



THIRD SPACE
LEARNING

Ultimate Guide to GCSE Maths Revision

Strategies and practical techniques for maths
teachers and subject leaders looking to support
students to revise effectively

SLT Guides

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Introduction

Secondary maths pedagogy usually focuses on how to teach new concepts well, how to enhance mathematical understanding, and how to encourage students to make connections between topics.

Revision - the process of reviewing and reinforcing this learning - is essential for strengthening students' grasp of mathematical concepts and filling knowledge gaps. But it can be overlooked.

In this guide, we'll explore a variety of revision strategies and delve into practical and straightforward techniques for secondary school maths teachers to use to improve their ability to support students revision methods and help them revise effectively.

While effective revision is generally personalised and self-led, most students need plenty of support from their teachers to develop the independent study skills they'll require to get the most out of their revision time. We don't believe revision is just the responsibility of the student, it's for teachers too, throughout a student's secondary journey.

This guide begins with more general revision strategies before focusing on department-wide support to embed effective revision strategies. It is aimed at secondary school leaders, such as Heads of Department, those with Key Stage responsibility or those with responsibilities across a Trust, but will also be useful for teachers looking for strategies to use in their classrooms.

Although it is primarily maths-focused, many of the revision strategies are relevant for other subjects or for whole-school use.

Why we've made this resource

At Third Space Learning, we speak to secondary schools every day about GCSE maths revision and all the challenges that come with it.

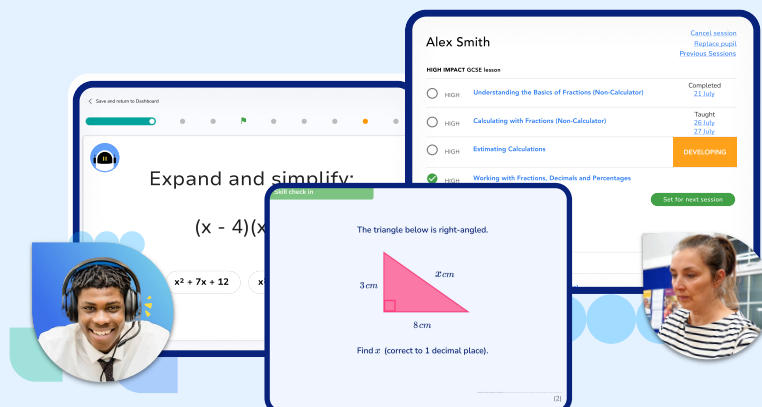
And, through our own GCSE Revision Programme, we provide personalised one to one revision sessions to KS4 students in schools up and down the country.

We've learnt a lot about what works best when it comes to maths revision, what works and - as importantly - what doesn't!

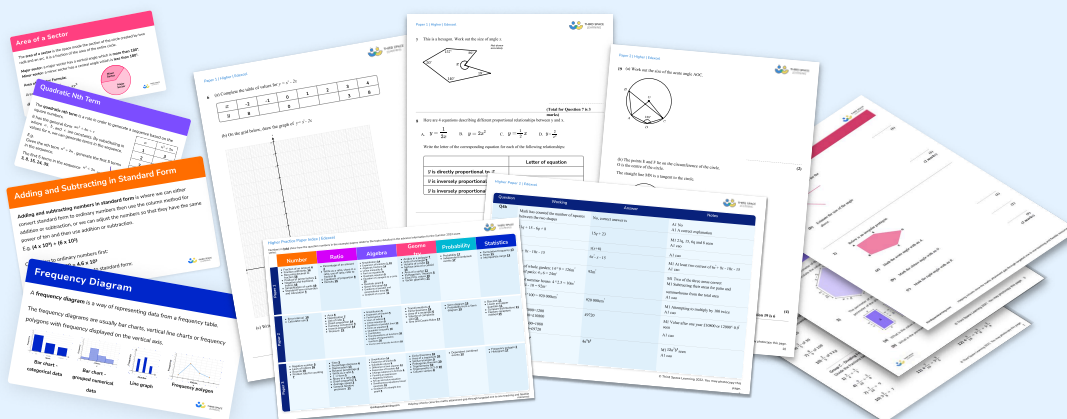
We've written this guide to provide a comprehensive overview of the most effective revision strategies as applicable to secondary school mathematics, and GCSE in particular.



At Third Space Learning, we're committed to helping students, teachers and schools with successful revision. Every week, KS4 students across the country receive online one-to-one GCSE revision lessons from AI maths tutor, Skye, who adapts each lesson based on students' answers to a diagnostic skill check in question. Real-time adaptive teaching helps students through practice questions on the GCSE topics they struggle most with and close learning gaps.



We also offer a [library of hundreds of free GCSE maths resources¹](#) to support students with independent learning. Our extensive collection of online revision guides provide step-by-step worked examples, alongside self-checking multiple choice questions for students to test their understanding, and exam questions written to closely follow the three main exam boards.



"The assessments at the beginning and end of sessions helps the students see for themselves that revision works, and a chance to feel successful in doing that – that has a big impact. It made them realise that this one session a week isn't their full revision, it's just an aspect of it, which led them to revise more."



Andy Appleford
Maths Director, Chorus Education Trust

The revision strategies that work

This section looks at the best strategies and techniques for students to use for revision. Students should develop good study habits before they become crucial to success during examination years.

We strongly advise you to teach study and revision skills explicitly alongside mathematical knowledge and concepts, whether general or more subject-specific skills.

These strategies apply across the full secondary age range. The earlier they are implemented, the more effective they will be when students reach Key Stage 4. Of course, they're still relevant if introduced to students while they're revising for their GCSEs.

Embedding these strategies into classroom practice gives students the opportunity to develop skills and habits which they can use for independent learning.

Practice testing

Identified by John Dunlosky in 2013 as one of the most effective learning strategies, practice testing is simply the testing of knowledge or understanding in a low-stakes way.

Common strategies for practice testing include:

- ✓ [Creating summaries of key information;](#)²
- ✓ Using flashcards;
- ✓ [Completing past exam questions.](#)³

Dunlosky mentions three key components to practice testing:

- ✓ Making notes in such a way to support later practice testing;
- ✓ Recalling from memory as opposed to choosing from multiple choice answers;
- ✓ Continuing practice testing until each concept has been correctly recalled at least once from memory.

Practice testing should continue until students can correctly recall each concept at least once from memory. This means that we need to emphasise the importance of 'getting things right'. This does not need to be immediate, but it's important to foster a sense of resilience in your students, and not giving up or brushing off a concept that they're really struggling with.

Flashcards for practice testing

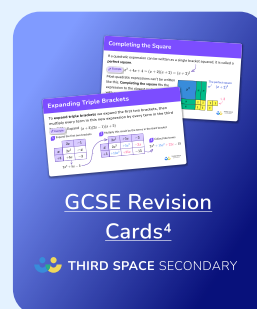
One way to support memorising key mathematical formula is through flashcards, where students can:

- ✓ Make them with a prompt on one side and the answer on the other
- ✓ Work through them, putting the correctly answered ones in one pile, and the ones they don't know in another pile
- ✓ Repeat the process until all contents have been recalled from memory at least once — the crucial part is that the unknown ones should be reviewed again



Third Space Learning's Revision Cards for GCSE Algebra were designed to test your students' knowledge and give them confidence ahead of exams.

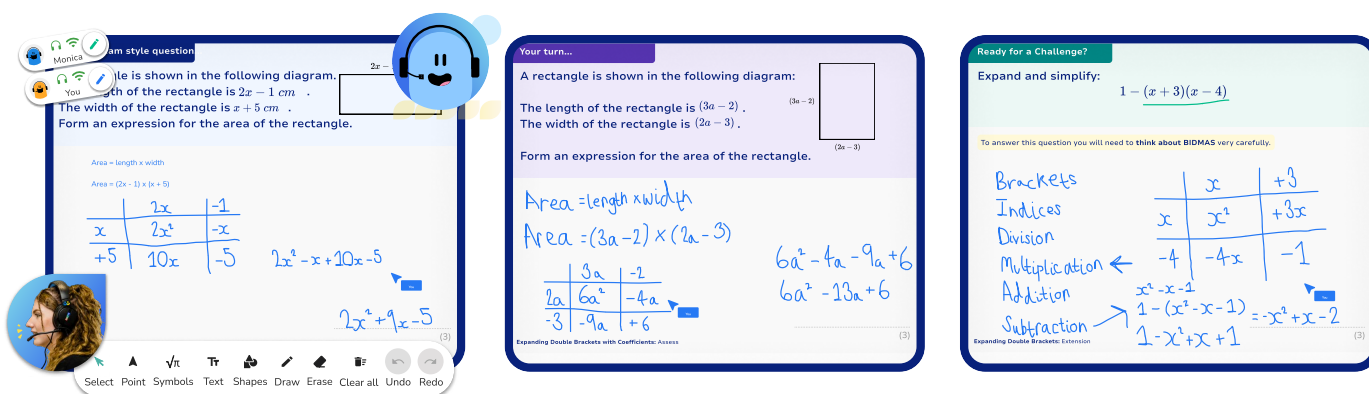
There are 60+ revision cards covering the key topics in GCSE Algebra, with important definitions and clear examples for each topic. What's more, each card links directly to the corresponding Third Space Learning Revision Guides and resources!



Worked examples for practice testing

Many secondary school exercise books contain worked examples or notes that students have copied while a teacher has worked through a problem or provided an explanation.

The key here is getting students to value careful recording of worked examples by ensuring that the examples they are given are concise, meaningful and draw attention to the key features of the new maths involved.



Monica's question: A rectangle is shown in the following diagram. The length of the rectangle is $2x - 1$ cm. The width of the rectangle is $x + 5$ cm. Form an expression for the area of the rectangle.

Area = length \times width
 $\text{Area} = (2x - 1) \times (x + 5)$

	$2x$	-1
x	$2x^2$	$-x$
$+5$	$10x$	-5

$2x^2 - x + 10x - 5$
 $2x^2 + 9x - 5$

Your turn...
 A rectangle is shown in the following diagram:
 The length of the rectangle is $(3a - 2)$.
 The width of the rectangle is $(2a - 3)$.
 Form an expression for the area of the rectangle.

Area = length \times width
 $\text{Area} = (3a - 2) \times (2a - 3)$

	$3a$	-2
$2a$	$6a^2$	$-4a$
-3	$-9a$	$+6$

$6a^2 - 4a - 9a + 6$
 $6a^2 - 13a + 6$

Ready for a Challenge?
 Expand and simplify: $1 - (x + 3)(x - 4)$

To answer this question you will need to think about BIDMAS very carefully.

Brackets
Indices
Division
Multiplication
Addition
Subtraction

	x	$+3$
x	x^2	$+3x$
-4	$-4x$	-1

$x^2 - x - 1$
 $1 - (x^2 - x - 1) = 1 - x^2 + x + 1 = -x^2 + x + 2$

Third Space Learning tutor, Skye, encourages students to explain their thought process verbally as well as in writing, ensuring maximum maths fluency rather than rote memorisation of methods.

For a deeper dive into worked examples in the maths classroom, Michael Pershan's work is well worth a look - see links at the end of the article for further reading and information.

Best practices for worked examples

Help your students to organise their worked examples

Students often don't see the value of these illustrative worked examples, or struggle to use these when revising for a variety of reasons, including:

- ✓ Unable to locate the required example in an exercise book;
- ✓ Errors in copying examples;
- ✓ Too many worked examples to choose from;
- ✓ Examples including multi-topic content.

To avoid this, try to provide students with a dedicated place for important worked examples:

- ✓ In a different section of their standard exercise book;
- ✓ In a stand-alone smaller book;
- ✓ On flashcards or in a folder.

This helps to avoid organisation issues when students are revising - if they can easily access the worked examples, they are much more likely to use them.

Select your illustrative examples with care

Think carefully about the illustrative examples chosen, particularly in selecting a variety of digits or numbers and ensuring that the arithmetic involved doesn't significantly increase the cognitive load of the problem.

It can be useful to include suggested illustrative examples within a scheme of work, particularly if the department includes a lot of inexperienced teachers or non-specialists.

Ofsted highlights this issue in their 2023 subject report, Coordinating Mathematical Success, where they discuss how an unplanned worked example with poor method selection limited the impact of a teacher's re-explanation of a concept.



Read more: [Ofsted Mathematics Subject Report: Coordinating Mathematical Success⁵](#)

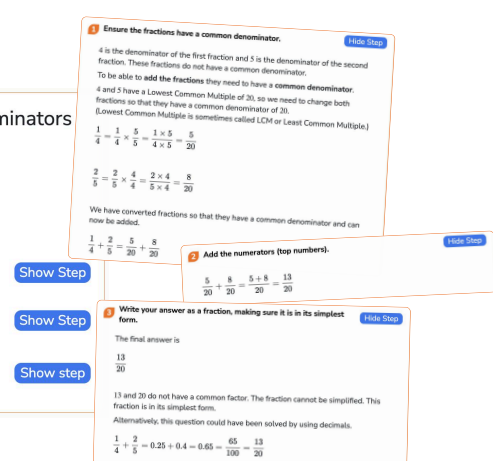
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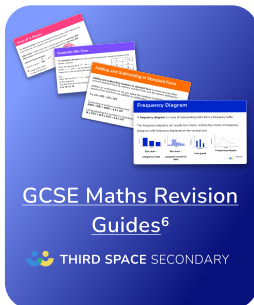
Example 3: adding fractions with different denominators

Work out:

$$\frac{1}{4} + \frac{2}{5}$$

- 1 Ensure the fractions have a common denominator.
- 2 Add the numerators (top numbers).
- 3 Write your answer as a fraction, making sure it is in its simplest form.



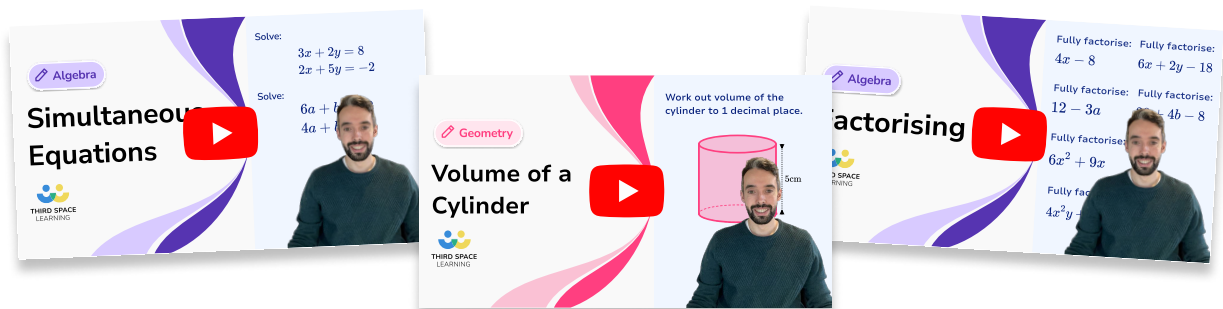


GCSE Maths Revision Guides⁶
THIRD SPACE SECONDARY

All the [GCSE maths revision guides](#) from Third Space Learning are free and include several worked examples on each page.

Consider using digital examples such as videos

Also consider the careful use of digital examples - students often prefer to be “talked through” a worked example as well as seeing it written on a page, as it's much easier to see the steps this way. Students could be provided with a QR code link or similar to a video example such as the ones included below that they can re-watch as part of their independent revision. This is particularly useful for multi-step problems.



[Third Space Learning GCSE Maths Videos⁷](#)

Include worked examples in knowledge organisers.

Knowledge organisers for maths can be helpful, particularly if students aren't able to take clear notes.

“Today, we're thrilled to be at the forefront of using Third Space Learning's AI voice tutoring. This innovative one-to-one maths tutoring solution offers an even more cost-effective alternative. The children are thoroughly enjoying the experience, and their engagement and focus are clearly evident.”



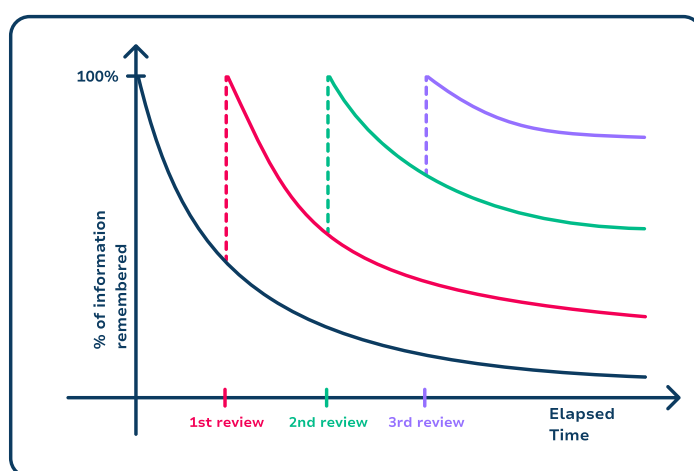
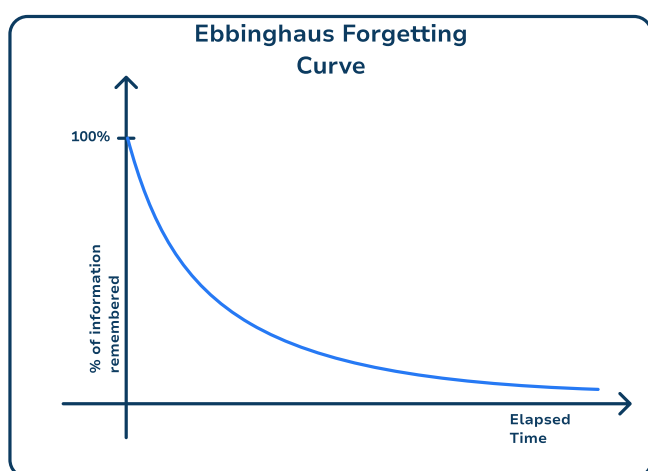
Chris Harris, Deputy Headteacher
Admirals Academy, part of EMAT



Encouraging memory recall with practice testing

The German psychologist Hermann Ebbinghaus, developed a 'forgetting curve' that shows most of a newly learned concept is forgotten rapidly if it is not regularly reviewed.

Regular review also 'flattens' the curve - with each repetition, concepts are forgotten less quickly each time.



Third Space Learning sessions offer students an opportunity for regular practice to ensure maximum retention of key maths concepts ahead of their exams. The one to one approach means that Skye can focus on the revision topics that each student is specifically struggling with, at a pace that suits them.



Read more: [Learning And Memory In The Classroom: What Teachers Should Know \(Especially After The Summer\)⁸](#)

9 min read

Dunlosky suggests that almost any kind of practice testing benefits student learning, but that students benefit **most** from tests that require memory recall, as opposed to tests which require selection of a correct answer.

While memory and cognitive theory have come to the forefront of educational discussion in recent years, the ideas involved are fairly intuitive and come naturally to many experienced practitioners.

However, we don't always communicate these ideas to our students - it's important that they also understand why we're making particular pedagogical decisions. So if your school uses a [Fluent in Five](#) approach at the start of every maths lesson, discuss with students why these lesson segments are fundamentally important and how they can maximise their learning during these parts of the lesson.



Distributed practice

Several short study sessions are much more effective than one long session. It's better to work for 20 minute chunks over the course of a week, than study for two hours on a weekend. This principle does not just apply to revision for tests; students can use this strategy when completing weekly homework or general review of classwork.

Try giving students a week to complete a homework task which is split up into sections to be completed daily. Tasks can be deliberately engineered so that students can't just do the entire sheet immediately e.g. by setting tasks that require content from later in the week.

Revision timetables

Students often struggle with the idea of distributed practice when they come to schedule revision, and instead opt to cram large chunks of information right before the relevant exam or assessment. Instead, encourage students (and help them) to come up with a revision plan that distributes topics or subjects evenly.

You can download a revision timetable template to fill in with students here:



Read more: [How To Revise For GCSE: What Your Students Need To Know To Achieve Their Target Grade](#)¹¹

6 min read

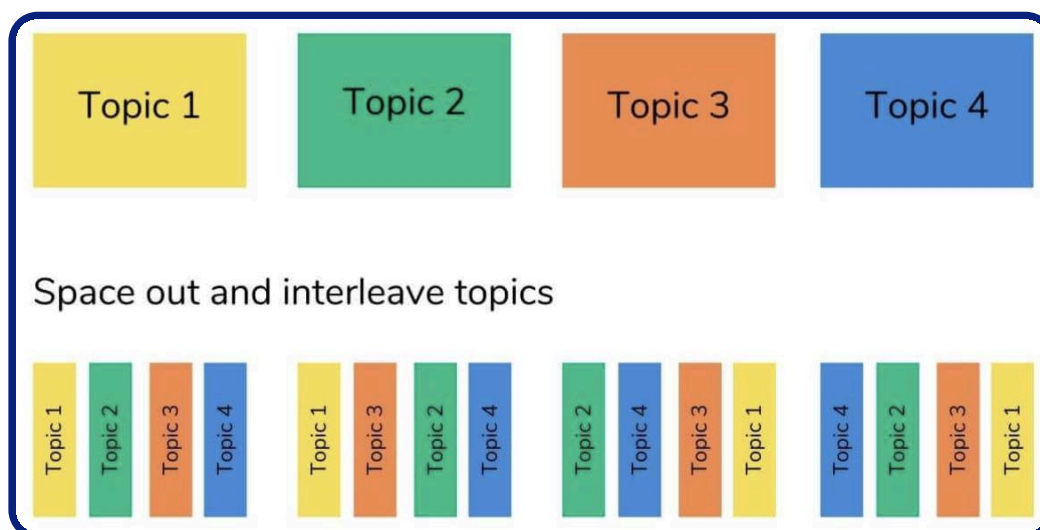
Interleaved practice

Interleaved practice allows the learner to alternate coverage of two or three distinct topics in a study session or task. When compared to massed practice (completing several of the same question in a row), interleaving results in slower initial learning but far superior retention.

These ideas must be communicated to students and the principles behind each task explained. Students are likely to be resistant to methodology which slows initial learning, or they may need additional time to complete an interleaved practice task.

How to space practice

- ✓ Revisit newly learned concepts frequently - include a recap in the next couple of lessons, then within a week, then within a fortnight.
- ✓ Revisit older concepts less frequently, but ensure they're mixed in with other newer concepts.
- ✓ Explicitly link to prior knowledge and concepts wherever possible and include practice on these concepts (e.g. include fractional coefficients when solving equations).



An example of how you might structure interleaved practice.

Elaborative interrogation and self-explanation

These strategies encourage:

- ✓ Elaborative interrogation involves a student trying to explain why a fact is true - for example, an explanation for why the interior angle sum of a hexagon is 720° might rely on a student splitting the shape into four triangles.
- ✓ Self-explanation involves a student linking new knowledge or information to something they already know - so for our hexagon example, the student might link this knowledge about the interior angle sum in a hexagon to other simpler shapes.

Dunlosky highlights that these techniques have no benefit when solving practice question sets, but show significant promise when students are faced with non-standard or unfamiliar problems.

Self-explanation is likely to be the more effective technique for mathematics learning. Drawing again on Michael Pershan's thoughts about worked examples, students' abilities to self-explain can be developed by including self-explanation prompts alongside worked examples.

Self-explanation prompts:

- ✓ Get students to think about generalisations that they may otherwise miss.
- ✓ Direct attention to the most important parts of a worked example.
- ✓ Do not need to be independently created - some students may benefit from a framework or a gap-fill approach.

Useful structures for self-explanation prompts

- 'What is the first step in this problem?'
- 'Could we write _____ here? Why/why not?'
- 'What would happen if we did _____ first?'
- 'What are the clues in the question that lead us towards _____ as the first step?'
- 'Explain how we know _____ is an unreasonable answer to this problem'
- 'How does this step tie in with what we learned previously about_____?'
- 'What's similar / different about this problem compared to previous work about_____?'



AI tutor Skye is trained in effective questioning techniques to encourage students to be active participants in their own learning and use mathematical dialogue.

Teaching across the department and school

Having a coherent vision across the department can significantly encourage student buy-in to revision strategies. Consistent messaging about the importance of revision, from the start of Year 7, means that effective revision is more likely to become embedded as a habit before the crucial GCSE years.

Developing a department-wide strategy

The better equipped students are to learn independently and review key material, the less curriculum time is needed to re-cover material.

As a department, select those learning strategies that work particularly well for maths, and build time into a scheme of work so right from Year 7 students can learn about them and put them into practice

For example, all Year 7s could start off with a short session introducing the Forgetting Curve and the importance of frequent review, with this review process explicitly modelled in subsequent lessons.

Create a bank of shared resources, linking the ideas within the scheme of work with suggestions and opportunities to include practice using relevant strategies.

Curriculum planning and CPD

Including revision strategies and opportunities in your curriculum planning can be a useful way to ensure that strategies are modelled consistently and regularly for students.

For example, you may decide that model examples with well-crafted self-explanation prompts would really help your department to improve learning retention. Rather than simply asking staff to come up with these individually on an ad-hoc basis, you could collect these as a team over the course of a year and then link into schemes of work in the appropriate place for use in subsequent years.



Practical GCSE revision tips

In this section we consider the practicalities of organising and supporting revision for GCSE students, particularly in Year 11, and suggest some resources that you may want to try with students.

Practical tips for the classroom

This section looks at strategies that can be implemented on an individual basis by class teachers. Some professional autonomy is needed here as students' needs will differ - a one-size-fits-all revision programme may not be helpful. However, there are some strategies that are generally applicable for most groups.

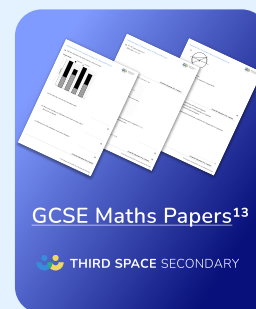
Past papers

Past papers are an integral part of exam preparation in Year 11, and there are a variety of ways of organising and using past papers.

- 1** Come up with a list as a department regarding which papers should be used for what purpose:
 - ✓ Make sure your November mock exam paper is never used in a revision lesson.
 - ✓ You may also want to allocate particular papers for independent study or for classroom use.
- 2** Hand out printed paper packs (of the appropriate tier) to the students early in Year 11 in a folder so they can use throughout the year.
 - ✓ The advantage is you've got all the reprographics administration out of the way in September.
 - ✓ The disadvantage is that papers and even whole packs get lost, although most of the papers could be kept in school.
- 3** Provide students with some kind of tracker or tracker recommendation so they can record their performance on the papers and thus inform future independent learning:
 - ✓ Marks and grades if appropriate
 - ✓ Areas for improvement identified



At Third Space Learning, our past paper sets each contain three papers and are modelled on real life GCSE Maths past papers. The questions are written by experienced teachers and examiners and are matched to the three main exam boards, Edexcel, AQA and OCR.



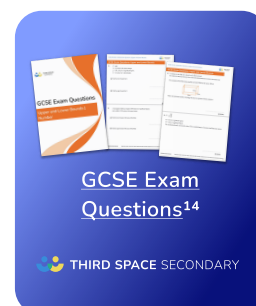
Paper walkthroughs

Paper walkthroughs are popular with students and tend to be a key feature of revision work at the end of Year 11. However, there can be the tendency for students to switch off or become inactive participants, particularly if that's the only activity that's going on in a session.

It's unlikely to be an efficient use of time to go through an entire paper with a class when the number and areas of mistakes vary considerably. This is where online paper walkthroughs can be really useful - students can view these independently (this could be in lesson time if your school has access to sufficient devices) and pick the parts of the papers relevant to them.

- ✓ Make sure you **select the video walkthroughs carefully** as there are lots of providers with very variable content.
- ✓ Supercharge paper walkthroughs with **shadow questions** or papers. Students watch a teacher model how to approach and solve a problem, then attempt a very similar "shadow" problem. The shadow problem may simply have values in the question changed, or the context varied.
- ✓ Try using **backwards-faded examples** or adapted sets of problems where each subsequent worked example has more of the working out removed.

Crucially, this removal process is backwards, so the first example may only have the calculation for the final answer missing, then the next removes the previous line of working, and so on up through the calculations until students produce the solution to the final question completely independently.

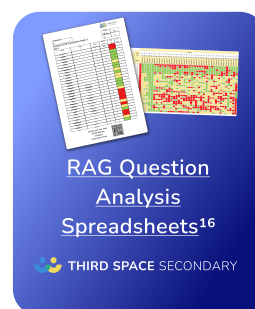


See Dave Taylor's website [Backwards Faded Maths¹⁵](#) for a full explanation, the rationale behind this and some useful resources, including Edexcel and OCR papers.

Effective use of Question Level Analysis

For full formal assessments it is fairly common practice to complete some form of QLA (question-level analysis) with students' results. There are a variety of spreadsheets available online that will automatically produce a list of key improvement topics, or provide a full list of RAG-rated topics for any given student.

If you have a large class of students who are fairly computer-literate, you can get students to complete the data-entry process themselves. An alternative time-saving method is to provide students with a paper template including question numbers and relevant topics. They can transfer marks from the question paper to a single piece of A4, which makes it easier for the member of staff to then transfer these marks electronically.



QLA can be useful to select topics that are general areas of weakness for the whole class, as these can then be picked up and addressed within lessons. However, Adam Boxer suggests that QLA are open to considerable over-interpretation via what he terms the 'just right' phenomenon. We may award marks to a student who has *only just* scraped an acceptable explanation, *only just* written enough method, or who has perhaps *just written down the correct answer* with no method at all).

Boxer suggests that, if nearly all students have got a particular question wrong, rather than simply going over that question or reteaching that particular content, we should instead be looking at the content domain that the question has come from and identifying wider issues within that domain.

So rather than just reteaching expanding double brackets, we might need to look in more detail at where misconceptions are cropping up from the whole domain of algebraic notation and simplification. Are students struggling because they have fundamental misconceptions about the difference between x^2 and $2x$, or is there an issue with working with negative coefficients?

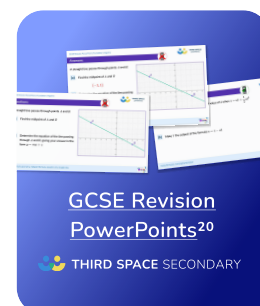
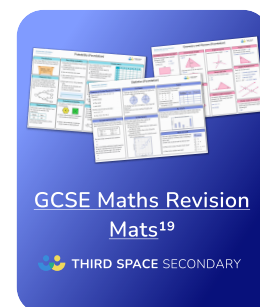
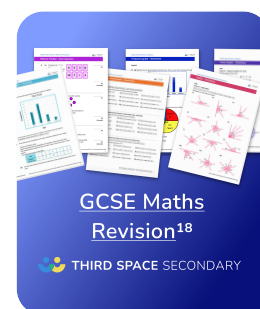


Read: [What to do after a mock? Assessment, sampling, inferences and more¹⁷](#)

Other revision resources

Year 11 students will need a variety of revision resources as well as past papers in the run-up to exams. The free GCSE revision resources from the [Third Space Learning Secondary Library](#) have all been designed by an expert team of maths teachers to support your KS3 and KS4 students. Here are some to try:

- 1 Topic worksheets** are split into skills practice questions, applications and exam questions, and come with answers and a mark scheme. Like all the resources, these worksheets have been written by experienced secondary school maths teachers and examiners.
- 2 Revision mats** are a fantastic way to target topics with a wider scope, and can be used in a variety of ways in the classroom. Mats can be used diagnostically to identify gaps across a wider content domain than a topic-based worksheet. They can also be used for retrieval practice or homework.
- 3 Revision PowerPoints** contain hundreds of exam style questions covering all of the key skills needed for the GCSE mathematics foundation and higher papers. They are designed to be used with the whole class or shared with students as part of their exam preparation. Each slide covers a different topic and is linked to the corresponding online revision guide and resources to make it really easy to get lots of practice.



Practical tips for the maths department

Organising revision sessions

Most schools offer extra-curricular revision sessions for Year 11. These are often after school, or sometimes during key school holidays, such as an intensive Easter revision session.

Organisation of these sessions is very dependent on the demographics and needs of your cohort. If there is an expectation that staff deliver revision sessions, ensure this is included in the timetabling allocation and make allowances for planning time for these sessions. If revision sessions are done on a more 'ad-hoc' or personal choice basis, it is important that this is communicated to students and there should not be undue pressure put on teachers who choose not to run sessions.

You may wish to involve the whole department in revision provision, regardless of whether they have a Year 11 group that year or not - this is a good way to encourage the department to take collective responsibility for the results **of the department**, rather than assigning responsibility to individual teachers.



Some schools choose tutoring programmes like Third Space Learning to enable students who need it most to access personalised revision sessions up until exams. With programmes like this, teachers have more time to focus on whole class teaching and GCSE preparation, while their target students receive regular one to one support from their own dedicated tutor.



“I analysed our data to look at the progress that the students made. The group who attended the sessions improved 1.19 of a grade on average, 0.46 more than those who didn’t have the sessions.”



Andy Appleford
Maths Director, Chorus Education Trust



Make sure your scheme of work or calculation method and policies are available on your website. Then if you as a school (or parents) hire external tutoring or intervention providers your students will be able to continue to practise the methods they know rather than being confused by alternatives.

Delivering revision sessions

Once you’ve worked out how to timetable and staff these revision sessions, here are a few suggestions that may work to improve their effectiveness:

- ✓ Consider the purpose of each revision session. Is the aim for students to have a quiet space to work independently, with assistance on hand if needed, or are the sessions teacher-led?
- ✓ Consider whether you can deploy staff to offer a mix of the above each week.
- ✓ For taught revision sessions, come up with a timetable of topics. Communicate these to students so they can opt in to topics or sessions relevant to their learning needs.
- ✓ If you offer independent work sessions, decide who is responsible for providing work for these sessions. Ideally, the teacher(s) overseeing the session should not be spending time finding resources for students to use.

- ✓ Communicate expectations to students and ensure high standards of behaviour. If revision sessions are non-compulsory, students can be asked to leave if their behaviour is preventing others from learning.
- ✓ Emphasise that students need to be active learners during these sessions - try to dissuade the mindset that they'll magically get better just by being physically present at an extra-curricular session. Third Space Learning tutors encourage students' investment in their own learning through targeted questioning techniques during their sessions. Questions might include: 'how did you arrive at that answer?', or 'can you sum up what we've just covered?'

Structuring revision sessions

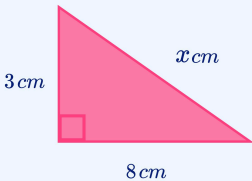
In order to maximise learning opportunities during the revision sessions it is important that they are well structured. Including opportunities for your students to recap the prior knowledge that will be required for the revision session can be a great way of setting them up for success.



Each Third Space Learning session begins with a skill check in question to assess prior knowledge.

Skill check in

The triangle below is right-angled.



Find x (correct to 1 decimal place).

..... (2)

Each Third Space Learning session begins with a skill check in question to assess prior knowledge. Each session follows an evidence-based I do, we do, you structure to move students from guided to independent practice, building mathematical knowledge and confidence.

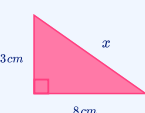


The GCSE revision lesson itself contains around three different questions on a given topic. Each set of questions is split into three sections:

1 Students try an exam-style question:

Try this exam style question...

The triangle below is right-angled.



Find x (correct to 1 decimal place).

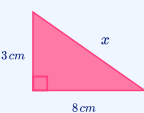
..... (2)

Finding the longest side: Exam Q1

2 Skye can use a scaffolded support slide to help

Let's go through it together...

The triangle below is right-angled.



Find x (correct to 1 decimal place).

..... (2)

Let's go through it together: Support

Pythagoras' Theorem states that for any right-angled triangle, the squares of the two shorter sides (a and b) will add to make the square of the longest side (c).

$$a^2 + b^2 = c^2$$

We can use this fact to find a missing side.

$$a^2 + b^2 = c^2$$

$$\text{.....}^2 + \text{.....}^2 = \text{.....}^2$$

$$\text{.....} + \text{.....} = \text{.....}^2$$

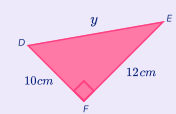
$$\text{.....} = \text{.....}^2$$

$$\text{.....} = \text{.....}$$

3 Students practice what they have learnt by working through a similar exam-style question

Your turn...

Triangle DEF is right-angled.



Find y (correct to 1 decimal place).

..... (2)

Finding the longest side: Assess

Giving students the opportunity to apply and extend their knowledge during revision sessions can help to improve their understanding of the material.


All Third Space Learning lessons include an opportunity for challenge. These slides are a great way of exploring the topic at a great depth and encouraging dialogue.

Ready for a Challenge?

A girl runs 5 km East and then 8 km North.

How far is she from her starting point?

To answer this question you will need to use an understanding of compass points.



To answer a Pythagoras question involving compass points it helps to draw a diagram.

..... (2)

Working with Pythagoras' Theorem: Extension

Selecting your revision resources

During revision sessions the quality of the resources that are used is of the highest importance. Using a high quality, reliable external provider for revision resources can allow the focus to be placed on the revision process itself in order to maximise the benefit to the students.



Third Space Learning has thousands of free maths resources available on the [Secondary Resource Library](#)²¹. There are hundreds of revision guides, worksheets, exam questions and so much more, all designed to save teachers time and support them to deliver great lessons and revision sessions.

Information evening for parents and carers

Getting parents and carers on board with your vision and goals from Year 11 can be extremely effective. Often parents and carers want to support their children at home but are not sure how to do so effectively. This is frequently compounded by parents' maths anxiety or not wanting to "teach the wrong method".

A parents' and carers' evening can include information about:

- ✓ Key dates and times of exams and mocks.
- ✓ Predicted grades and what may be needed for further education or training.
- ✓ Useful revision strategies that people at home can help with (e.g. flash card quizzing).
- ✓ Useful websites to direct their children to, or a suggested list of apps.

This could be run independently as a department, in conjunction with English, or on a wider-school basis.

Collate subject-specific information after the event and email it out to all parents and carers in a simple, one-page guide to supporting their children with revision at home.

Walking talking mocks

A walking talking mock is a teacher-led exam paper run-through, usually occurring in the same space that students will use for their final exam.

It's a very effective way to really support students in the run up the exams by increasing their familiarity with the spaces that they will use in their exams, and improving their exam technique and time management thanks to the expert modelling from teachers.

The following are some considerations and recommendations to make the most out of these.

Staffing and timetabling

There will also of course be logistic arrangements to consider for your setting and cohort.

- ✓ How will tiers (Foundation/Higher) be split? Will you run sessions at the same time in separate venues, or run sessions on consecutive weeks using the same venue?
- ✓ How many classes can be accommodated at the same time? Do you combine all classes sitting the same tier, or run smaller sessions with two or three teaching groups at a time?
- ✓ How many members of staff will be needed for each session?
- ✓ If you have multiple groups and members of staff in the session, who will lead the explanations to the group? If there is a teacher who is particularly good with exam technique and modelling, it may be appropriate for them to lead all of the modelling (if they are happy to do so!).
- ✓ What are the roles of the other members of staff? For example, circulating while students are working independently, monitoring behaviour, working with individuals etc.

Content coverage

If you're working on a standard school timetable, it will likely not be practical to fit an entire paper into a single session. It may be appropriate to adapt papers, for example:

- ✓ For lower Foundation groups, focus on the first half or two-thirds of a paper.
- ✓ For 'borderline' Foundation groups, look at strategies for tackling the common questions towards the end of the paper.
- ✓ For Higher group students aiming for a grade 5 or 6, concentrate on the first half.

You may want to adapt papers or remove content entirely. Alternatively, students can be given a whole paper and complete whatever is unfinished during independent study time.

If your school does not have an agreed calculation policy or preferred methods, try to avoid questions that may be taught differently by individual members of staff.

Improving student engagement

Walking talking mocks tend to be fairly teacher-led and require periods of listening to explanations. Here are some suggested strategies for ensuring students don't switch off or just mindlessly copy solutions.

- ✓ Set students a time limit to try each question before the teacher's explanation - try working on 'a mark a minute'.
- ✓ Use a visible timer on the board to hold everyone (students and teachers!) accountable for this time frame.
- ✓ Shadow papers could be used in conjunction with the mock paper, with time given for students to complete the relevant question after listening to the teacher's explanation.



Working with tutors

In the run-up to GCSE exams, some students or parents choose to engage private tutors for additional support. Schools often also fund tutoring for pupils who are most in need, particularly those less likely to receive help outside school.

Skye, Third Space Learning's voice-based AI maths tutor, makes it possible for schools to give every student who needs extra help their own one-to-one maths tutor – without stretching budgets or staff time.

With Skye, schools pay a low fixed yearly cost for unlimited sessions, for unlimited students. This means schools no longer have to choose between who needs support and what they can afford. Schools could save over 90% compared to the average cost of other one-to-one tutoring providers .

Because Skye's sessions are delivered online via a shared screen and microphone headset, it can support multiple students simultaneously. Some schools are running up to 120 weekly one-to-one sessions for the same fixed price.

This flexibility makes it easy to raise maths attainment without disrupting the timetable. Sessions can be scheduled to start every five minutes before, during or after school, and students can work on exactly the topics they need.

Every lesson is built on the same curriculum and pedagogy as our traditional tutoring, created by experienced maths teachers, and Skye adapts its teaching in real time to each student's responses. Ofsted recently highlighted that tutoring provision is strongest when “other adults working with students, including [...] tutors, understand the curriculum and its implementation.”



Read more: [Ofsted Mathematics Subject Report: Coordinating Mathematical Success²²](#)

12 min read



Third Space Learning's GCSE Revision Programme is designed specifically for Year 10 and 11 students in secondary schools and academies who are struggling with maths or lacking in confidence.



Scan to find loads
of **FREE** GCSE
maths revision
resources!

GCSE Revision Tips

1. Think about your revision space

Find a calm, quiet place to work, e.g. a quiet space at home, in a school classroom, or at the local library.

2. Prepare your materials

Get your materials together in one easily accessible, organised place, like a folder.

3. Keep revision materials close by

- Exercise book, paper and equipment
- Revision guides
- Worksheets or past papers
- A phone, tablet or computer to look things up or watch videos
- Links to useful revision websites

4. Create flashcards for important formulae

Write a prompt on one side (e.g. "Area of a Circle") and the key information or formula on the card's reverse.

5. Test your memory

Continually test yourself using your flashcards. Place the cards that you can do in one pile, and the ones you can't in another. Keep going back to the pile that you couldn't do and work through them again.

6. Do some maths

The most effective way of learning methods or processes is to **do some maths**. There is limited value in re-reading notes or examples if you're not actively using that information to work on a similar problem.

7. Use practice testing

Pick a topic and choose a set of problems to test your understanding. Work through the problems, answering as much as you can from memory. If you get stuck, use your notes, revision guide, or online videos to try and work out the step you're missing.

8. Explain to yourself or a friend

Explain the process you're working on to yourself as you go along - make sure you understand **why** you're doing something, rather than just following a tutorial. If you really want to test your understanding, explain it to a friend or family member.

9. Space your revision

Don't leave all of your revision to the last minute! Try and space out subjects throughout the week, and space the topics within these subjects so you're frequently revisiting ideas.

10. Ask for help

The idea of planning revision can be overwhelming. Ask for support from your teachers - they may have some suggestions to help you begin or have advice on topics to focus on.

References

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Further reading

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