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Introduction

Edexcel's GCSE Mathematics materials
This GCSE Mathematics course has been developed by Edexcel to support you in teaching our new GCSE Mathematics specifications. All the materials have been fully referenced to the specifications. The course offers the following components for each of the Foundation and Higher Tiers:

• **Student Book** with graded questions, lots of support for the new Assessment Objectives and our unique Examiner insight from Results Plus.

• **ActiveTeach** CD-ROM to support you in your use of ICT for whole-class teaching, and in your lesson planning and management.

• **Teacher’s Guide**, providing lesson objectives, topic grades, ideas for activities including the use of ICT in ActiveTeach and resource sheets to support students completing exercises in the Student Book. Word and Pdf files of all material available on the CD-ROM which is included and which will integrate with the ActiveTeach.

• **Practice Books**: with one-to-one matching of Student book exercises. Pdfs of the material for upload to the school VLE or network are available separately and will integrate with ActiveTeach.

• **Targetted Practice Books**: providing support for G to F students; extension material for A to A* students and Booster C material for those all important borderline D/C students. Pdfs of the material for upload to the school VLE or network are available separately and will integrate with ActiveTeach.

• **Assessment Pack** containing End of chapter tests; extra A02 and A03 practice questions; and a set of Exam Practice Papers with mark schemes. Word and Pdf files of all material are available on the accompanying CD-ROM which will integrate with ActiveTeach.

• **ResultsPlus Booster C**, designed to boost the grades of your D/C borderline students. It provides web-delivered homeworks and tests for individual formative assessment with detailed teacher and pupil feedback.

• **ResultsPlus Progress tests** provide web-delivered individual summative assessment matched to the new specification.

• **SupportPlus website** contains information about the specifications, training events, support and sample materials. An Edexcel Maths-users-only area gives further detailed support for teaching the specification.

Support for teaching the new Assessment Objectives

<table>
<thead>
<tr>
<th>Assessment Objective</th>
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<tr>
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<td>45-55</td>
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<tr>
<td>A02</td>
<td>Select and apply mathematical methods in a range of contexts.</td>
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<td>25-35</td>
</tr>
<tr>
<td>A03</td>
<td>Interpret and analyse problems and generate strategies to solve them.</td>
<td>Problem solving: Deciding how and explaining why</td>
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The new assessment objectives means that question styles within the exam are changing, with more problem-solving, open-style questions being set. These new question types are clearly marked in the Student books and also have dedicated spreads for further practice. Yet more questions are available in the Practice Books and in the Assessment Pack. Further interactive support is offered in the ActiveTeach with interactive examples and in the Assessment pack.

The examination and the course
Written by examiners who thoroughly understand the new specification, all the material you need to prepare students for the examination is available from this course and has been carefully developed and reviewed.

• All questions show targeted grades.

• ResultsPlus examiner tips help students to gain those extra few marks in the examination.

• Past exam questions and exam style questions can be found in the Chapter Review at the end of each chapter. These have been chosen or specifically written to ensure they are a true reflection of the style of questions that might appear in the examination.

• Ask for the HCF of pairs of small numbers e.g. 2 and 6 (2), 4 and 10 (2), 6 and 12 (6).

• Discuss the best method for finding the HCF and LCM for two small numbers (e.g. 4 and 6). Show students how these can be found by making a list of the factors and first few results is reached.

• Tell students that they are going to find the HCF and LCM of two numbers.

• Tell students that they are going to find out how to write any positive whole number as a product of its prime factors. (These are often incorrectly replaced by addition signs or commas.)

• Find the prime factor decomposition of positive integers.

• Complete the following factor trees.

• Find two common factors of 12 and 18.

• Find the HCF and LCM of 70 and 84.

• Find the HCF and LCM of the following pairs of numbers.

• c Find the HCF and LCM of 70 and 84.

• b Find the HCF and LCM of 42 and 70.

• a 60 and 84 ...............................................................  b  70 and 105 ...............................................................  c Find the HCF and LCM of 70 and 84.

• a 60 and 84 ...............................................................  b  70 and 105 ...............................................................  c Find the HCF and LCM of 70 and 84.

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A topic from Edexcel’s GCSE Mathematics course
As well as the concise Starters, Main teaching and learning points and Plenary, the lesson notes also contain:

- Prior knowledge, skills and concepts highlighted where applicable.
- Key mathematical vocabulary pulled out; this is also available on the ActiveTeach with written and spoken definitions in English and a multilingual spoken glossary.
- Sections detailing common misconceptions, and possible enrichment activities to challenge students and check their understanding are also included where appropriate.

Teaching and Learning
Saving you time and guiding you through the new specification, the Teacher’s guide contains concise, easy-to-read Lesson plans and extra Guided Practice Worksheets which are available as editable Word files and pdfs on the CD-ROM.

- At a glance specification references and detail.
- Starter ideas to check that students have the required prior knowledge.
- Main teaching and learning points to help you teach the topic itself.
- Plenary questions to test understanding and application of the mathematics.
• Common misconceptions, and possible enrichment activities are also included where appropriate.
• Editable scheme of work available on the CD-ROM.
• Guided practice worksheets with remediation questions. As these are support worksheets, some of the questions may fall below grade levels.
• Integrates fully with ActiveTeach if installed.

Digital products

ActiveTeach
ICT is seamlessly incorporated into mathematics lessons by using the unique, networkable, VLE compatible ActiveTeach.

ActiveTeach is a front-of-class teaching tool allowing you to display the Student Books on your whiteboard or through your VLE, while giving access to a wealth of activities, video clips, quizzes and other activities.

• BBC Active clips bring maths to life. Accompanying each clip are teacher mediated questions, and a worksheet for students to complete.
• ResultsPlus interactive problem-solving activities provide whole class practice of the new AO2 and AO3 style questions with our unique three-part tool.
• ResultsPlus knowledge checkers test AO1 recall with a multiple choice test at the end of each chapter.
• High-quality interactive content integrates seamlessly with the Student Book.
• Multi-lingual glossary gives audio translations for common maths terms in five languages.
• My lessons area allows you to personalise content by adding your own links, interacting directly with the text and saving your annotations, enabling you to reapply your thinking the next time you deliver the lesson.

ResultsPlus Booster C
Easy to adopt, set up and administer, ResultsPlus Booster C is an online service that takes borderline D/C students through highly targeted practice to boost their performance and help them get that all-important C grade.

• Dynamically generated guided practice questions, labelled by grade, give students a variety of practice to meet their needs exactly.
• Edexcel exam-style questions onscreen, give the benefits of instant examiner feedback, and familiarity with the new GCSE question types and requirements.
• Online delivery ensures total currency of questions for the new specification.
• Links to other course components, give students and teachers a clear, consistent learning experience.

• Advanced reporting tools give unmatched insight into student performance, enabling teachers to pinpoint exactly where individuals are going wrong.
• Works alongside ResultsPlus Progress to allow you to address the weak areas that ResultsPlus Progress diagnoses.

ResultsPlus Progress tests
Our online diagnostic assessment service helps you improve your students’ performance before it’s too late. Great for embedding Assessment for Learning into your course, it gives you access to exactly the information you need, to help tackle areas of weakness for each student.

• Ten topic-based tests, all with 25 questions that are perfect for both linear and modular courses.
• Each topic test can be taken individually or linked with others to create more comprehensive unit, termly or mock-style assessments.

SupportPlus website
www.edexcelmaths.com/supportplus
Our dedicated website with information about the specifications, training events, support and sample materials. An Edexcel Maths users-only area gives detailed support including

• Interactive Schemes of Work
• Teaching Resources – Lesson Plans and Practice Worksheets
• Exam Question Editor
• Updates from Subject Leader Graham Cumming
• ICT Blog
• Community Area
• Answers to questions in printed materials not included with the book

Icons used in the Student books
• Assessment objective questions are classified as AO2 and/or 3. These questions follow the more open structure demanded by QCDA for the new specification and are not available in earlier GCSE publishing schemes.
• Functional skills indicates questions that cover functional elements of GCSE maths.
• Quality of Written Communication (QWC) identifies questions that follow the style of QWC questions in the exam.
• Non-calculator indicates questions where students must not use a calculator to find the answer. It does NOT indicate that the subject area covered by the question will only appear in the non-calculator paper of the exam.