

# Edexcel GCSE

# Mathematics B

# Modular

# Foundation

# Teacher Guide

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# Contents

## Unit 1 Statistics and probability

### 1 Collecting and recording data

1.1	Introduction to data (SP a, SP d)	00
1.2	Collecting data (SP a, SP d, SP e)	00
1.3	Questionnaires (SP a, SP c)	00
1.4	Sampling (SP a, SP b, SP c)	00
1.5	Two-way and other tables (SP a, SP e, SP f)	00

### 2 Processing, representing and interpreting data

2.1	Pictograms (SP g, SP i)	00
2.2	Pie charts (SP g, SP i, SP l)	00
2.3	Bar charts (SP g, SP i)	00
2.4	Comparative and composite bar charts (SP g, SP i, Sp l)	00
2.5-6	Line diagrams for discrete data and histograms for continuous data; Frequency polygons (SP g, Sp i)	00

### 3 Averages and range

3.1-5	Understanding using numbers; Finding the mode, the median and the mean; Algebra; Knowing the advantages and disadvantages of the three types of average; Finding the range (SP h, SP l, SP u)	00
3.6	Using stem and leaf diagrams to find averages and range (SP g, SP i)	00
3.7	Using frequency tables to find averages for discrete data (SP g, SP h)	00
3.8-10	Working with grouped data; Estimating the mean of grouped data; Using calculators (SP g, SP h)	00

### 4 Line diagrams and scatter graphs

4.1-3	Plotting points on a line graph; Straight-line graphs; Drawing and using line graphs (SP g, SP i)	00
4.4-7	Drawing and using scatter graphs; Recognising correlation; Lines of best fit; Using lines of best fit to make predictions (SP g, SP i, SP k)	00

### 5 Probability

5.1	The probability scale (SP m)	00
5.2	Writing probabilities as numbers (SP m, SP n, SP o)	00
5.3-4	The probability that something will <i>not</i> happen; Using fractions, decimals and percentages in problems (SP p)	00
5.5	Sample space diagrams (SP o)	00
5.6	Relative frequency (SP n, SP s, SP t)	00
5.7	Two-way tables (SP p)	00
5.8-9	Predicting outcomes; Ratio and proportion (SP n)	00

## Unit 2 Number, Algebra, Geometry 1

### 1 Number

1.1-3	Understanding digits and place value; Reading, writing and ordering whole numbers; The number line (N a, N b)	00
1.4	Adding and subtracting (N a)	00
1.5	Multiplying and dividing (N a, N q)	00
1.6	Rounding (N u)	00
1.7-9	Negative numbers; Working with negative numbers; Calculating with negative numbers (N a, N b)	00

### 2 Number

2.10	Factors, multiples and prime numbers (N c)	00
2.11	Finding lowest common multiple (LCM) and highest common factor (HCF) (N c)	00
2.12	Finding square numbers and cube numbers (N d)	00

### 3 Decimals and rounding

3.1-2	Understanding place value; Writing decimal numbers in order of size (N b, N j)	00
3.3	Adding and subtracting decimals (N a)	00
3.4-6	Multiplying decimals; Squares and square roots, cubes and cube roots; Dividing decimals (N a, N d, N q)	00
3.7	Rounding decimal numbers (N u)	00
3.8-9	Rounding to 1 significant figure; Rounding to a given number of significant figures (N u)	00
3.10	Estimating (N u)	00
3.11	Manipulating decimals (N q)	00

### 4 Fractions

4.1-3	Understanding fractions; Equivalent fractions; Ordering fractions (N b, N h, N o)	00
4.4	Improper fractions and mixed numbers (N h)	00
4.5-6	Multiplying fractions; Dividing fractions (N a, N o)	00
4.7	Adding and subtracting fractions (N a, N i)	00
4.8	Converting between fractions and decimals (N j, N k)	00

### 5 Percentages

5.1	Converting between percentages, fractions and decimals and ordering them (N l, N m)	00
5.2	Finding percentages of quantities (N m, N o)	00
5.3	Finding the new amount after a percentage increase or decrease (N m, N o)	00

### 6 Ratio and proportion

6.1	Introducing ratio (N p)	00
6.2	Solving ratio problems (N p, N t)	00
6.3	Sharing in a given ratio (N t)	00
6.4	Solving ratio and proportion problems using the unitary method (N t)	00

### 7 Algebra 1

7.1	Using letters to represent numbers (A a)	00
7.2	Understanding variables, terms and expressions (A b)	00
7.3	Collecting like terms (A c)	00

<b>7.4-5</b>	Multiplying with numbers and letters; Dividing with numbers and letters (A a, A c)	00
<b>7.6</b>	Expanding single brackets (A c)	00
<b>7.7</b>	Factorising (A c)	00
<b>7.8</b>	Understanding expressions, equations and formulae (A b)	00
<b>7.9</b>	Replacing letters with numbers (A c)	00
<b>8 Algebra 2</b>		
<b>8.1</b>	Calculating with powers (N a, N e)	00
<b>8.2</b>	Writing expressions as a single power of the same number (N e, N f)	00
<b>8.3</b>	Using powers in algebra to simplify expressions (A c)	00
<b>8.4</b>	Understanding order of operations (N q)	00
<b>8.5</b>	Multiplying out brackets in algebra (A c)	00
<b>8.6</b>	Factorising expressions (A c)	00
<b>9 Sequences</b>		
<b>9.1</b>	Sequences (A i)	00
<b>9.2</b>	Using input and output machines to investigate number patterns (A i)	00
<b>9.3</b>	Finding the $n$ th term of a number pattern (A i, A j)	00
<b>9.4</b>	Deciding whether or not a number is in a number pattern (A i)	00
<b>10 Graphs 1</b>		
<b>10.1</b>	Coordinates of points in the first quadrant (A k, A l)	00
<b>10.2</b>	Coordinates of points in all four quadrants (A k, A l)	00
<b>10.3</b>	Finding the midpoint of a line segment (A k)	00
<b>11 Graphs 2</b>		
<b>11.4</b>	Drawing and naming horizontal and vertical lines (A l)	00
<b>11.5</b>	Drawing slanting lines (A l)	00
<b>11.6</b>	Drawing straight-line graphs without a table of values (A l)	00
<b>11.7</b>	Naming straight-line graphs (A l)	00
<b>12 Graphs 3</b>		
<b>12.1</b>	Interpreting and drawing the graphs you meet in everyday life (A r, A s)	00
<b>12.2</b>	Drawing and interpreting conversion graphs (A r, A s)	00
<b>12.3</b>	Drawing and interpreting distance–time graphs (A r, A s)	00
<b>13 Formulae</b>		
<b>13.1</b>	Using word formulae (A f)	00
<b>13.2</b>	Substituting numbers into expressions (A f)	00
<b>13.3</b>	Using algebraic formulae to represent a problem (A f)	00
<b>13.4</b>	Writing an algebraic formula to represent a problem (A c, A f)	00
<b>14 Angles 1</b>		
<b>14.1-3</b>	Fractions of a turn and degrees; What is an angle?; Naming sides and angles (GM a)	00
<b>14.4-5</b>	Estimating angles; Measuring angles (GM a, GM t)	00
<b>14.6</b>	Drawing angles (GM t)	00
<b>14.7</b>	Special triangles (GM b)	00
<b>14.8</b>	Angle facts (GM a, GM b)	00

## 15 Two-dimensional shapes

15.1	Triangles (GM b)	00
15.2	Quadrilaterals (GM d)	00
15.3	Similar shapes (GM f)	00
15.4-5	Circles; Drawing circles (GM u, GM v)	00
15.6	Line symmetry (GM e)	00
15.7	Rotational symmetry (GM e)	00

## 16 Angles 2

16.1	Angles in quadrilaterals (GM b)	00
16.2-3	Perpendicular and parallel lines; Corresponding and alternate angles (GM a, GM b)	00
16.4	Proofs (GM b)	00

## 17 Measure

17.1	Reading scales (GM o, GM q)	00
17.2	Time (GM o)	00
17.3	Metric units (GM o, GM p, GM q)	00
17.4	Imperial units (GM p)	00
17.5	Speed (GM p, GM s)	00
17.6	Accuracy of measurements (GM o)	00

## 18 Perimeter and area of 2D shapes

18.1	Perimeter (GM x)	00
18.2	Area (GM x)	00
18.3	Finding areas using formulae (GM x)	00
18.4	Problems involving areas (GM x)	00

## 19 Three-dimensional shapes

19.1	Recognising three-dimensional shapes (GM k)	00
19.2	Isometric paper (GM k)	00
19.3	Volume of a prism (GM aa)	00
19.4	Surface area of a prism (GM x, GM z)	00

## Unit 3 Number, Algebra, Geometry 2

### 1 Using a calculator

1.1	Finding reciprocals (N q, N v)	00
1.2	Interpreting a calculator display (N v)	00
1.3	Working out powers and roots (N v)	00
1.4	Working out complex calculations (N v)	00

### 2 Percentages

2.1	Finding percentages of quantities (N m, N o)	00
2.2	Using percentages (N m, N o)	00
2.3	Writing one quantity as a percentage of another (N m, N o)	00

### 3 Equations and inequalities

3.1	Using simple equations (A d)	00
3.2	Solving equations with one operation (A d)	00
3.3	Solving equations with two operations (A d)	00
3.4	Solving equations with brackets (A d)	00
3.5	Solving equations with letters on both sides (A d)	00

<b>3.6</b>	Solving equations with negative coefficients (A d)	00
<b>3.7</b>	Using equations to solve problems (A c, A d)	00
<b>3.8</b>	Solving equations by trial and improvement (A h)	00
<b>4 Inequalities</b>		
<b>4.1</b>	Introducing inequalities (A g)	00
<b>4.2</b>	Representing inequalities on a number line (A g)	00
<b>4.3</b>	Solving inequalities (A g)	00
<b>5 Graphs 2</b>		
<b>5.1</b>	Interpreting real-life graphs (A r, A s)	00
<b>5.2</b>	Drawing quadratic graphs (A t)	00
<b>5.3</b>	Using graphs of quadratic functions to solve equations (A t)	00
<b>6 Formulae</b>		
<b>6.1</b>	Finding the value of a term in a formula which is not the subject of the formula (A f)	00
<b>6.2</b>	Changing the subject of a formula (A f)	00
<b>7 Angles and two-dimensional shapes</b>		
<b>7.1</b>	Polygons (GM c)	00
<b>7.2</b>	Exterior and interior angles (GM c, GM f)	00
<b>7.3</b>	Congruent shapes	
<b>7.4</b>	Tessellations (GM c)	00
<b>7.5</b>	Accurate drawings (GM a, GM b)	00
<b>7.6</b>	Bearings (GM r)	00
<b>7.7</b>	Maps and scale drawings (GM m, GM u)	00
<b>8 Circles</b>		
<b>8.1</b>	Circumference of a circle (GM z)	00
<b>8.2-3</b>	Area of a circle; Area and perimeter of half and quarter circles (GM z)	00
<b>9 Three-dimensional shapes</b>		
<b>9.1</b>	Nets	
<b>9.2</b>	Plans and elevations (GM k)	00
<b>9.3</b>	Volumes (GM aa)	00
<b>9.4</b>	Surface area (GM x, GM z)	00
<b>9.5</b>	Perimeter, area and volume (GM n)	00
<b>9.6</b>	Converting units of measure (GM p)	00
<b>10 Constructions and loci</b>		
<b>10.1</b>	Constructions (GM v)	00
<b>10.2</b>	Loci (GM v, GM w)	00
<b>10.3</b>	Regions (GM v, GM w)	00
<b>11 Transformations</b>		
<b>11.1</b>	Introduction (GM l)	00
<b>11.2</b>	Translations (GM l)	00
<b>11.3</b>	Rotations (GM l)	00
<b>11.4</b>	Reflections (GM e, GM l)	00
<b>11.5</b>	Enlargement (GM f, GM l)	00
<b>11.6</b>	Combinations of transformations (GM l)	00



## 12 Pythagoras' Theorem

12.1	Finding the length of the hypotenuse of a right-angled triangle (GM g)	00
12.2	Finding the length of one of the shorter sides of a right-angled triangle (GM g)	00
12.3	Checking to see if a triangle is right-angled or not (GM g)	00
12.4	Finding the length of a line segment (GM g, A k)	00

## Functional Skills

Healthy living	00
Learning to drive	00
2012 Olympics	00
University	00
Money management	00
Kitchen design	00
Coverage and range spread	00

## Answers

Unit 1	00
Unit 2	00
Unit 3	00





# 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.
- **Targeted 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

Assessment Objective	What it is	What this means	Approx % of marks in the exam
A01	Recall and use knowledge of the prescribed content.	Questions testing your knowledge of each topic.	45-55
A02	Select and apply mathematical methods in a range of contexts.	Questions asking you to decide what method you need to use to get to the correct answer.	25-35
A03	Interpret and analyse problems and generate strategies to solve them.	Problem solving: Deciding how and explaining why	15-25

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.

# Introduction (Continued)

- Written by examiners. the Assessment Pack contains:
  - editable end-of-chapter tests for you to use or adapt for student assessment. All answers are provided.
  - a bank of A02 and A03 questions for extra practice of these assessment objectives
  - examination practice papers, to help your students become familiar with the types of questions they will be asked in the exam.
- Formative and summative electronic tests are available through our online ResultsPlus Booster C and Results Plus Progress tests.
- References to the specification are given in student friendly language in the Student books and in full in the Teacher's Guide.
- The Teacher Guide CD contains electronic copies of the scheme of work and the specification both of which contain references to the relevant sections of the Student book, Practice books and Teacher Guide.
- A blank self-assessment sheet is available on the Teacher Guide CD to enable students to reflect on a topic. Cross referencing on the self-assessment sheet points students back to the book if they need to revise.

## 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:

Specification references for the 2010 specification and for Functional skills.

Objectives that link directly to the specification and are included in each section in the Student Book.

Photocopiable remediation exercise worksheets provide extra questions and help support students.

Hints help students tackle the work on their own.

The screenshot shows a lesson plan for '1.2 Understanding prime factors, LCM and HCF'. It includes sections for Specification (GCSE 2010, FS Process skills, FS Performance), Concepts and skills (Find the prime factor decomposition, Find the highest common factor (HCF) and the least common multiple (LCM)), Functional skills (L1 Add, subtract, multiply and divide whole numbers), Prior knowledge (multiplication tables), Starter (check understanding of terms), Main teaching and learning (factor trees, HCF and LCM methods), Common misconceptions (multiplication signs), and Enrichment (Venn diagrams). A remediation worksheet on the right contains questions like 'Write down all the factors of each of the following numbers' and 'Complete the following factor trees'.

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 A02 and A03 style questions with our unique three-part tool.
- ResultsPlus knowledge checkers test A01 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](http://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 A02 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.