Supporting great Maths teaching
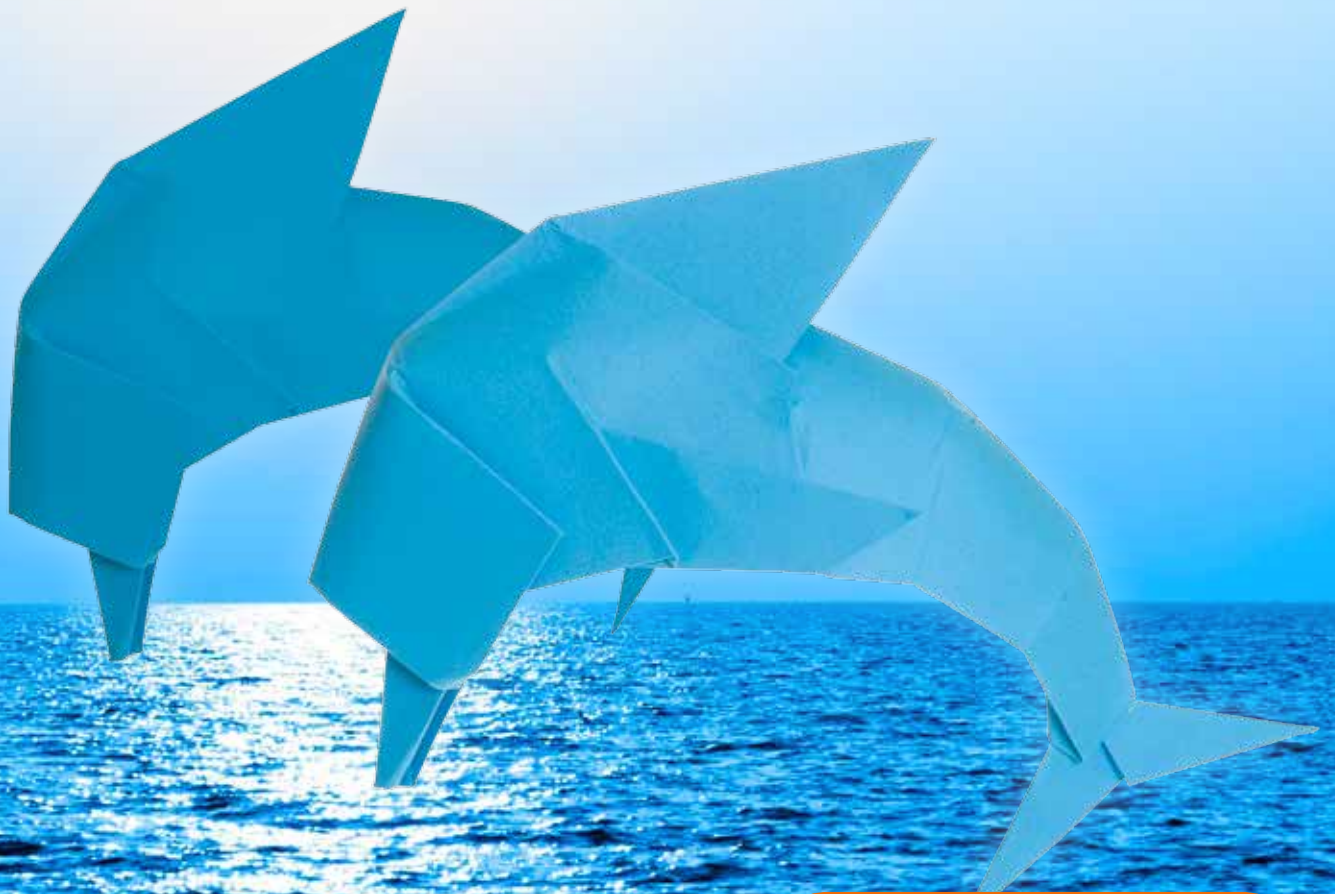
Support for planning and delivering
GCSE (9-1) Mathematics successfully

Look out for Pearson's published support

PEARSON

Supporting great Maths teaching

The key to your students' success isn't to be found in a qualification and the help we provide. Instead it's in what you do every day to develop their understanding and nurture their confidence. And, **as both an awarding body and a publisher**, we'll do everything we can to support you in doing that, every step of the way. We'll provide:

- **Exams accessible to the full range of learners**
  We've designed our assessments to be accessible to the full range of your learners, while continuing to stretch the most able students. Our papers gradually build demand and are designed to help your students approach the exams with confidence.

- **Tools to help you measure progress**
  A wide range of free online and offline support and materials available to help you build your schemes of work and assess your students' progress over time.

- **Free local training sessions and access to events**
  We host a large number of online and local events to help you get ready to teach. You will also have the opportunity to network with your peers to share resources and ideas.

- **The personal support of our team of experts**
  We hope to give you all the tools you need, but should you need further help at any time, our team of assessment experts is always there for you, including subject expert Graham Cumming.

- **Published resources that nurture confidence in Mathematics***
  Research shows a strong link between confidence and achievement in mathematics. Our Edexcel GCSE (9-1) Mathematics resources have been developed with the help of UK teachers, and are based on academic evidence and research into what improves learning in Maths. Look out for the temari balls throughout this leaflet for more information on our Edexcel GCSE (9-1) course.

*You don't have to purchase any resources to deliver our qualification.

Get in touch
You can always get in touch with us - you'll find all our contact details at the back of this leaflet.

Using this guide

This guide will take you through each element of support for Edexcel GCSE (9-1) Maths. You'll find guidance for planning, teaching, assessing and tracking, and for professional development.

Look out for the temari balls...

Throughout this leaflet, these boxes show you where Pearson's Edexcel GCSE (9-1) Mathematics* course will provide additional support. Our printed resources are endorsed for use with the Edexcel GCSE (9-1) Maths specification.

www.pearsonschools.co.uk/edexcelgcse9-1mathscourse
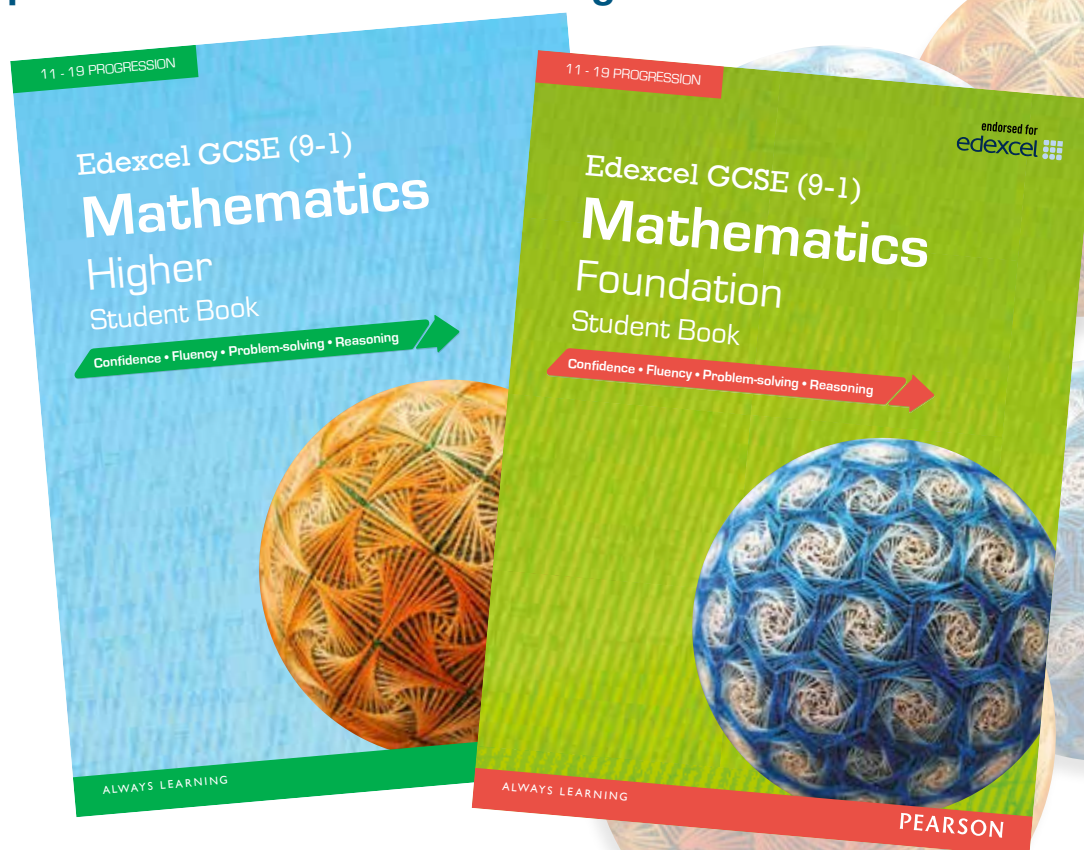
Support in our Edexcel GCSE (9-1) Mathematics course

Plan

We'll provide extensive support for you to plan and deliver GCSE Mathematics 2015 successfully. Whatever guidance you're looking for, we're here to help.

Schemes of Work

Our **Getting Started Guide** will give you an overview of the new GCSE (9–1) Mathematics specification, and help you get to grips with the changes to content and assessment.

Three-year Scheme of Work

Based on an eight-term model for both Foundation and Higher tier students.

Two-year Scheme of Work

Based on a five-term model for both Foundation and Higher tier students.

Five-year Scheme of Work

Providing guidance for teachers to plan across Key Stages 3 and 4. We asked endorsed publishers to share their KS3 schemes of work, which we've made available alongside our KS4 schemes of work.

You don't have to purchase any resources to deliver our qualification.

One-year Scheme of Work

intended primarily for post-16 resit students.

Access to Foundation tier GCSE Scheme of Work

You can find out more about how we'll support lower attainers on page 7.

To download all our resources, visit www.edexcel.com/gcsemathssupport

Course Schemes of Work

You can also find free Schemes of Work with page references linking directly to our KS3 Maths Progress and Edexcel GCSE (9-1) Mathematics course.
To download them for free, visit:
www.pearsonschools.co.uk/edexcelgcse9-1mathscourse.

Support in our Edexcel GCSE (9-1) Mathematics course

Understanding the content

Content mapping documents

We've mapped the GCSE Maths 2015 knowledge, skills and understanding requirements against the GCSE Maths 2010 content descriptors, concepts and skills, and vice versa.

Content guidance

Our content guidance document provides commentary from the senior examiner team alongside the new content statements, which gives you guidance on how the specification will be assessed.

Teaching guidance on the new GCSE (9-1) Mathematics specification, with information on each specification point that includes content guidance, new topics, specification mapping, sample questions, and Exam Wizard topics.

Understanding the assessment

Exemplar student answers

We've provided marked exemplar student answers with examiner comments, to illustrate how the mark scheme will be applied and the marks awarded, and give you valuable information on what examiners expect to see as answers to the new style questions.

SAMs exemplification

Additional information on all the questions in the New Sample Assessment Materials (accredited by Ofqual in June 2015), including content and assessment objectives and questions new to Foundation and new to this specification.

Lesson plans

The ActiveLearn Digital Service provides lesson plans and CPD videos, created by experienced teachers to support the Schemes of Work.

Try ActiveLearn Digital Service, visit:
www.pearsonschools.co.uk/edexcelgcse9-1mathscourse.

Support in our Edexcel GCSE (9-1) Mathematics course

Teach

Resources that nurture confidence in Mathematics

Research shows a strong link between confidence and achievement in mathematics. Our KS3 Maths Progress and Edexcel GCSE (9-1) Mathematics resources have been developed with the help of UK teachers, and are based on academic evidence and international research into what improves learning in Maths.

Resources by teachers, for teachers

We have sets of resources and worksheets created by teachers, for teachers to help you deliver the new GCSE Maths (9-1) specification, each focusing on a different aspect of change.

Teaching and learning videos

We understand that sharing teaching and learning approaches can be really useful in helping you tackle the changes you're likely to come across. So on our website, you'll find six short videos presented by teachers, for teachers, to help you navigate the changes to GCSE Mathematics.
The videos show innovative teachers sharing their existing, successful and innovative approaches to teaching mathematics.

Complementary resources

To get the most out of each video, you'll also be able to download the relevant resource so you can use them in your own classroom.

Watch the videos and download the resources:
www.edexcel.com/ gcsemathsvideos

Resources which build confidence in Maths

Classroom resources

Worksheets to support all units in the two- and three-year schemes of work. The first four units are available now. We'll be releasing these throughout the course as and when you need them.

Getting Ready to Teach resources

Resources provided by our Getting Ready to Teach trainers and experienced teachers to support teaching new topics for both Foundation and Higher tiers.

Formulae poster

We've created a handy poster so you can help your students learn the formulae they'll need to remember for their GCSE Maths exam. You can download your copy from our website. There's also an A5 version for your students to print out and stick in their exercise books.
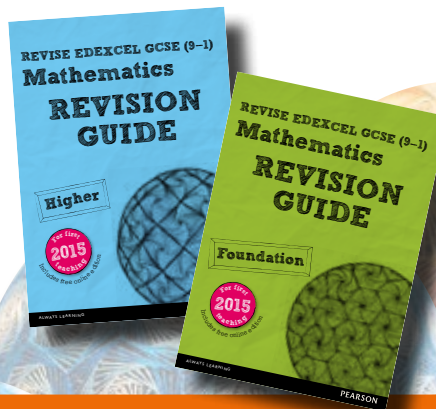
To download all our resources, visit www.edexcel.com/ gcsemathssupport
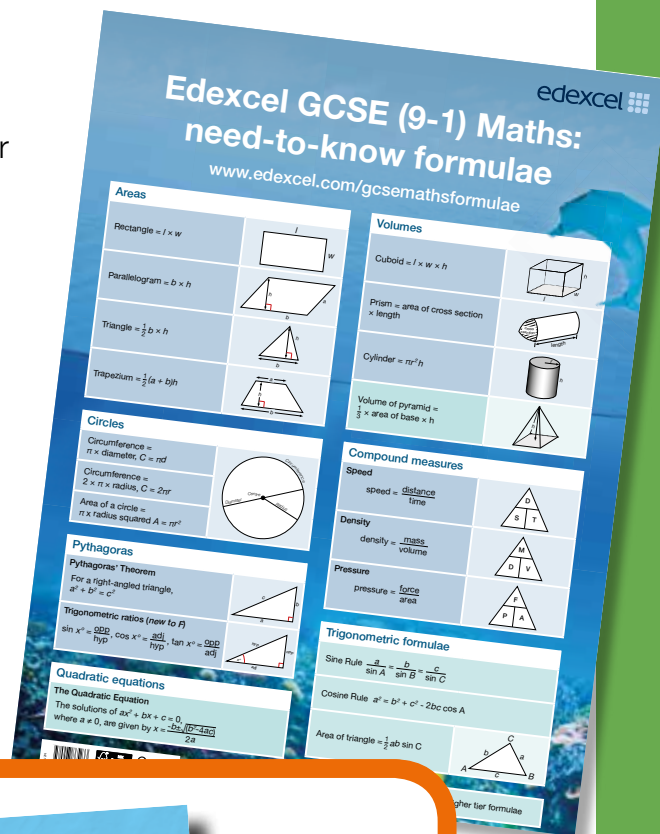
Revision

Our REVISE revision guides and workbooks have been designed for classroom and independent study and complement the Student Books. Find out more, visit: **www.pearsonschools.co.uk/ edgcse9-1mathscourse**

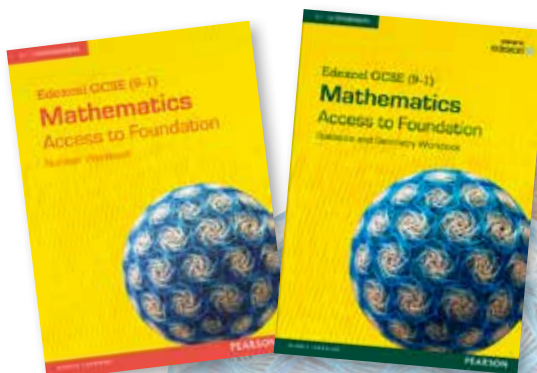**Support in our Edexcel GCSE (9-1) Mathematics course**

Support for lower attainers

On our website, you'll find additional support for low-attaining students, including a course outline, scheme of work, teaching notes and strategies, mock paper and low-stakes assessment.

Low attainers course

Access to Foundation Workbooks provide structured support for low attaining students.

Download samples, visit: **www.pearsonschools.co.uk/ edgcse9-1mathscourse**

Support in our Edexcel GCSE (9-1) Mathematics course

The Building Confidence in Maths approach

The *Building Confidence in Maths* approach used in both our courses provides an evidence-based method for building your students' confidence in maths.
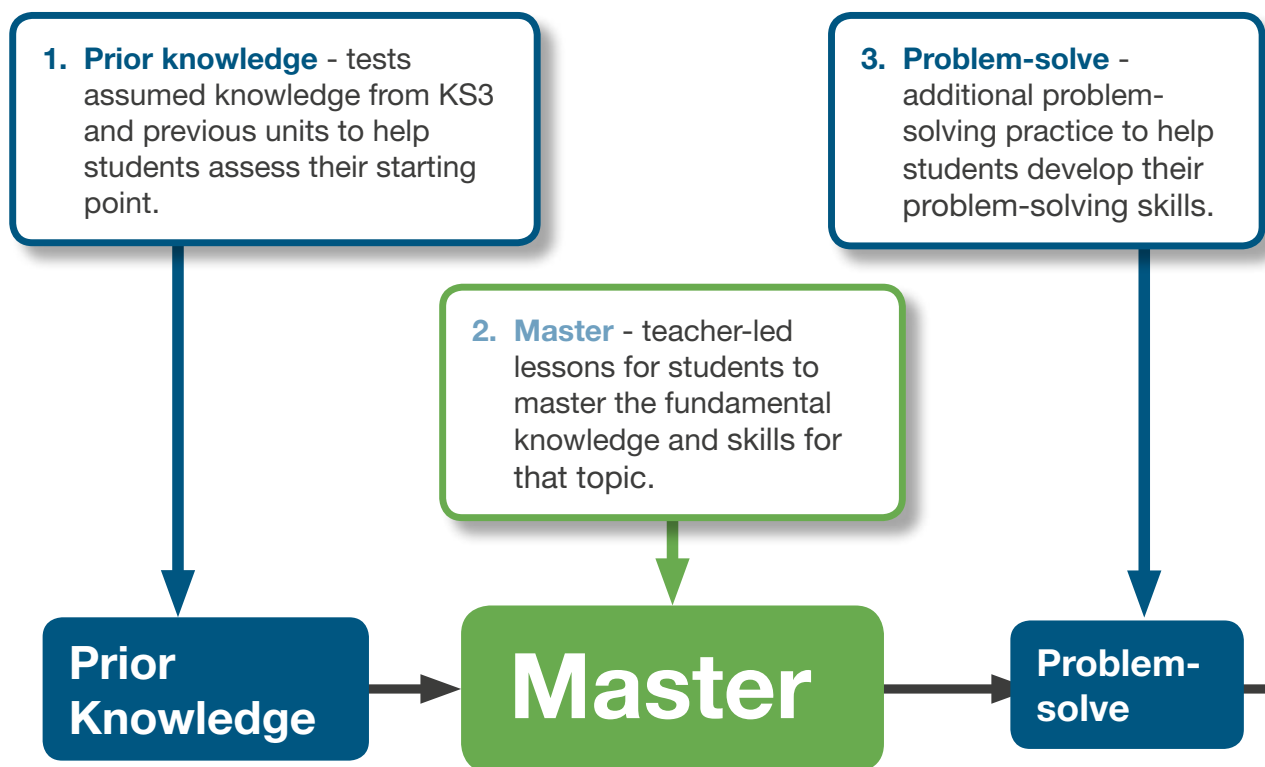
Building Confidence in Maths combines:

- An evidence-based focus on fluency, problem-solving and reasoning
- Mastery depth and breadth
- Unique unit structure

Our unique unit structure

Our unique unit structure, with in-built differentiation, helps students gain a deeper understanding of each topic.

1. Prior knowledge - tests assumed knowledge from KS3 and previous units to help students assess their starting point.

3. Problem-solve - additional problem-solving practice to help students develop their problem-solving skills.

2. Master - teacher-led lessons for students to master the fundamental knowledge and skills for that topic.

Prior Knowledge → Master → Problem-solve

Teaching maths 11-16

Find out more about how our KS3 and GCSE courses give you and your students a consistent teaching and learning experience, visit

**www.pearsonschools.co.uk/
buildingconfidenceinmaths**
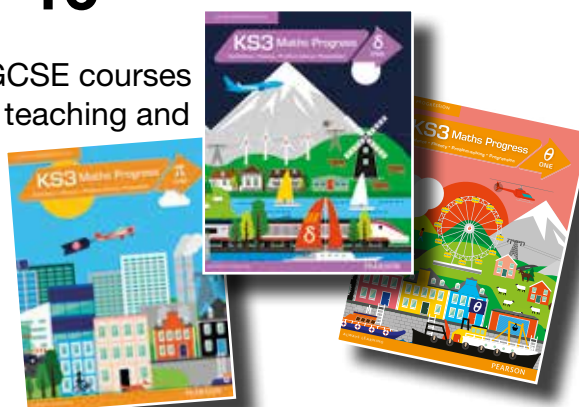
4. Check - a short formative assessment to help students give an indication of their confidence level.

6. Test - a summary of the learning from the unit and a useful revision tool.

5. Strengthen

Not confident? Need more practice?
Students practise the topic more with hints and tips to help them.

Check

Strengthen

Extend

Test

5. Extend

Performed well? Feeling confident? Students extend their learning with more breadth and depth.
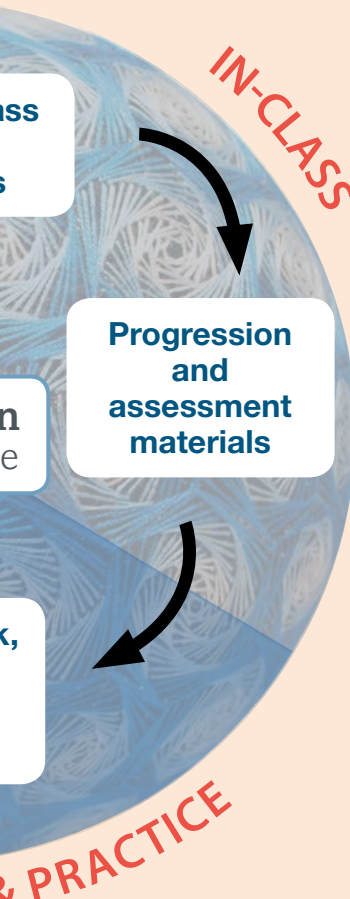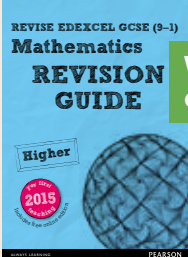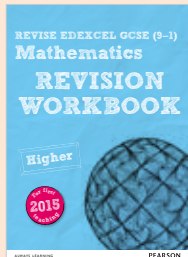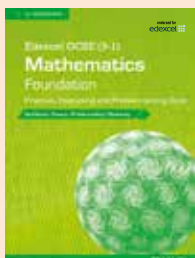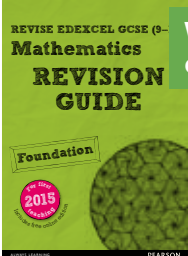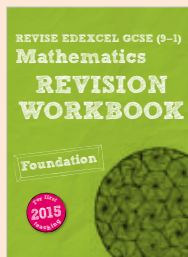
At-a-glance: course components

	Student Books	ActiveLearn Digital
Higher tier	Edexcel GCSE (9-1) **Mathematics** Higher Student Book — Confidence · Fluency · Problem-solving · Reasoning — PEARSON 978 1 447980 20 9 (PB) 978 1 447990 23 9 (AB)	
Foundation tier	Edexcel GCSE (9-1) **Mathematics** Foundation Student Book — Confidence · Fluency · Problem-solving · Reasoning — PEARSON 978 1 447980 19 3 (PB) 978 1 447990 18 5 (AB)	
	Access to Foundation Edexcel GCSE (9-1) **Mathematics** Access... Edexcel GCSE (9-1) **Mathematics** Access to Foundation — PEARSON	

PLANNING & RECORDING

HOMEWORK &

Teacher planning materials

Front-of-class teaching resources

ActiveLearn Digital Service

Homework practice and support

Support in our Edexcel GCS

Service	Practice, Reasoning and Problem-solving Books	Revision Guides and Workbooks

IN-CLASS

Progression and assessment materials

& PRACTICE

Practice, Reasoning and Problem-solving Books

NEW

Edexcel GCSE (9-1) Mathematics Higher EXTENSION

978 1 292105 05 5 (PB)

Mathematics Higher

978 1 447983 60 6 (PB)

NEW

Edexcel GCSE (9-1) Mathematics Foundation BOOSTER

978 1 292100 17 3 (PB)

Edexcel GCSE (9-1) Mathematics Foundation

978 1 447983 59 0 (PB)

Revision Guides and Workbooks

REVISE EDEXCEL GCSE (9-1) Mathematics REVISION GUIDE Higher

With a FREE online edition.

978 1 447988 09 0 (PB)

REVISE EDEXCEL GCSE (9-1) Mathematics REVISION WORKBOOK Higher

978 1 447987 93 2 (PB)

REVISE EDEXCEL GCSE (9-1) Mathematics REVISION GUIDE Foundation

With a FREE online edition.

978 1 447988 04 5 (PB)

REVISE EDEXCEL GCSE (9-1) Mathematics REVISION WORKBOOK Foundation

978 1 447987 92 5 (PB)

You can order a free Evaluation Pack, download samples, try ActiveLearn Digital Service, and get the Complete Guide to our course now, visit:

www.pearsonschools.co.uk/edgcse9-1mathscourse

E (9-1) Mathematics course

Assess and Track

Tools to help you measure progress

A wide range of free online and offline support and materials available to help you build your schemes of work and assess your students' progress over time.

GCSE baseline tests

We've provided three tests to help you understand the progress your students have made at Key Stage 3, and assess their learning needs before you start teaching the GCSE.

> Tracking your learners' progress is key to understanding their achievements. We'll help you do this, as well as set targets and understand which tier of entry may be most appropriate.

Classroom tests

Topic tests

Tests for each unit in the two- and three-year schemes of work, using past paper and specimen paper questions and created using Exam Wizard.

End-of-term tests

Our end-of-term tests are aligned to both tiers of our two-year and three-year schemes of work. They're designed to help you understand the progress your students have made at the end of term and can be used in conjunction with the GCSE baseline test. All tests use the progression steps to help you track your students' progress.

Practice papers

We provide three sets of specimen papers in addition to secure mock papers available as one set per year for the next three years. We also have selected exemplar student answers with examiner comments (see page 5)

> **You'll also find all the tests and assessments on our ActiveLearn Digital Service and our problem solving bank!**

**To download all our resources, visit www.edexcel.com/ gcsemathssupport**

ResultsPlus

ResultsPlus is a free online results analysis tool for teachers that gives you a detailed breakdown of your students' performance in Edexcel exams.

Widely used by teachers across the country, ResultsPlus provides the most detailed analysis available of your students' performance and helps you to identify topics and skills where your students could benefit from further learning, helping them gain a deeper understanding of maths.

> Contextualises performance through 'skills map' reports, to show how students fared on topics, skills and types of question.
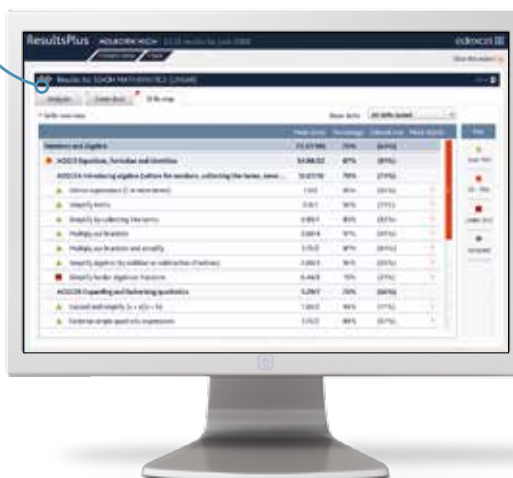
Visit **www.edexcel.com/resultsplusgcsemaths**

examWizard

- examWizard is a free online resource for teachers containing a huge bank of past paper questions and support materials to help you create your own mock exams and tests.
- examWizard helps you search for past papers, mark schemes and examiners' reports
- Create topic-based tests with the easy-to-use, intuitive question search
- Build your own paper with the latest past paper questions as they become available after each exam series

Visit **www.edexcel.com/examwizardgcsemaths**

11-16 progression

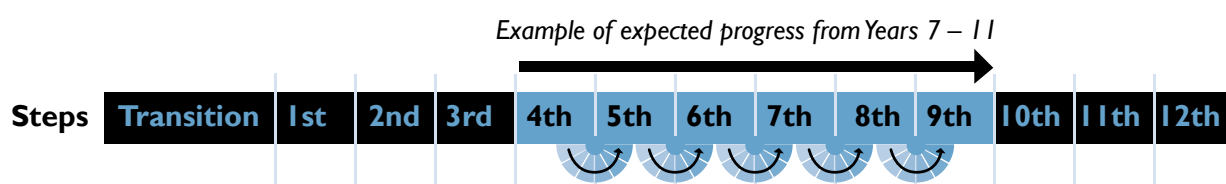## The Pearson Progression Scale - life without National Curriculum Levels

Over the past year, we have seen the removal of National Curriculum Levels, the introduction of the Progress 8 performance measure and the announcement of a new 9-1 GCSE grade scale. These reforms are leading to new ways of thinking including:

- how to track that students are making the correct rate of progress
- how to give a better insight to students about their progress in maths, especially to help those students who are not making the correct rate of progress

The Pearson Progression Scale

The Pearson Progression Scale is designed to help track progress in mathematics. Between the ages of 11 years and 16 years the Pearson Progression Scale has twelve steps. The average student is expected to make one step of progress per year.

In the example below, a student starting on step 4 at the start of Year 7 will be expected to be on step 9 at the end of Year 11.

Example of expected progress from Years 7 – 11

Steps	Transition	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th

The Pearson Progression Scale provides a simple and clear way of reporting progress to both students and parents.

The Pearson Progression Map for mathematics

The Pearson Progression Map represents our view of how learners progress in mathematics from Step 1 to Step 12. It enables a teacher to provide detailed feedback to students on their progress, as well as to identify potential next steps in learning. This includes identifying blockers to progress and booster opportunities.

Example:

Strand	Probability
Descriptor/Objective	Use tree diagrams to calculate the probability of two independent events
Prerequisite/ Blocker #1	Draw a probability tree diagram based on given information (no more than 3 branches per event)
Prerequisite/ Blocker #2	Apply the property that the probabilities of an exhaustive set of outcomes sum to 1
Booster	Use a tree diagram to calculate conditional probability
Step	6
National Curriculum Reference	P8
Specification reference(s) Edexcel GCSE Maths 2015	P8: calculate the probability of independent and dependent combined events, including using tree diagrams and other representations, and know the underlying assumptions

The Pearson Progression Map for mathematics references both the new National Curriculum and the Edexcel GCSE (9-1) Mathematics specification.

Assessing learning

We are providing both free tests via our Edexcel qualification services and paid-for tests as part of the **ActiveLearn Digital Service**: Progression and assessment materials.

These tests include baseline tests, end of topic tests, end of year tests and practice tests. All tests include detailed mark schemes and analysis to report against the Pearson Progression Scale.

Step analysis

Marks/80	Step
71–80 marks	8th
61–70 marks	7th
46–60 marks	6th
20–45 marks	5th
0–19 marks	4th

Online markbook

An online markbook is available as part of our ActiveLearn Digital Service, to enable teachers to record their students' test results and to help predict future performance, quickly identify problems, take the most effective actions and compare students' progress nationally.

Pearson Progression Service

Representing how learning progresses in Maths and how the understanding and skills build upon each other, our progression scale, maps, tests and markbooks will support you to measure progression for every student. This service is free to use for all centres.

Download your editable toolkit and find out more at: www.pearsonschools.co.uk/ progression

Develop

Free local training sessions and access to events

We host a large number of online and local events to help you get ready to teach.
You will also have the opportunity to network with your peers to share resources and ideas.

Getting Ready to Teach events

As part of the support we're providing to help you with delivering the new Edexcel GCSE Maths (9-1) qualification, we're running free Getting Ready to Teach events throughout autumn 2015.

Each whole-day event will be presented by a practising teacher who will look at how the new GCSE Mathematics (9-1) can be delivered in the classroom.

You'll have the opportunity to network with other teachers, discuss best practice and discover more about the full range of support we'll provide.

Visit **www.edexcel.com/ gcsemathsevents** to find out more about all our training and events

Mathematics Collaborative Networks

Our free local teaching networks help support, train and share best practice with maths teachers and heads of department across the country.

Promoting best practice and innovation with local support

Mathematics education is going through major reforms and redevelopment. This makes it more important than ever for teaching professionals to be kept up to date through networking and sharing best practice. That's why we launched the Mathematics Collaborative Networks.

What are the Mathematics Collaborative Networks?

Introduced in May 2013, the Mathematics Collaborative Networks are a free Pearson initiative that sees us working with schools and colleges whose innovative maths teaching practices have shown a direct benefit to their students. These schools and colleges become recognised as 'hub' centres and lead a collaborative network in their region.

The Mathematics Collaborative Networks
Promoting best practice and innovation with support local to you

"I found it very valuable, and a fantastic opportunity to be kept well informed and share good practice."

- Tanya Rose, Ursuline High School, Wimbledon

Want to find out more?
For bookings, queries or to find out more, please email **mathsevents@pearson.com**.

Warwick Conference

Every year, we run our Maths conference at the University of Warwick. This two-day event enables teachers and Heads of Maths to network with peers, share best practice, and attend workshops on key issues in maths teaching.

Feedback from Warwick 2015: Supporting great Maths teaching

"Amazing set of resources to aid preparation and planning - thank you."

Kathryn Sanders, St Andrews College

"Very visual and practical. Excellent resources! I am incorporating this in my teaching."

Julianah Sobowale, La Retraite RC Girls School

*"So much knowledge, tips and ideas – it's a win-win situation."*

Huma Nawaz, Cressex Community School

CPD to support your teaching

We have a programme of face-to-face events that will support your teaching in key areas such as supporting low attainers and teaching problem-solving strategies. We can also provide bespoke in-school department training.

Find out more and book your place, visit:
www.pearsonschools.co.uk/edgcse9-1mathscourse
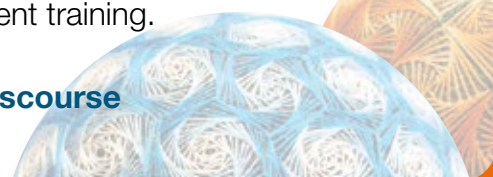
Support in our Edexcel GCSE (9-1) Mathematics course

The personal support of our team of experts

We hope to give you all the tools you need, but should you need further help at any time, our team of assessment experts is always there for you, including subject expert Graham Cumming.

Mathematics Emporium

Our unique Mathematics Emporium is prized by teachers. Run by Graham Cumming, our in-house mathematics expert, it will keep you up to date and give you easy access to all the materials you need to teach GCSE Mathematics 2015 throughout the year.

You can access and download:
- Past papers
- Schemes of work
- Specifications
- Mock and practice papers
- Mark schemes
- Grade boundaries
- Examiners reports

The Mathematics Emporium is free to use to all maths teachers in UK schools - all you need to do is create an account. We keep these documents secure to stop students from freely accessing them, so that you can use our papers with your classes as mocks, tests and homework

Your subject expert

Graham Cumming,
Maths subject expert
UK: 020 7010 2174
Intl: + 44 (0)20 7010 2174
TeachingMaths@pearson.com

You can sign up to The Emporium via **www.edexcel.com/ emporium**

The Mathematics Emporium email service

Our handy email service tells you what you need to know, when you need to know it. This unique service keeps you updated with the latest information about our qualifications, support, Word versions of the papers shortly after the examinations have been taken, and much more - all direct to your inbox!
You'll hear about:
- Approaching entry deadlines and reminders for key dates
- New training events and support materials
- News and government announcements affecting mathematics education
- New qualifications and resources.

Get in touch

**The new GCSE 9-1 Maths:
we're here to help.**

For queries, information and support, get in touch.

Call us on: **0844 463 2931**

Email us at: **TeachingMaths@pearson.com**

Visit us online: **www.edexcel.com/gcsemaths2015support**

Find out more about our published course

1. Evaluate
Request a FREE Evaluation Pack:
Edexcel GCSE (9-1) Mathematics - 9781446926383
KS3 Maths Progress - 9781447977391

2. Place an order online:
Visit: www.pearsonschools.co.uk/edgcse9-1mathscourse
Call: our customer services team on 0845 630 33 33

Discounts are available to help make your budget go further.

3. Ask us a question
Email us: gcse9-1maths@pearson.com

Support in our Edexcel GCSE (9-1) Mathematics course