

Matched to the 2010 specifications

Edexcel Linear • Edexcel Modular • AQA Modular

NEW GCSE MATHS

More practice + Smooth progression = Better results

Find out how inside

Brian Speed • Keith Gordon • Kevin Evans • Trevor Senior
Chris Pearce

Collins New GCSE Maths

Brian Speed • Keith Gordon • Kevin Evans
Trevor Senior • Chris Pearce

Contents

Components	3
Student Books	4
Teacher's Packs	5
Homework Books, Workbooks and Revision Guides	6
Interactive Books	8
Assessment	9
Contact information	10
Order form	11

The GCSE Maths specifications are changing for 2010 and our bestselling team of authors, famous for *New Maths Frameworking* for Key Stage 3, have been hard at work writing excellently matched resources to help you implement the changes smoothly.




Collins New GCSE Maths enables you to:

- **Reduce your planning time** with differentiated 3-part lessons, with customisable schemes of work to suit a 2 or 3 year GCSE course, available as editable Word documents
- **Help your students learn and progress at a smooth pace**, with more differentiated and graded practice questions than ever before
- **Engage students whilst helping them grasp tricky concepts** with real-life examples
- **Be confident you are covering the required functional and problem-solving skills** with a functional or problem-solving activity in every chapter, and functional maths, problem solving and the new exam-style questions flagged throughout the series
- **Assess your pupils' progress easily** with record sheets and customisable practice tests, and track and provide evidence with our auto-marking online diagnostic assessment engine

You can see how all the components fit together on the following pages. If you'd like to see more, turn to the back where you will be able to find the contact details of your local representative, or details of how to order a 30-day Evaluation Pack.

Components





Evaluation Packs

 Feb 2010 Edexcel Linear (A) 978-0-00-732985-4	 Feb 2010 Edexcel Modular (B) 978-0-00-732984-7	 Feb 2010 AQA Modular (B) 978-0-00-732983-0
--	---	---

Evaluation Packs contain: Student Book Foundation 1, Student Book Higher 1, Unit from Teacher's Pack Foundation 1, Unit from Student Book Foundation 2, Unit from Revision Guide and Interactive Book demo disk





Foundation

Student Book

 Feb 2010 Edexcel Linear 1 978-0-00-734018-7 Edexcel Modular 1 978-0-00-733986-0 AQA Modular 1 978-0-00-734002-6	 Mar 2010 Edexcel Linear 2 978-0-00-734022-4 Edexcel Modular 2 978-0-00-733990-7 AQA Modular 2 978-0-00-734006-4	 Feb 2010 Edexcel Linear 1 978-0-00-734026-2 Edexcel Modular 1 978-0-00-733994-5 AQA Modular 1 978-0-00-734010-1	 Mar 2010 Edexcel Linear 2 978-0-00-734029-3 Edexcel Modular 2 978-0-00-733997-6 AQA Modular 2 978-0-00-734013-2
--	--	--	--





Higher

Homework Book

 Apr 2010 Edexcel Linear Book 1 978-0-00-734019-4 Edexcel Modular Book 1 978-0-00-733987-7 AQA Modular Book 1 978-0-00-734003-3	 May 2010 Edexcel Linear Book 2 978-0-00-734023-1 Edexcel Modular Book 2 978-0-00-733991-4 AQA Modular Book 2 978-0-00-734007-1	 Apr 2010 Edexcel Linear Book 1 978-0-00-734027-9 Edexcel Modular Book 1 978-0-00-733995-2 AQA Modular Book 1 978-0-00-734011-8	 May 2010 Edexcel Linear Book 2 978-0-00-734030-9 Edexcel Modular Book 2 978-0-00-733998-3 AQA Modular Book 2 978-0-00-734014-9
--	--	--	--

Homework Book Foundation and Higher CD-ROM 1: Edexcel Linear 978-0-00-735377-4, Edexcel Modular 978-0-00-735375-0, AQA Modular 978-0-00-735379-8, Apr 2010
Homework Book Foundation and Higher CD-ROM 2: Edexcel Linear 978-0-00-735378-1, Edexcel Modular 978-0-00-735376-7, AQA Modular 978-0-00-735380-4, May 2010

Teacher's Pack



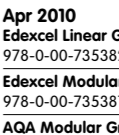
 Feb 2010 Edexcel Linear 1 978-0-00-734020-0 Edexcel Modular 1 978-0-00-733988-4 AQA Modular 1 978-0-00-734004-0	 May 2010 Edexcel Linear 2 978-0-00-734024-8 Edexcel Modular 2 978-0-00-733992-1 AQA Modular 2 978-0-00-734008-8	 Apr 2010 Edexcel Linear 1 978-0-00-734028-6 Edexcel Modular 1 978-0-00-733996-9 AQA Modular 1 978-0-00-734012-5	 May 2010 Edexcel Linear 2 978-0-00-734031-6 Edexcel Modular 2 978-0-00-733999-0 AQA Modular 2 978-0-00-734015-6
--	--	--	--

Revision Guide

 Apr 2010 Edexcel A + B + AQA B 978-0-00-734098-9	 Apr 2010 Edexcel A + B + AQA B 978-0-00-734099-6
---	---



Working at Grades G-E

Workbook

 Mar 2010 Edexcel Linear 1 978-0-00-734021-7 Edexcel Modular 1 978-0-00-733989-1 AQA Modular 1 978-0-00-734005-7	 Apr 2010 Edexcel Linear 2 978-0-00-734025-5 Edexcel Modular 2 978-0-00-733993-8 AQA Modular 2 978-0-00-734009-5	 Apr 2010 Edexcel Linear Grade C Booster Workbook 978-0-00-735382-8 Edexcel Modular Grade C Booster Workbook 978-0-00-735381-1 AQA Modular Grade C Booster Workbook 978-0-00-735383-5
--	--	---

Foundation and Higher

Interactive Book

 Apr 2010 Edexcel Linear 1 978-0-00-734032-3 Edexcel Modular 1 978-0-00-734000-2 AQA Modular 1 978-0-00-734016-3	 Jun 2010 Edexcel Linear 2 978-0-00-734033-0 Edexcel Modular 2 978-0-00-734001-9 AQA Modular 2 978-0-00-734017-0
--	--

Assessment

 Sept 2010 Assessment 1 978-0-00-734491-8	 Sept 2010 Assessment 2 978-0-00-734492-5
---	---

Collins New GCSE Maths Student Books are suitable for your students whatever level they are working towards. Foundation books help students working at G to C, while Higher books are perfect for those aiming towards A*. Lots of functional skills, problem solving and graded maths practice are packed into two books, making them an accessible resource that will give your students the confidence to take on all aspects of the new curriculum.

Collins New GCSE Maths Foundation and Higher Teacher's Packs contain everything you need to deliver effective lessons in mathematics with confidence. Differentiated lesson plans, quick access to the Student Book and Homework Book answers, and lesson plans in Word format on the accompanying CD-ROM give you the support and flexibility to adapt lessons to support all your classes.

Why this chapter matters

Thousands of years ago, lots of different number systems were developed in many different civilisations. Most of these ways of counting were based on the number 10 ('decimal' numbers), simply because humans have 10 fingers and 10 toes.

The Egyptian number system (from about 3000 BC) used different symbols or drawings to represent 1, 10, 100, 1000 and so on.

To the number 23 would be written:

The Chinese number system used sticks.

To the number 23 would be written:

The Roman number system is still used today, often on clocks, and is based on the numbers 5 and 10.

To the number 23 would be written: **XXIII**

The system we use today is called the **Hindu-Arabic system** and uses the symbols 0, 1, 2, 3, 4, 5, 6, 7, 8 and 9. This has been widely used since about 1000.

This system provides an almost universal 'language' of maths that has allowed us to make sense of the world around us and communicate ideas to others even when their spoken language may differ from ours.

Chapter 1 Basic number

Visual overview

- Arithmetic
- Algebra
- Geometry
- Statistics
- Number

What you should already know

- Times tables up to 10×10 (KS2 level 4)
- Addition and subtraction of numbers less than 20 (KS3 level 3)
- Simple multiplication and division (KS3 level 3)
- How to multiply numbers by 10 and 100 (KS3 level 3)

Quick check

How quickly can you complete these?

1. 4×6	2. 3×7	3. 5×8	4. 9×2
5. 6×7	6. 13×14	7. 15×15	8. 18×12
9. 19×7	10. 11×6	11. 50×9	12. 48×6
13. 25×7	14. 42×6	15. 36×9	16. 8×10
17. 9×100	18. 3×10	19. 14×100	20. 17×10

Exercise 1B

1. Write down the answer to each of the following without looking at the multiplication square.

4×5	7×3	5×4	3×5	8×2
3×4	5×2	6×7	1×4	$1 \times 9 \times 2$
3×6	$1 \times 8 \times 7$	3×6	8×7	3×3
5×9	3×9	5×3	7×7	4×6
6×6	7×5	4×8	4×9	6×8

2. Write down the answer to each of the following without looking at the multiplication square.

10×2	20×7	36×6	40×5	15×3
20×5	21×3	24×4	$1 \times 16 \times 8$	$1 \times 12 \times 4$
42×6	$1 \times 24 \times 3$	18×2	25×5	48×6
36×4	32×8	15×5	49×7	27×3
45×9	16×4	40×8	63×9	54×9

3. Write down the answer to each of the following. Look carefully at the signs, because they are a mixture of \times , $+$, $-$ and \div .

3×7	$20 \div 5$	3×7	4×8	$24 \div 3$
$15 \div 3$	6×8	27×9	$1 \times 6 \times 5$	$36 \div 6$
7×5	$15 \div 3$	$24 \div 8$	28×4	7×9
9×6	$36 \div 9$	30×5	8×7	4×6
8×5	$42 \div 7$	8×9	9×8	$54 \div 9$

4. Ahmed works for 3 hours and is paid £11 an hour. Ben works for 4 hours and is paid £8 an hour. Who is paid the most?

From Student Book Foundation 1

Smooth progression in our questions and more of them gives every student the chance to practise, progress and fulfil their potential

Help students to monitor their own progress through the GCSE Maths course with Collins' colour-coded grades on every page and a grade booster at the end of every chapter

Chapter 1 Basic number

Overview

Exercise	G	F	E	D	C
A	1-36	37-6			
B	1-5	6			
C	1-7	8-12			
D	1-11	12			
E	1-10	11-10			
F	1-7	8-9			
G	1-4	5-7			

Overview test

All questions are GCSE grade G or KS3 level G.

1. Complete the multiplication grid.

3	2	4	7	8
5				
9				
6				

2. Write down the answers to these calculations.

$7 + 8 = \square$
 $19 - 11 = \square$
 $3 + 3 + 7 = \square$
 $15 - 6 = \square$
 $12 - \square = 5$
 $24 - 6 = \square$
 $18 \div 3 = \square$
 $54 \div \square = 4$
 $7 \times 7 = \square$
 $9 \times 3 = \square$

3. Work out the answers to these calculations.

$\square \times 10 = 100$
 $\square \times 10 = 40$
 $23 \times 230 = \square$
 $40 \times 6000 = \square$
 $38 \times 280 = \square$

4. Complete the following grid.

	$\times 10 = 100$
4	
23	
40	
28	

Answers to overview test

1. $3 \times 2 = 6$	$2 \times 4 = 8$	$7 \times 8 = 56$	$8 \times 5 = 40$
$5 \times 9 = 45$	$6 \times 7 = 42$	$9 \times 6 = 54$	$6 \times 12 = 72$

2. 15 , 8 , 9 , 15 , 9

3. 15 , 8 , 40 , 400 , 2300 , 240000 , 380000

4. 10 , 40 , 500 , 2800

From Collins Teacher's Pack Foundation 1

Link maths concepts and help students to access functional and problem-solving scenarios

Engage the whole class and help them consolidate new concepts with tripartite lesson structures

ALSO AVAILABLE IN THE STUDENT BOOKS:

- Colourful functional skills and problem-solving pages at the end of every chapter to engage students with rich tasks that will develop their process skills and allow them to apply maths in stimulating real-life contexts
- Comprehensive exam practice and worked exam questions with examiner notes at the end of every chapter

ALSO AVAILABLE IN THE TEACHER'S PACKS:

- Quick access to answers to all questions in the corresponding Student Book and Homework Book
- Ready-made Schemes of Work
- Lesson plans in Word format on the CD-ROM

Homework Books, Workbooks & Revision Guides



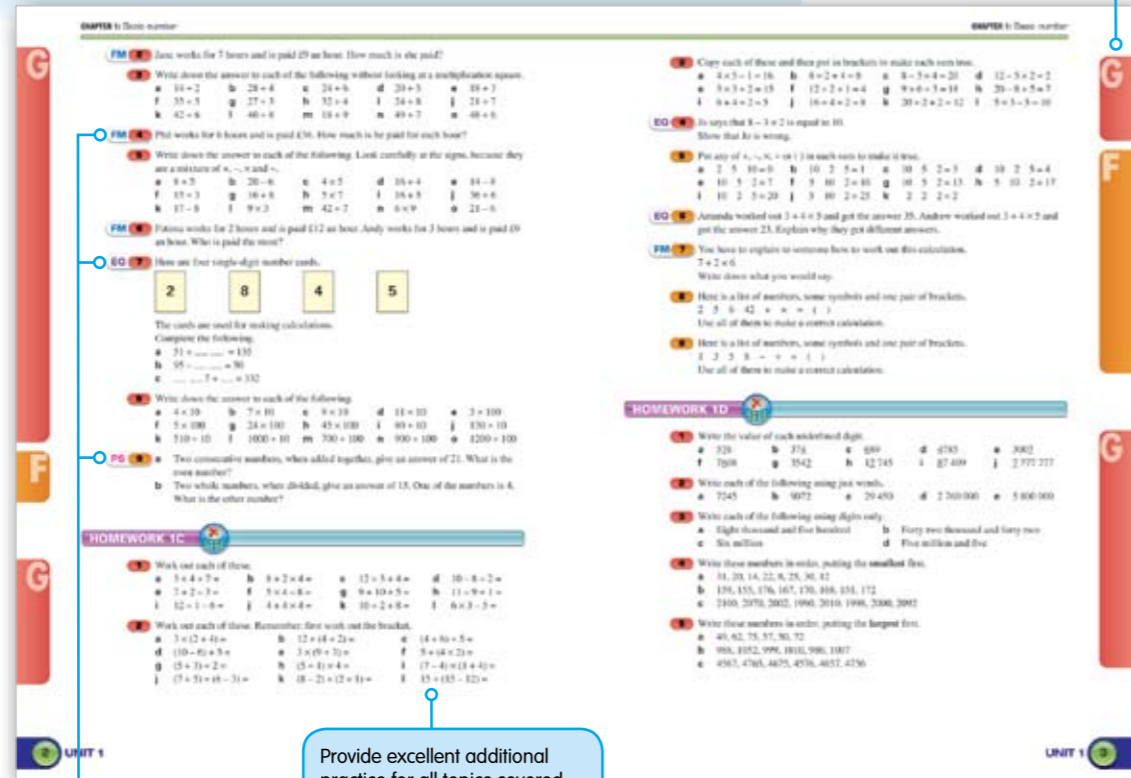
Homework Books

Collins New GCSE Maths Homework Books are excellent companions to the Student Books. Following the familiar structure and layout of the Student Book, the Homework Book provides extensive practice of all the elements of the new curriculum. Also available on CD-ROM.

Enable students to assess their own progress through each chapter with familiar colour-coded grades in every exercise

ALSO AVAILABLE IN THE HOMEWORK BOOKS:

- Develop students' functional maths and problem-solving skills with open-ended investigative tasks at the end of every chapter
- Give students easy reference to the clear explanations and examples in their textbooks with a free CD-ROM of the Student Book inside



From Collins Homework Book Foundation 1

Provide continuity for your students with functional skills, problem solving and new exam-style questions flagged in the same style as the Student Books

Provide excellent additional practice for all topics covered in the Student Book with brand new questions not found in the Student Book

Check progress with student-friendly learning objectives

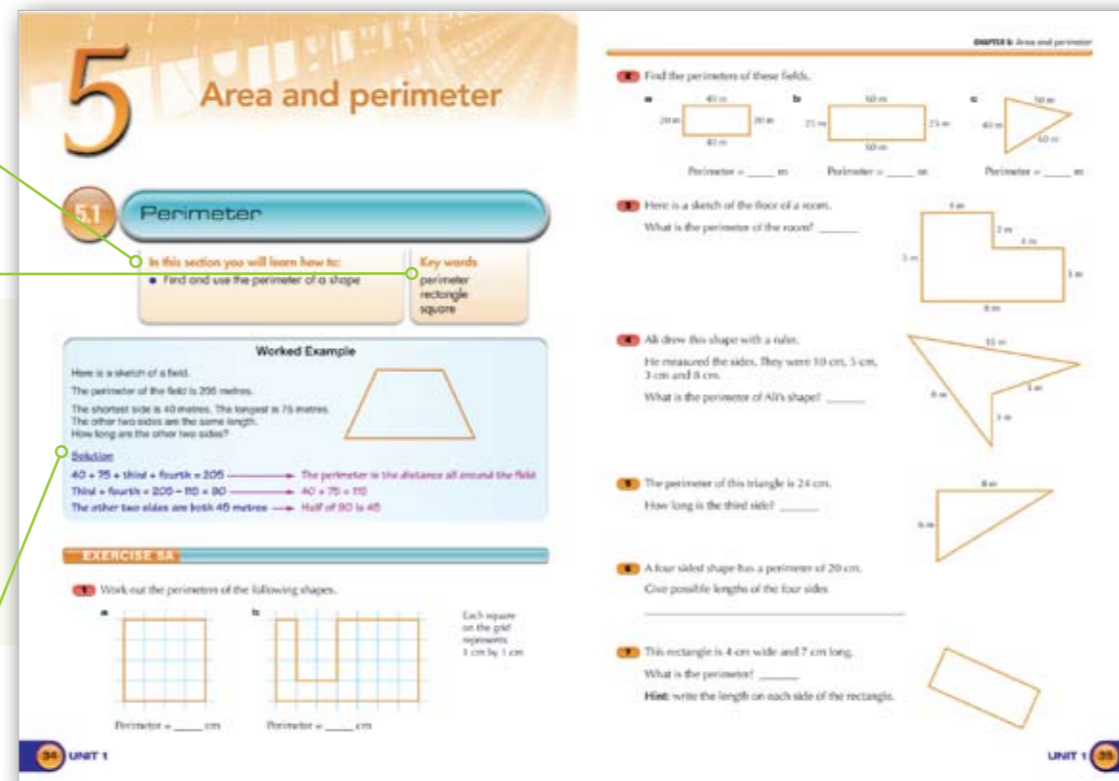
Remind students of important vocabulary with key words listed for each chapter

Help students learn how to work through problems with step-by-step processes using the worked examples

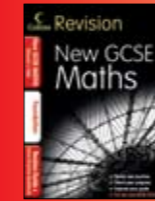


Workbooks

Collins New GCSE Maths Workbooks provide support for students to make a smooth transition from KS3 to KS4. They are an ideal resource for students working at Grades E to G to ensure a solid foundation in GCSE Maths. The Workbooks offer plenty of practice with hundreds of questions provided in a write-in format. Plus, help students aiming for a C with the Grade C Booster Workbook.



From Collins Workbook Foundation 1



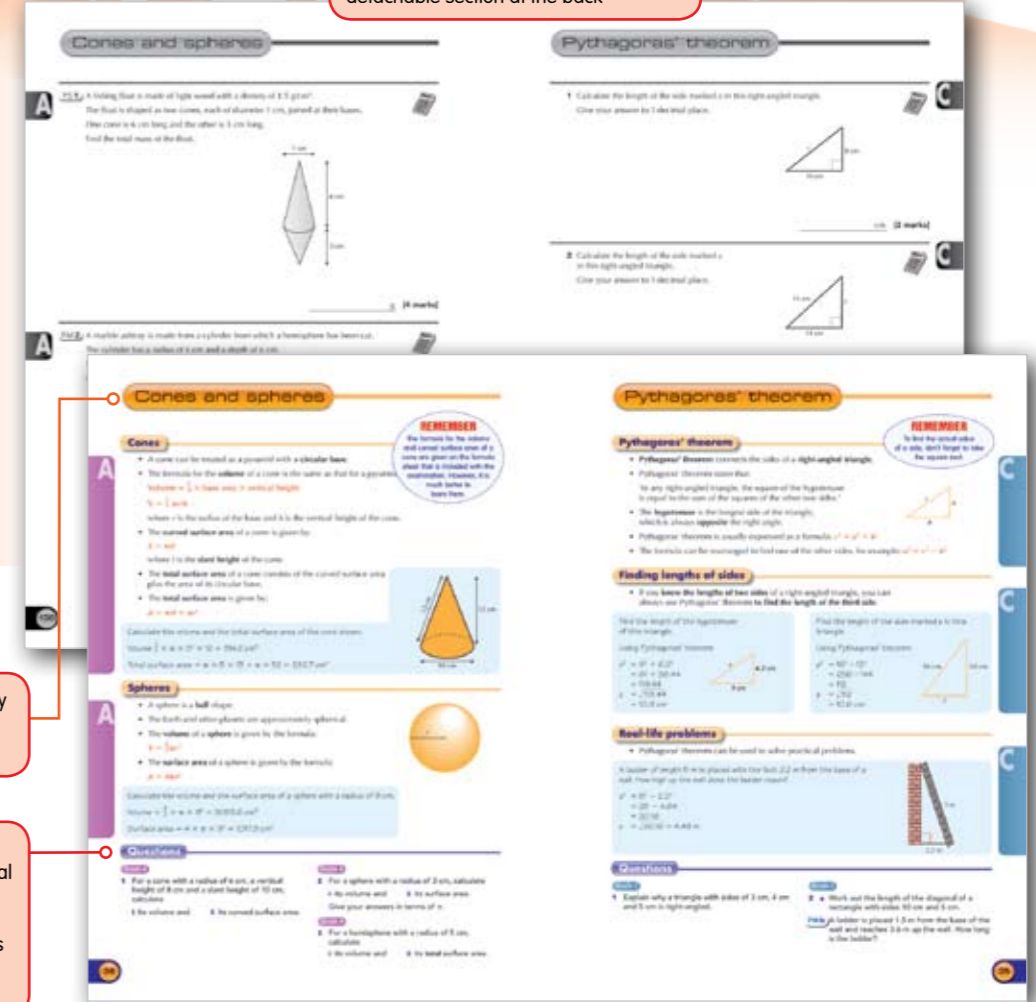
Revision Guides

Prepare your students for the exams with these all-in-one revision guide and exam-practice workbooks. Written by an experienced examiner, they show how each student can follow their level, test their knowledge, check their answers and improve their maths grade.

Students know what level they are working towards with colour-coded graded content

Plenty of practice, including problem solving and functional skills, with lots of tried and trusted maths questions and exam practice, helps students consolidate their knowledge and gain confidence

Students have the flexibility to revise in a way that suits them with revision guide pages and corresponding write-in workbook pages, with answers in a detachable section at the back



From Collins Revision New GCSE Maths Edexcel + AQA Foundation

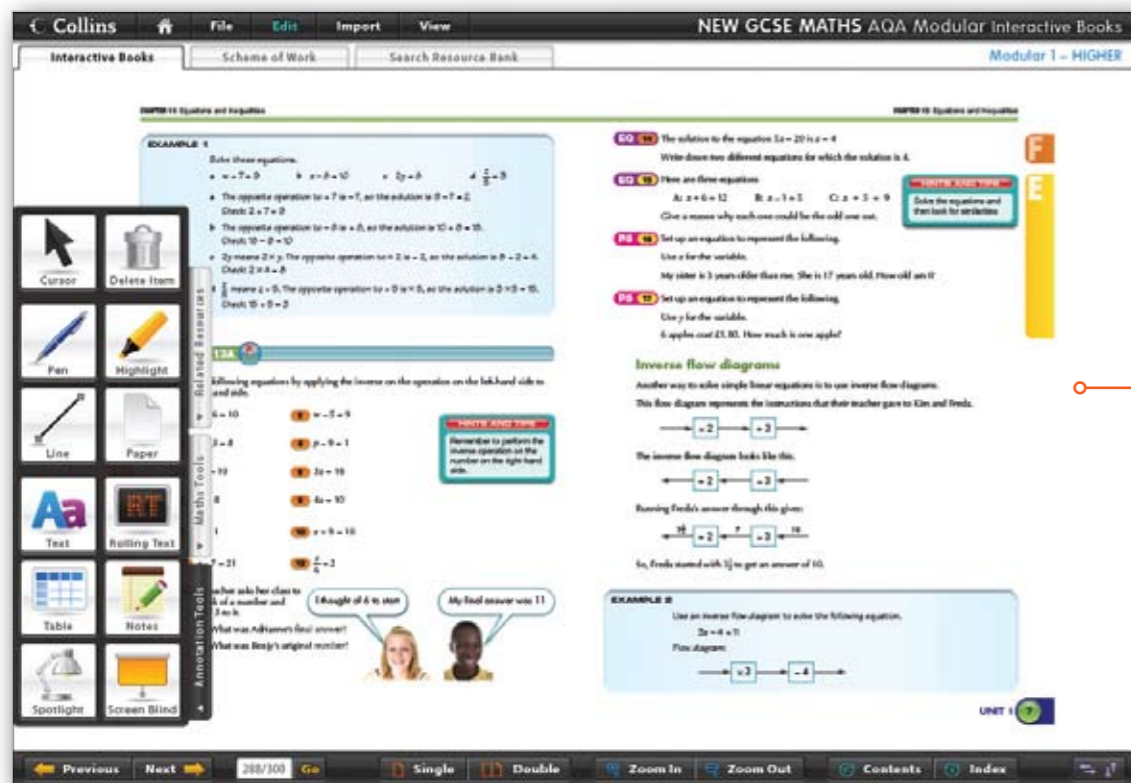
ALSO AVAILABLE IN THE WORKBOOKS:

- Answers at the back in a handy, detachable section to aid self-assessment
- Application sections which cover Functional Skills Level 1 help students understand the application of maths in real-life scenarios
- Exam questions at the end of each chapter to prepare students for GCSE exams
- Colourful functional skills and problem-solving pages at the end of each chapter that will help students develop their process skills and allow them to apply maths in stimulating real-life contexts

ALSO AVAILABLE IN THE REVISION GUIDES:

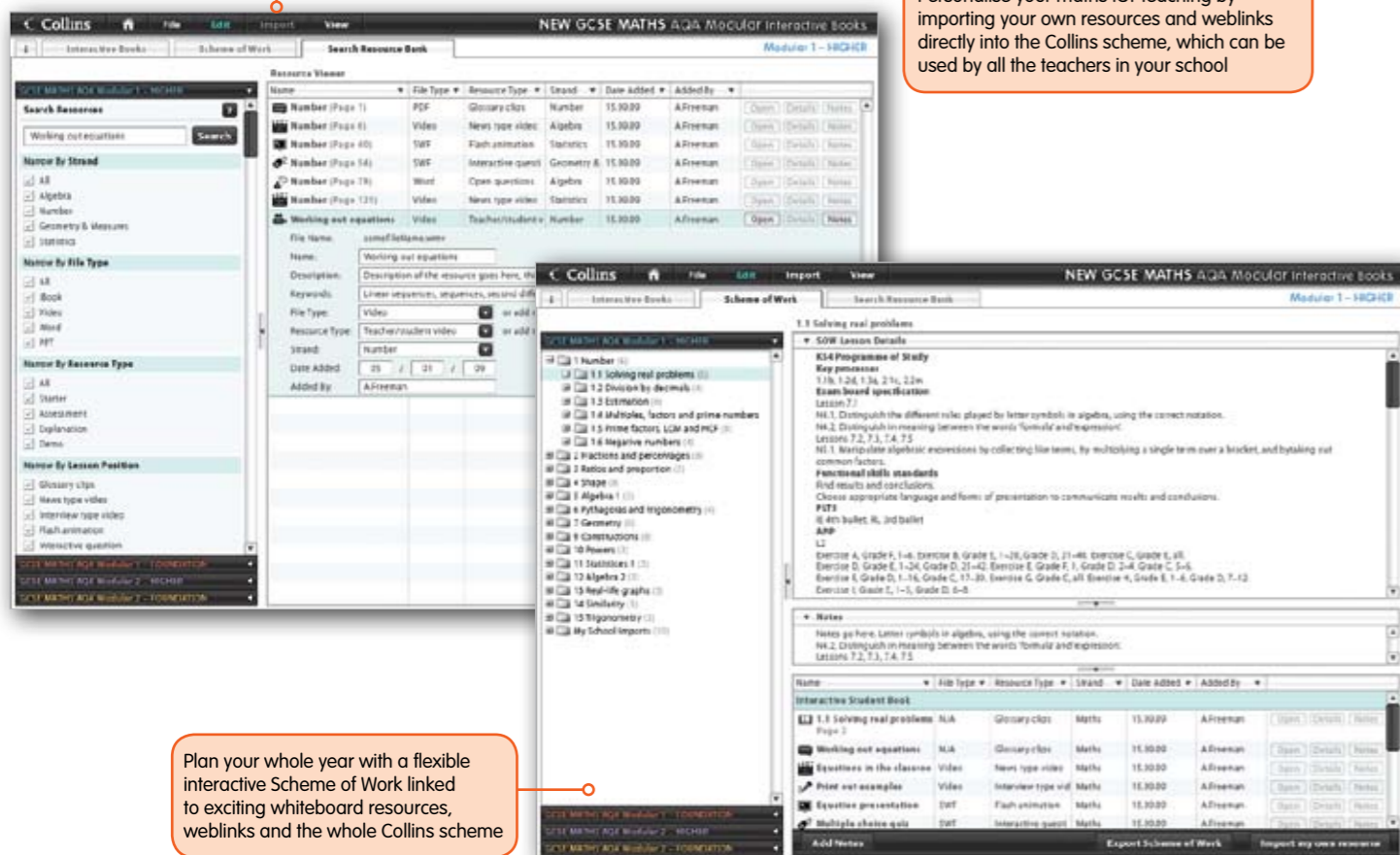
- Practical guidance, exam technique tips, and clear advice on how to move answers up a grade with grade boosters and progression maps to help students get the best possible grade

These easy-to-use interactive whiteboard resources are packed full of real-life examples, functional skills, problem solving and an interactive Scheme of Work fully integrated into the *Collins New GCSE Maths* scheme. With classroom-friendly software and resources which have been developed, written and tested by teachers, you'll be able to integrate ICT into all your lessons with ease.



- For each lesson:
- Audio-visual keyword definitions
 - Learning objectives
 - 3 interactive resources matching the new assessment focuses, (A01, A02, A03), including:
 - Student video clips
 - News clips
 - Animations
 - PPT presentations
 - Real-life examples
 - Answers

From Interactive Book 1



Personalise your maths ICT teaching by importing your own resources and weblinks directly into the Collins scheme, which can be used by all the teachers in your school

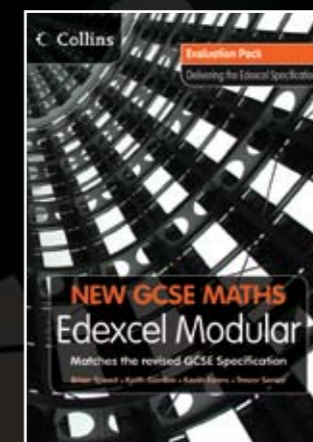
Plan your whole year with a flexible interactive Scheme of Work linked to exciting whiteboard resources, weblinks and the whole Collins scheme

Assess and track students' progress with *Collins New GCSE Maths* flexible online and paper assessment.

- Get access to paper tests and online automarking tests, which include functional and problem solving questions, that are fully integrated into the *Collins New GCSE Maths* scheme and matched to the new curriculum
- Pinpoint individual students' strengths, areas for improvement and next steps with detailed student / parent and teacher reports
- Chart students' progress over the whole GCSE course to ensure that they hit their target grade
- Save valuable admin and preparation time with ready-made tests and valuable reporting tools



Edexcel Linear (A) 978-0-00-732985-4



Edexcel Modular (B) 978-0-00-732984-7



AQA Modular (B) 978-0-00-732983-0

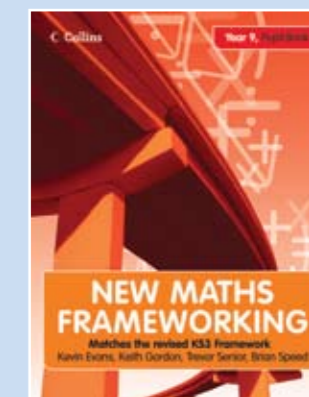
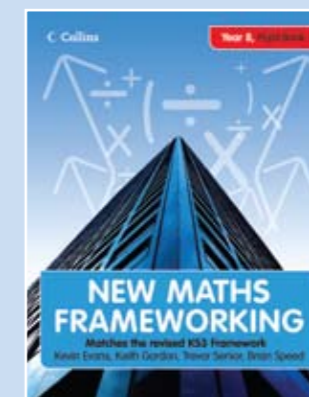
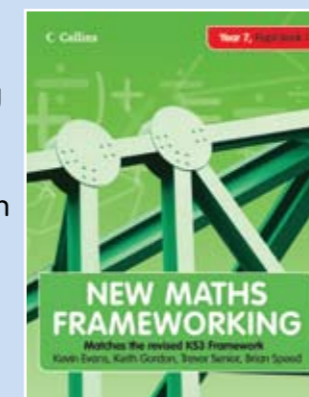
Would you like to try *Collins New GCSE Maths* in your school?

Evaluation Packs for Edexcel Linear, Edexcel Modular and AQA Modular specifications are available for you to try for free for 30 days. Simply return the form at the back to receive yours.

Evaluation Packs contain: Student Book Foundation 1, Student Book Higher 1, Unit from Teacher's Pack Foundation 1, Unit from Student Book Foundation 2, Unit from Revision Guide and Interactive Book demo disk

Collins New Maths Frameworking

Looking for resources for Key Stage 3 with Functional Maths, colour-coded levelling and built-in level boosters, loads of extra practice questions and editable lesson plans? Join the thousands of schools already using New Maths Frameworking and find out how it can help you deliver the KS3 Maths Framework with ease.



Find out more at www.collinseducation.com/nmf or see overleaf for the contact details of your local rep.