THE ABBEY SCHOOL
A BUSINESS & ENTERPRISE ACADEMY

Mathematics

GCSE Maths Resit
Scheme of Learning 2025 - 2026

Subject leader: K Ellender

Topics by term	Topic overview based on high frequency questions in GCSE maths exams					
	Term 1 – 7 weeks	**Term 2 – 7 weeks**	**Term 3 – 6 weeks**	**Term 4 – 6 weeks**	**Term 5**	**Term 6**
Topics taught	**Core Number Knowledge Ch4F, 11F, 14F, 18F** 1a. Decimal calculations using 4 operations, rounding and estimation. 1b. Fraction calculations using 4 operations, FDP equivalence. 1c. Percentage increase, decrease, reverse percentage change, interest calculations. 1d. Ratio and Proportion in context. 1e. Application of index laws, standard form. 1f. HCF/LCM/PFF. 1g. Knowledge gaps.	**Core Algebra Knowledge Ch2F, 5F, 9F, 16F, 20F** 2a. Algebraic manipulation of expressions and formulae, expanding, simplifying, substitution. 2b. Solving equations and inequalities. 2c. Changing the subject of a formula. Understanding sequences and nth term rule. 2d. Drawing and interpreting linear graphs. 2e. Manipulating quadratics, expanding and factorising. 2f. Drawing quadratic graphs. Interpretation of distance time graphs. 2g. Knowledge gaps.	**Core Geometry Knowledge Ch6F, 8F, 15F, 17F, 10F, 12F** 3a. Calculating angle problems involving lines, triangles, parallel lines, polygons. 3b. Calculating area and perimeter of compound shapes and circles. 3c. 3D solids volume and surface area. 3d. Perform and describe al 4 Transformations. 3e. Using Pythagoras and Trigonometry. 3f. Knowledge gaps.	**Core Data Knowledge Ch3F, 13F** 4a. Data representations and interpretation of pie charts, scatter diagram. 4b. Averages, including large datasets in a table. 4c. Probability scale, calculations, relative frequency. 4d. Probability diagrams, two way tables, tree and Venn diagrams. 4e. Knowledge gaps.	End of Year Revision and Exams	End of Year Revision and Exams

Contents

This symbol indicates that there are aspects of this curriculum area that pupils have previously practised. Pupils will be revisiting earlier content as part of their consolidation or in order to ensure knowledge is secure before expanding into new learning. References to these earlier SOL are noted for teachers to check specific objectives and content.

Specification References	Big questions	Topic area: Main Items	Learning Objectives /Outcomes All: grades 1-3 Most: grades 4-5 Examples	Key Terms/ concepts Literacy Numeracy	Assessment and homework tasks	Resources
Term 1						
	Topic 1: Core Number Knowledge (7 weeks)					
N1-16 **R1-16**	What core Number knowledge do I need to practise in order to be confident in solving real-world problems? Yr7/8/9/10 & Yr11 Ch18	1a. Decimal calculations, rounding and estimation. 1b. Fraction calculations, FDP equivalence. 1c. Percentage increase, decrease, reverse percentage change. 1d. Ratio and Proportion in context. 1e. Application of index laws, standard form. 1f. HCF/LCM/PFF 1g. Knowledge gaps	See Learning objectives and outcomes listed within the KS4 SOL. Areas of learning and focus will depend on student areas of strength and weakness and will be determined through classroom assessments, mixed question practice, student feedback and termly gap analysis. Students should practice exam techniques and various question styles to combine knowledge areas and navigate new or unfamiliar vocabulary. It helps to do this in an examination format for familiarity and confidence on a regular basis. **Gatsby Benchmarks: Careers** Use real-life contexts with number work wherever possible to help students to engage and relate learning to everyday and working life. Maths, Why Bother? | MYPATH Careers Resources (mypathcareersuk.com) - Fractions	See GCSE SOL for Ch4F, 11F, 14F, 18F. See command words	**Starter quizzes for the term include:** **Mixed skills practice** **Focused accuracy drills** **Knowledge gap support** **Look, cover, write, check.** Pupils are expected to complete purposeful exercises and repeated practice on the core areas within the Number specifications of the course. Practical problems of number operations and multistep problems in a range of scenarios with reasoning, Plenary style questions – • White Rose Maths - Assessments • https://www.missbsresources.com/ > Number> skills review • Mathsbox > Topic resources > 4 Questions / Exit tickets	• Pearson's GCSE Maths F 9-1 Textbook. • Purposeful Practice Book • Edexcel Higher Linear Course Text Book. • Common misconception information. Please see the Resources section for available materials on practice questions and AO1/AO2/AO3 style questions for assessment.
Term 2						
	Topic 2: Core Algebra Knowledge (7 weeks)					
A1-25	What core Algebra knowledge do I need to practise in order to be confident in solving real-world problems? Yr7/8/9/10 & Yr11 Ch16	2a. Algebraic manipulation of expressions and formulae, expanding, simplifying, substitution. 2b. Solving equations and inequalities. 2c. Changing the subject of a formula. Understanding sequences and nth term rule. 2d. Drawing and interpreting linear graphs.	See Learning objectives and outcomes listed within the KS4 SOL. Areas of learning and focus will depend on student areas of strength and weakness and will be determined through classroom assessments, mixed question practice, student feedback and termly gap analysis. Students should practice exam techniques and various question styles to combine knowledge areas and navigate new or unfamiliar vocabulary. It helps to do this in an examination format for familiarity and confidence on a regular basis.	See GCSE SOL for Ch2F, 5F, 9F, 16F, 20F See command words	**Starter quizzes for the term include:** **Mixed skills practice** **Focused accuracy drills** **Knowledge gap support** **Look, cover, write, check.** Pupils are expected to complete purposeful exercises and repeated practice on the core areas within the Number specifications of the course. Practical problems of number operations and multistep problems in a range of scenarios with reasoning,	• Pearson's GCSE Maths F 9-1 Textbook. • Purposeful Practice Book • Edexcel Higher Linear Course Text Book. • Common misconception information. Please see the Resources section for available materials on practice questions and AO1/AO2/AO3 style questions for assessment.

		2e. Manipulating quadratics, expanding and factorising. 2f. Drawing quadratic graphs. Interpretation of distance time graphs. 2g. Knowledge gaps.	**Gatsby Benchmarks: Careers** Use real-life contexts with algebra work wherever possible to help students to engage and relate learning to everyday and working life. Maths, Why Bother? | MYPATH Careers Resources (mypathcareersuk.com) - Fractions		Plenary style questions – • White Rose Maths - Assessments • https://www.missbsresources.com/ > Number> skills review • Mathsbox > Topic resources > 4 Questions / Exit tickets	
Term 3						
	Topic 3: Core Geometry Knowledge (6 weeks)					
G1-25	What core Geometry knowledge do I need to practise in order to be confident in solving real-world problems? Yr7/8/9/10 & Yr11 Ch17	3a. Calculating angle problems involving lines, triangles, parallel lines, polygons. 3b. Calculating area and perimeter of compound shapes and circles. 3c. 3D solids volume and surface area. 3d. Transformations. 3e. Using Pythagoras and Trigonometry. 3f. Knowledge gaps.	See Learning objectives and outcomes listed within the KS4 SOL. Areas of learning and focus will depend on student areas of strength and weakness and will be determined through classroom assessments, mixed question practice, student feedback and termly gap analysis. Students should practice exam techniques and various question styles to combine knowledge areas and navigate new or unfamiliar vocabulary. It helps to do this in an examination format for familiarity and confidence on a regular basis. **Gatsby Benchmarks: Careers** Use real-life contexts with geometry work wherever possible to help students to engage and relate learning to everyday and working life. Maths, Why Bother? | MYPATH Careers Resources (mypathcareersuk.com) - Fractions	See GCSE SOL for Ch6F, 8F, 15F, 17F, 10F, 12F See command words	**Starter quizzes for the term include:** **Mixed skills practice** **Focused accuracy drills** **Knowledge gap support** **Look, cover, write, check.** Pupils are expected to complete purposeful exercises and repeated practice on the core areas within the Number specifications of the course. Practical problems of number operations and multistep problems in a range of scenarios with reasoning, Plenary style questions – • White Rose Maths - Assessments • https://www.missbsresources.com/ > Number> skills review • Mathsbox > Topic resources > 4 Questions / Exit tickets	• Pearson's GCSE Maths F 9-1 Textbook. • Purposeful Practice Book • Edexcel Higher Linear Course Text Book. • Common misconception information. Please see the Resources section for available materials on practice questions and AO1/AO2/AO3 style questions for assessment.
Term 4						
	Topic 4: Core Data Knowledge (5 weeks)					
P1-8, S1-6	What core Data and Probability knowledge do I need to practise in order to be confident in solving real-world problems? Yr7/8/9/10 & Yr11 Ch13	4a. Data representations and interpretation of pie charts, scatter diagram. 4b. Averages, including large datasets in a table. 4c. Probability scale, calculations, relative frequency. 4d. Probability diagrams, two way tables, tree and Venn diagrams.	See Learning objectives and outcomes listed within the KS4 SOL. Areas of learning and focus will depend on student areas of strength and weakness and will be determined through classroom assessments, mixed question practice, student feedback and termly gap analysis. Students should practice exam techniques and various question styles to combine knowledge areas and navigate new or unfamiliar vocabulary.	See GCSE SOL for Ch3F, 13F, See command words	**Starter quizzes for the term include:** **Mixed skills practice** **Focused accuracy drills** **Knowledge gap support** **Look, cover, write, check.** Pupils are expected to complete purposeful exercises and repeated practice on the core areas within the Number specifications of the course. Practical problems of number operations and multistep problems in a range of scenarios with reasoning,	• Pearson's GCSE Maths F 9-1 Textbook. • Purposeful Practice Book • Edexcel Higher Linear Course Text Book. • Common misconception information. Please see the Resources section for available materials on practice questions and AO1/AO2/AO3 style questions for assessment.

		4e. Knowledge gaps.	It helps to do this in an examination format for familiarity and confidence on a regular basis. **Gatsby Benchmarks: Careers** Use real-life contexts with data and statistics work wherever possible to help students to engage and relate learning to everyday and working life. Maths, Why Bother? | MYPATH Careers Resources (mypathcareersuk.com) - Fractions		Plenary style questions – • White Rose Maths - Assessments • https://www.missbsresources.com/ > Number> skills review • Mathsbox > Topic resources > 4 Questions / Exit tickets	
Term 5						
	Topic 5: Revision and Public Exams					
	Topics this term will vary and should be based on Question Level Analysis of strengths and areas for development. These will be conducted on all previous assessments and marking for individuals. A more detailed list will be produced closer to the time based on assessment results and analysis of the year. However, there are common topics that students are likely to need to revisit based on Exam Results Analysis of the previous cohorts. Some of these topic examples are listed within the Year 11F Scheme of Learning and should be revisited, focussing particular on the application of skills to problem solving questions.					

Use of Big Questions and Lesson Questions

Please refer to the department document on using Big Questions as part of The Abbey Lesson – "What does an Abbey Lesson look like in Maths?".

Big Questions are designed to build upon pupils' prior knowledge and link topics across KS2, 3 and 4. Big Questions will connect a series of learning outcomes, as opposed to focussing on individual objectives. All students, regardless of ability will be exposed to the same knowledge within reason, but able to explore Mathematical concepts to varying depths and wider applications. The spectrum of the Big Question focus allows for this to happen. This is where Lesson Questions are used to tailor the approach, level of detail and depth of knowledge to suit the ability, attainment, and confidence of individual classes.

Common Misconceptions Notes

Please refer to KS4 Schemes of Learning.

Ch1-7F Year 9F
Ch18-15F Year 10F
Ch16-20F Year 11F

GCSE – Command Words

Please note that this table is not exhaustive but uses the most commonly used command words. These should be highlighted, explained and demonstrated when giving out problem solving work and GCSE questions.

Command word	**Comments**
Write down... Write...	No working will be needed
Find...	Some working will be needed but will be minimal
Work out...	Used interchangeably with 'calculate', it will be necessary to do some working out
Calculate...	Used interchangeably with 'work out' but use of 'calculate' suggests that a calculator will be needed, it will be necessary to do some workings.
Explain...	Explanation needed – may be a sentence or could be a mathematical statement
Give a reason...	Clear reasons needed; if geometrical reasons then must link into working
Draw...	Implies accuracy is important
Sketch...	Less formal than 'draw'...(no accurate measurements needed)
Complete...	Usually means that some values need filling in, for example, on a probability tree diagram or a table of values
Show...	All working needed to get to the required answer must be shown
Prove...	More formal than 'show', all steps must be present and, in the case of a geometrical proof, reasons must be given
Prove algebraically...	Algebra must be used in the proof
Describe...	Words needed to describe, for example, a transformation
Justify...	Show all working or give a written explanation
Expand...	Remove brackets
Expand and simplify...	Remove brackets and simplify
Factorise...	Straight forward factorisation
Factorise fully...	More complex factorisation, more than one factor to consider
Simplify...	Simplify the given expression
Simplify fully....	Likely to be more than one stage needed to simplify expression
Solve...	Solve an equation / inequality

General Resources Bank

Teachers will select the resources required for individual lessons. These will be fit for purpose for their class in order to promote the best progress and understanding for individual objectives, whilst still working towards the Big Question.

A **sample** list of resource materials is given as a starting point or for new ideas and are used by the department:

- Pearson's Edexcel 9-1 Textbook Series 1 and 2 - ActiveLearn (pearsonactivelearn.com)
- Pearson's Purposeful Practice book - ActiveLearn (pearsonactivelearn.com)
- MathsBox - Mathsbox
    - A wide-ranging selection of mixed quizzes, repeated practice and differentiated questions for use in the classroom, including short term cover work.
- MathsBot - MathsBot.com - Tools for Maths Teachers
    - Interactive tools and activites to aid the teaching of mathematics. Hundreds of randomly generated questions and answers and Mathematics Manipulatives for mastery.

- Corbett maths Corbettmaths – Videos, worksheets, 5-a-day and much more
  - Video tutorials, questions, revision resources and puzzles.
- Maths 4 Everyone - Maths Worksheets [Primary and Secondary] (maths4everyone.com)
  - Carefully thought-out questions that are designed for the different stages of learning a topic. Typically, there is one sheet that focuses on the First Steps, and then other sheets that contain questions which help students to Strengthen and then Extend their understanding.
- Go Teach Maths - Go Teach Maths: 1000s of free resources
  - Animated PowerPoint slides to demonstrate a mathematical method within lessons and supporting activities with an individual or paired consolidation focus.
- Maths Genie – Maths Genie • Learn GCSE Maths for Free
  - GCSE revision videos, exam style questions and solutions.
- Oak Academy - Oak National Academy (thenational.academy)
  - Online lessons and resources to support independent study – particularly useful for students who are having to spend significant amounts of time outside of the classroom.
- Mr Barton – Variation Theory - Variation Theory
  - A collection of high-quality, sequences of questions and examples using key principles from Variation Theory. Holds questions and examples constant, together with the mathematical behaviour of *reflect, expect, check, explain*.
- Dr Frost Maths - DrFrostMaths.com
  - A diverse set of free teaching resources and tools including downloadable teaching slides/worksheets for KS3-5, teaching videos and an online platform for whiteboard practice and exam questions.
- Edexcel Exam Wizard- ExamWizard :: Index
  - ExamWizard is a free exam preparation tool containing a bank of past Edexcel exam questions, mark schemes and examiners' reports for a range of GCSE subjects.

- Additional Maths Blogs and other online resources include:

Solvemymaths
Resouraholic
Colleenyoung.wordpress
missquinnmaths.wordpress
Just Maths
Mathed Up
Miss B resources

Boss Maths
SavemyExams
Nrich
Pret Homework
BBC Bitesize
GCSE POD

Assessments/ Quizzes / Walking Talking Mocks / Pre-Public Examinations

Through the GCSE syllabus, pupils are assessed regularly to monitor progress, understanding and make predictions.

- **Formal Graded Assessments**

Formal assessments will occur once a term, during week 3 for monitoring purposes and formal feedback. It will be a mixed topic assessment to mimic the mixed topics they will need to answer for their end of year and public examinations. It is to support a more active attitude to revision in small, manageable tasks, as well as allowing students to revisit topics in a formal setting and identify gaps in knowledge.

- **Topic Quizzes**

Other assessment will be end of unit quizzes to assess recent learning and conducted when learning of that sequence is concluded.

For an improved response to revision and independent study, students are expected to undertake guided revision tasks through the year before assessments as part of their homework. Staff will support students with effective techniques and resources offered where required. These revision homework tasks will consist of:

- *Directions to important online videos and tasks to consolidate knowledge or expose students to a higher-level task or topic.*
- *Pre-prepared practice questions on the relevant topics, such as the Active Learn assessment materials and Hegarty Maths.*
- *GCSEPOD with videos and related questions.*

- **Walking, Talking Mocks**

Year 11 and 12/13 will have a Walking Talking Mock as a method of revisiting public exam formats and good exam technique. During the WTM, the teacher will model an approach to questions on an examination paper and guide students to complete it, with a large focus on areas that students struggle with and/or do not perform their best. Dates TBC following the publication of the exam schedule.

- **End of Year Assessments**

GCSE Public Examinations – dates to follow.

Homework

Mathematics homework is designed and set to promote students' understanding and their ability to use mathematics in a variety of situations.

Homework should be set once per week and consist of:

- Online homework through Sparx Maths.
- Preparation and Revision for assessments and quizzes, with particular reference to the Knowledge Organisers.
- Written homework when the teacher feels it is necessary or beneficial
- Past paper practice
- Research or Investigative Tasks.

It is expected that KS5 students will undertake a minimum of 45 minutes homework per week.

All students are given individual logins to a variety of virtual learning environments, which give them access to video tutorials, practice questions and answers. The main programmes being used are: Sparx maths, GCSE POD, Active Learn

Most of the time, homework will support in-class learning and reinforce topics that students have studied recently within the classroom to reinforce learning and secure knowledge.

If students fail to complete homework, staff will follow procedures outlined in the Behaviour Policy.

SMSC/ ICT/ Cross Curricular Connections

The programme of study is designed to encourage the development of wider problem solving as the mathematical knowledge of the student advances. Students must look for action points and next steps that are not explicit, in order to solve increasingly complex problems.

Lessons should :

- Value listening and respecting the viewpoint of others in problem solving.
- Promote the discussion of mathematical understanding and challenge assumption.
- Support students to question information and data that they are presented with.
- Discourage jumping to conclusions.
- Seek opportunities to build self-confidence.
- Include questions chosen based on prior lack of confidence,
- Encourage collaborative learning in the classroom – in the form of listening and learning from each other and paired discussion.
- Develop powers of logic, reasoning and explanation.
- Build competence – every student is good at something, and students struggle when connections between their strengths are not obvious or of a clear use.
- Allow choices to promote self-determination, and deal with the consequences, however minor. Giving authentic (not false) choices doesn't have to be complex—for example, choices around how to complete a multi-step problem.