, please refer to ocr.org.uk/activeresults

Publisher Partners

We are working with a number of leading publishers to ensure that there are some great textbooks and associated digital resources to support your teaching of the new specifications.

You can find out more details about all our publisher partners and all the resources they're providing on our website: ocr.org.uk/publishing-partners

NEW MOCK PAPERS SERVICES

EXAMCREATOR

PAST PAPERS AT YOUR FINGERTIPS

Use our new online past papers service 'ExamCreator' to build, mark and assess tests from OCR exam questions. You can select questions for particular topics or units being studied or produce a complete mock GCSE or A Level exam. With its unique 'online' functionality to assign and mark tests, ExamCreator is able to provide feedback and generate test performance reports for individual students and groups.

WITH EXAMCREATOR YOU CAN:

- Build your own tests using a mix of real exam questions
- Filter questions by topic, tier, unit, year, etc
- Access mark schemes and Examiner comments for each question in your test
- Print tests as PDF documents to be sat in exam conditions
- Assign tests online
- Create teaching groups, year groups or any other combination to make assignment easier
- Mark online tests on-screen and record the results
- Create reports for individual students or whole teaching groups.

IN SUMMARY...

ExamCreator could help you create end-of-topic tests for assessment for learning, make termly tests to assess retention of knowledge, set mock examinations or set homework. And remember, it has a built-in reporting system, so could help you track the progress of individual students or teaching groups.

To find out more about the costs and to register as a user, please see the details at ocr.org.uk/examcreator

MOCK EXAM SERVICE (DETAILS TO BE FINALISED)

GCSE maths students post-2015 will have significantly fewer chances to experience full examination conditions in preparation for their final exams, due to linearisation and assessment at the end of the course. You'll also have fewer opportunities to assess students' progress under formal examination conditions.

To help fill this gap, we plan to support our GCSE qualifications with a mock examinations service from May 2016.

THE STANDARD SERVICE WILL FEATURE:

- Question papers produced to the same standards as official GCSE papers that will be available to download from a secure location
- Well-presented, easy-to-interpret mark schemes
- Examiner's commentary on points to look out for when marking
- Sample answers with Examiner's commentary.



FREE GCSE REFORM TRAINING EVENTS

AN INTRODUCTION TO THE NEW SPECIFICATIONS

We're running free training events throughout the next academic year to help you get to grips with the reformed qualifications for first teaching in September 2015.

PRACTICAL EVENTS, CREATED WITH YOU IN MIND

These carefully planned free events are designed to help smooth the path to the first teaching of reformed qualifications and provide you with an understanding of:

- The new specification content, structure and assessment
- The differences between the existing and new specifications
- The resources and support available.

They'll give you the opportunity to speak face-to-face with our team, and network and discuss teaching approaches with colleagues.

Watch out for details at cpdhub.ocr.org.uk

To receive more information about dates, and the wide range of locations as we release them, please register for GCSE reform email updates at ocr.org.uk/updates



Download high-quality, exciting and innovative GCSE (9-1) Maths resources from ocr.org.uk/gcsemaths

Free resources and support for our GCSE (9-1) Mathematics qualification, developed through collaboration between our Maths Subject Specialists, teachers and other subject experts, are available from our website. You can also contact our Maths Subject Specialists for specialist advice, guidance and support, giving you individual service and assistance whenever you need it.

Meet the team at ocr.org.uk/mathsteam and contact them at:

01223 553998

maths@ocr.org.uk

[@OCR_maths](https://twitter.com/OCR_maths)

To stay up to date with all the relevant news about our qualifications, register for email updates at ocr.org.uk/updates

Mathematics community

The social network is a free platform where teachers can engage with each other – and with us – to find and offer guidance, discover and share ideas, best practice and a range of Maths support materials.

To sign up, go to social.ocr.org.uk

follow us on



facebook.com/ocrexams



linkedin.com/company/ocr



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youtube.com/ocrexams



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