

## Ofqual GCSE maths research report – FAQs

Ofqual announced on the 21 May 2015 the conclusions and actions of its research programme to evaluate the four major exam boards' sample assessment materials (SAMs) for the new GCSE Maths qualifications for first teaching from 2015.

To support you through these changes we have put together the below FAQ's to answer some of the key questions and show how our resources can support you and your students through the new specifications.

### 1. What are the conclusions of the research findings into the SAMs review?

Ofqual's review evaluated the expected difficulty of exam boards' sample exam papers and their approach to the assessment of mathematical problem solving.

The evidence suggests that all boards' higher tier papers appropriately stretch the most able students and that they compare well with papers from a range of already high-performing countries.

However they concluded that OCR, Edexcel and WJEC Eduqas need to refine (to varied extents) both their higher and foundation tier papers to sufficiently differentiate across student abilities, in particular focusing on their AO1 and AO2 questions. AQA needs to lift, the expected difficulty of their foundation tier papers, in particular addressing their AO3 questions.

All exam boards, apart from WJEC Eduqas have been asked to use evidence in the report to inform their writing of AO3 items in the future.

Want to know more?

- Read the full research report [here](#).
- Read the regulatory summary of actions exam boards are now taking in response [here](#).
- View a video explaining their findings [here](#).

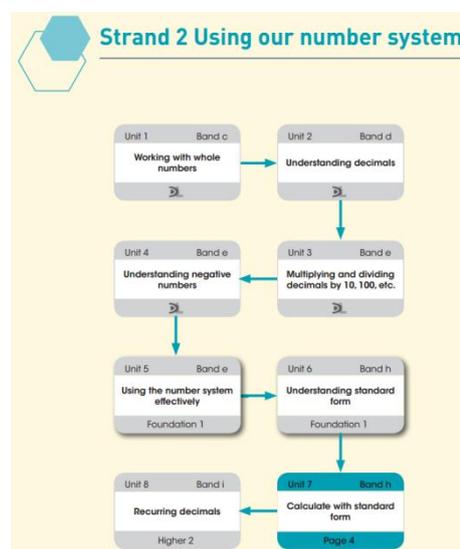
### 2. Can teachers be confident that the levelling in our new GCSE Mathematics resources for Edexcel and OCR are still relevant, given that awarding bodies have been asked to produce revised SAMs?

Yes. Our print and digital resources organise topics into progression strands with each strand presented as a series of units where the content gets more difficult as you progress (from Band b to Band k). This offers a system which fits with the previous National Curriculum level equivalents as teacher feedback suggested this would be useful for recording purposes to quantify progress in some way.

Within each unit, we offer a whole range of graduated exercises so students can gain a solid understanding and fluency of concepts before applying the skills to problem solving questions that will prepare students for the most stretching questions they will meet on the exam paper for each concept.

Our progression strands also allow students to see what they've learnt and what they need to learn next. They make it easy for students to identify any remediation and extension work they need.

Progression strand from Mastering Mathematics for Edexcel GCSE Foundation 2/ Higher 1



We are not advising on grades but providing a framework for recording progress and offering a clear way for you and your students to identify gaps in learning and apply appropriate remediation or extension steps in order to make the best progress.

The content has been split across the three books in line with the bold, underlined and basic text in the specifications. This has not changed, so teachers can be confident that students have access to the appropriate content for the level they are working at.

### 3. Are the question styles in our new GCSE Mathematics resources for Edexcel and OCR resources still relevant following the outcome of the SAMs review?

Yes. Our resources help to build understanding and measure progress throughout the course with a variety of questions, worked examples and graduated exercises that support the new assessment objectives.

Our huge variety of questions within each unit allow students to develop AO1, AO2 and AO3 skills that will prepare them for all types of exam questions. We have included questions that aid learning such as correction exercises, matching activities, Always, Sometimes, Never questions, and other Intelligent Practice questions (as seen in Shanghai and Singapore textbooks), as well as examples of exam-style questions.

Our questions have been developed by an author team experienced in teaching and examining at GCSE over many years and supported by our Assessment Consultant Keith Pledger, an experienced examiner and former chair of examiners.

### 4. The review highlighted some concerns with SAMs and their approach to the assessment of problem-solving (AO3). How do your resources support this assessment objective?

Students are encouraged to practice and build their problem solving skills throughout our print and digital resources.

A lot of our questions are set in real life contexts to encourage students to think about applying mathematics to everyday contexts and other curricular subjects. Additionally Exam-style questions that focus on the new AO3 problem solving objective are clearly labelled:

#### Problem solving

- Exam-style**
- ① The mass of a spacecraft is  $7.8 \times 10^4$  kg.  
The spacecraft is carrying equipment with a total mass of  $2.4 \times 10^3$  kg.  
The spacecraft docks with a space station.  
The mass of the space station is  $4.62 \times 10^5$  kg.  
The commander of the space station does not want the total mass on docking to be greater than  $5.43 \times 10^5$  kg.  
Is the total mass within this limit?
- Exam-style**
- ② Jenny is making a scale model of the Solar System.  
She wants the distance from Earth to Saturn to be 20 cm on her scale model.  
The real distance from the Earth to Saturn is  $1.25 \times 10^9$  kilometres.  
a Find the scale of the model in the form  $1:n$  where  $n$  is written in standard form.  
Jenny wants to put the position of a spacecraft on the scale model.  
The real distance of the spacecraft from Earth is  $8.5 \times 10^8$  kilometres, correct to 2 significant figures.  
b Work out the distance of the spacecraft from Earth on the scale model.

### 5. How do your resources support the Edexcel and OCR specification?

#### • Exam board endorsed resources

Our resources have been endorsed by Edexcel and OCR which means that they have been through a thorough review process by the awarding body to confirm that they fully cover the teaching and learning content of the new specification.

Ofqual's review concluded that Edexcel and OCR needed to refine their higher and foundation tier papers to sufficiently differentiate across student abilities. Our new GCSE Mastering Mathematics series provide full coverage of the GCSE grade ranges with three books, meaning that content is focused at the right level for each student. One book for Foundation and one for Higher encourages repetition of what they already know and slows down progression.

#### • Offers five-year progression

KS3 Mastering Mathematics and Mastering Mathematics for Edexcel and OCR GCSE focus on strands of learning within the new National Curriculum to improve progression throughout Secondary Mathematics.

Take a look at our [11-16 Progression Pathway chart](#) that shows how the Mastering Mathematics strands are mapped to the new curriculum for KS3 and GCSE.

We also have a [flexible 5 year scheme](#) that will provide all you need for:

- A two year KS3 and a three year GCSE
- A three year KS3 and a two year GCSE
- A one year scheme for resit students aiming for a grade 4/5.

**Plus buy our GCSE titles and we'll give you KS3 for FREE**

To help you deliver true progression, buy Mastering Mathematics for GCSE and we will give you Mastering Mathematics for Key Stage 3 FREE OF CHARGE\*

If you want to take us up on this fantastic time-limited offer email: [website@hoddereducation.co.uk](mailto:website@hoddereducation.co.uk)

- **Resources developed with leading Assessment Consultant Keith Pledger and a team of subject specialists**

Our resources have been written by an author team experienced in teaching and examining over many years and supported by our Assessment Consultant Keith Pledger, an experienced examiner and former chair of examiners.

- **Textbooks that follow the NCETM guidance**

Have you seen the new textbook guidance from the NCETM? Download the guidance and a check list to see how our textbooks measure up [here](#).

\* Terms and Conditions apply. If you order Mastering Mathematics for GCSE we will match your spend with our Key Stage 3 books FREE OF CHARGE. Offer applies to UK education institutions only. Not valid in conjunction with any other offer. Discount ends September 2015.