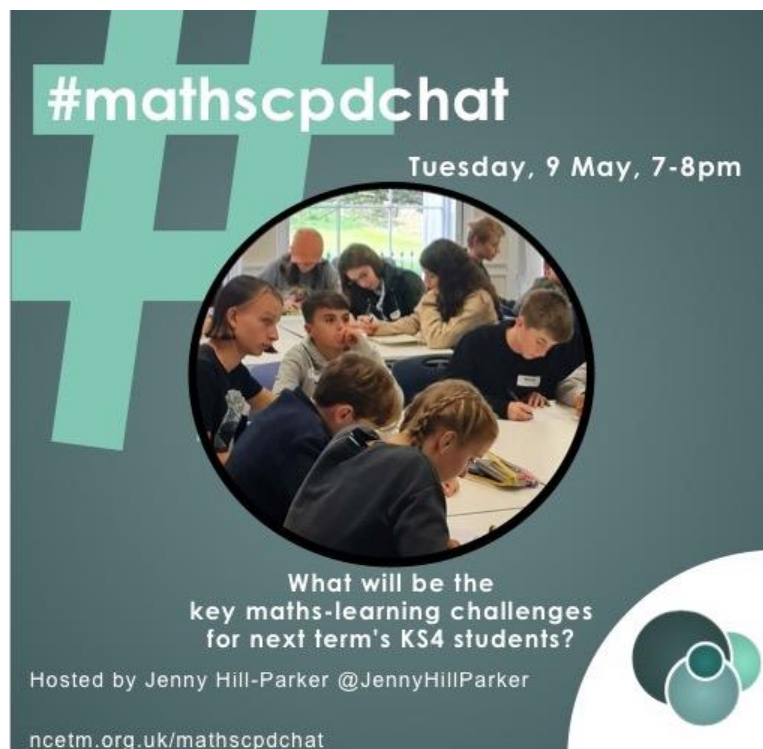


## #mathscpdchat 9 May 2023

**What will be the key maths-learning challenges  
for next term's KS4 students?**

Hosted by [Jenny Hill-Parker](#)

*This is a summary of the discussion – to see all the tweets, follow the hashtag #mathscpdchat in Twitter*



The links shared during this discussion were:

[Four ways to create better mathematical talk in your classroom](#) which is an article on the NCETM website. The authors look at practical ideas for improving mathematical talk in the classroom, including ways of creating an expectation that all pupils/students will engage in mathematical talk. Links are provided to useful resources. It was shared by [Jenny Hill-Parker](#)

[One-Mark Wonders](#) which is a [MathsBot.com](#) interactive resource from [Jonathan Hall](#). Sets (of selectable sizes) of short 'questions' are displayed, answers can be shown or hidden, and the level of difficulty can be adjusted using a slider. It was shared by [Jenny Hill-Parker](#)

[Fingertip Knowledge](#) which is a set of 'fingertip knowledge documents for Foundation Tier GCSE' created by [Ben Gordon](#). They are sets of free-to-download self-quizzable items that require calculation and factual recall, and they can be found on [Jo Morgan](#)'s website. It was shared by [Jenny Hill-Parker](#)

[Corbettmaths: Ultimate GCSE Higher Revision Video](#) which is a video in which all items on a 'GCSE Higher Tier Checklist' are 'revised'. Links to a 'Question Booklet', an 'Answer Booklet', and 'Revision Checklists' are provided, as are the 'Video Times' for each small topic that is revised on the video. It was shared by [Jenny Hill-Parker](#)

[Exam Papers - 1st Class Maths](#) which are GCSE 'Predicted Maths Papers using Advance Information from exam boards'. It was shared by [Jenny Hill-Parker](#)

[Maths Genie: GCSE Revision](#) which are many sets consisting of a Video, Exam Questions, an Exam Questions Booklet and Solutions, each of which is for a very specific maths topic. The maths topics are organised/presented in groups, each of which is related to a particular GCSE grade (or in one case grades), from 'Grade 1' to 'Grade 8/9'. It was shared by [Nikki Cloudsdale](#)

[Access Maths: 9-1 Revision Material](#) which is a website page containing revision tasks presented in a great variety of forms. For example, there are grids where which the user fills in empty cells, a 'Treasure Hunt' composed of numbered cards on each of which a 'question' is presented, and 'Formula Tetrahedrons'. It was shared by [Caroline](#)


**An illustrated summary of the discussions in this #mathsCPDchat follows.**

The host tweeted this reminder a few minutes before the discussion began ...



**Jenny Hill-Parker** @JennyHillParker · 15h

Starting on three minutes, grab your phone and a cuppa and let's go!  
[#mathscpdchat](#)



**#mathscpdchat** Today  
Tuesday, 9 May, 7-8pm

What will be the key maths-learning challenges for next term's KS4 students?

Hosted by Jenny Hill-Parker @JennyHillParker

[ncetm.org.uk/mathscpdchat](http://ncetm.org.uk/mathscpdchat)

... and then opened the chat with her first main question ...



**Jenny Hill-Parker** @JennyHillParker · 16h

Let's start with year 11. What strategies have you used to help prepare your students for next weeks Paper 1? [#mathscpdchat](#)

... which she immediately followed with her own reply and a reminder ...



**Jenny Hill-Parker** @JennyHillParker · 17h

We've used these papers and students completed them as a walking talking mock. How do you run a walking talking mock in your school?



1stclassmaths.com  
EXAM PAPERS | 1st Class Maths  
GCSE Predicted Maths Papers using Advance Information from exam boards.



**Jenny Hill-Parker** @JennyHillParker · 17h

Oops! Forgot the hashtag [#mathscpdchat](#)  
Please remember to include in all tweets and replies!

... and which then generated seven single replies, a linked pair of tweets, a short conversation, a quote-reply comment and the following long discussion initiated by Charlotte Hawthorne, who was tweeting her first reply while Jenny was tweeting a question to her:



**Charlotte Hawthorne** @mrshawthorne7 · 16h

I've been trying to keep it varied. Second the 1st class maths recommendation. Some great resources on [@Just\\_Maths](#). And on [@EmporiumMaths](#) for Edexcel. [#mathsCPDchat](#)



**Jenny Hill-Parker** @JennyHillParker · 17h

Thanks for retweet [@mrshawthorne7](#), I'd love to know what you have done with your year 11 cohort over the last month or two! [#mathscpdchat](#)



**Charlotte Hawthorne** @mrshawthorne7 · 17h

Was just composing a tweet :)  
I also spent quite a bit of time going through every 1MA1 paper including specimen and pulling out threads such as area/perimeter and Ratio&proportion and graphs & spend a lesson or two focussing on those topics and all the questions. [#mathsCPDchat](#)



**Jenny Hill-Parker** @JennyHillParker · 16h

Nice. I used the fingertip facts resource in [@mathsjem](#)'s blog too. Great way of checking for understanding [#mathscpdchat](#)  
[resourceaholic.com/2023/02/5-math..](https://resourceaholic.com/2023/02/5-math..)



**Atul Rana** @atulrana · 17h

Can't go wrong with the 1 markers on the mathsbot site. Just discovered those today! [#mathsCPDchat](#)



**Jenny Hill-Parker** @JennyHillParker · 17h

Yes of course!  
I love them but haven't used them as much as I should have. I will next year! [mathsbot.com/gcse/oneMarkers](https://mathsbot.com/gcse/oneMarkers) [#mathscpdchat](#)



**Mary Pardoe** @PardoeMary · 17h

It's interesting to see which topics you felt it was best to focus on! Any implications for next year's Y11? [#mathspdchat](#)



**Charlotte Hawthorne** @mrshawthorne7 · 16h

These aren't all of them. I did it mainly based on things I knew we hadn't done in a while or things I knew were weaknesses in mocks. It helps I've taught most of them since they were in year 8 so I know them well.  
[#mathsCPDchat](#)



**Mary Pardoe** @PardoeMary · 17h

Yes .... continuity with groups helps so much! (NB timetablers for next year!) #mathscpdchat



**Mary Pardoe** @PardoeMary · 16h

Interesting comment/report-of-experience! Many thanks @Yorkshire\_Steve! #mathscpdchat



**Mary Pardoe** @PardoeMary · 9m

Replying to @mrshawthorne7 and

@JennyHillParker

Yes .... continuity with groups helps so much! (NB timetablers for next year!) #mathscpdchat

As HOD I aimed for continuity 7 into 8; and then continuity 9 into 10 into 11. Obviously didn't always work perfectly, and sometimes I wanted to break a dynamic when it wasn't working great with a class and a particular teacher. I was lucky though - settled team of high quality maths specialists. I get that if this isn't the case then different factors come into play. I supported 1 school which had 2/7 of the maths team as specialists on permanent contracts.

(The report above was sent to Mary Pardoe immediately after she had tweeted about continuity.)



**Jenny Hill-Parker** @JennyHillParker · 16h

Did you teach them remotely in years 8 and 9? Lovely to know them so well! #mathscpdchat



**Charlotte Hawthorne** @mrshawthorne7 · 16h

Yes and lessons were mostly well attended by that class, mathspad (@MathsPadNicola) was our friend then, great tasks and could see the progress live. I knew which areas to go over once we were back face to face though. #mathsCPDchat



Jenny's first question ...

Let's start with year 11. What strategies have you used to help prepare your students for next weeks Paper 1? #mathscpdchat

... also generated the following seven 'single' replies ...



**Ruby Judge** @RubyJudge · 12h

This is very useful honestly Maths community is fab!





**Laura** @mathsteacher09 · 15h

...

The revision sheets on @goteachmaths are also fantastic #mathscpdchat



**MsC** @ZoeCruise · 13h

...

Shadow papers from maths emporium, high frequency topics from @Just\_Maths, exam papers from @1stclassmaths



**Conyers Maths** @ConyersMaths · 12h

...

I'm loving the topic revision sheets from @draustinmaths, using the 5 and 6 ones with my set 1 #mathscpdchat



**Jeged** @JeggedMaths · 12h

...

For Foundation 4/5 I've mixed between pastPapers, Pick n Mix from @JaggersMaths, Sparx Maths Free Crossover Books @SparxMaths and target tests from @mathsgenie #mathscpdchat



**Aurelia Davis** @MrsDavisMaths · 4h

...

We have been using the mark maximisers from @goteachmaths at the start of every lesson then picking a topic to reteach followed by exam questions on that topic from mathsgenie or other resources such as @draustinmaths. This week we are walking talking using @1stclassmaths papers



**Nikki Cloudsdale** @NikkiCloudsdale · 3h

...

Gap analysis of 2 mock sets and teaching the week topics with mathsgenie.co.uk practice revision resources.

... this pair of tweets ...



**S** @lfcssa · 16h

...

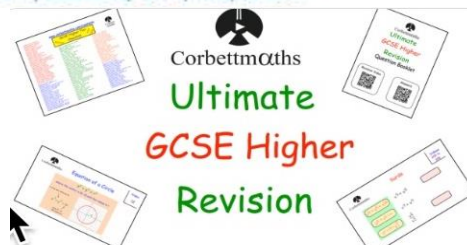
Try the Ultimate paper from Corbettmaths @Corbettmaths and also the predicted papers from Primrose Kitten @Primrose\_Kitten



**Jenny Hill-Parker** @JennyHillParker · 15h

...

Yes! There's a link to the Ultimate Paper here: [corbettmaths.com/2023/04/16/ult...](https://corbettmaths.com/2023/04/16/ult...)



[corbettmaths.com](https://corbettmaths.com)


Ultimate Higher Revision Video


The Ultimate GCSE Higher Maths Revision Video and Booklet - Edexcel AQA OCR - Corbettmaths

... this short conversation ...


-  **Caroline** @cpip1601 · 17h ...  
[accessmaths.co.uk/revision-resou...](https://accessmaths.co.uk/revision-resou...) printed the progressive revision sheets on A3. Did ratio today. #mathscpdcht
-  **Jenny Hill-Parker** @JennyHillParker · 16h ...  
 Yes I love these sheets too! I've used them for intervention classes. How about you? #mathscpdchat
-  **Caroline** @cpip1601 · 16h ...  
 Used in class. Went through any they struggled with. Sent them home with the sheet to finish to form part of their revision and messaged parents to tell them about the resource. #mathscpdcht
-  **Jenny Hill-Parker** @JennyHillParker · May 9 ...  
 Nice #mathscpdchat

... and this from a supply teacher:

-  **Joanne Green** ✓ @MsJoanneGreen · 20h ...  
 @JennyHillParker #mathscpdchat @NCETM I spoke about this today. School's still on curriculum in Science, and other classes it's self learn. I let them know the @coopfailsworth strategy devised by HOD & HOL for them to copy and use: A ppp of exam papers from @3wks b4 & >rewards.

 **Jenny Hill-Parker** @JennyHillParker · 21h  
 Let's start with year 11. What strategies have you used to help prepare your students for next weeks Paper 1? #mathscpdchat  
[Show this thread](#)

The host's second question ...

-  **Jenny Hill-Parker** @JennyHillParker · 19h ...  
 Q2 in tonight's #mathscpdcht  
 Have you been surprised by any gaps in knowledge in the current year 11 (maybe caused by lockdowns in years 8 and 9). How did you check for understanding and identify the gaps?

... prompted her own reply ...

-  **Jenny Hill-Parker** @JennyHillParker · 19h ...  
 I was very glad I checked for understanding with my year 11s, most of whom will get grade 6+. They had, however forgotten how to do stem and leaf diagrams 😞 #mathscpdchat

... and this mention of Sparx Learning resources:



**Charlotte Hawthorne** @mrshawthorne7 · 19h

Something I think my Y11 really benefitted from was having all their homework this year be the y10 scheme of work assigned to them on Sparx. It was like constant revision while continuing with the rest of the scheme. Really showing now we are doing past papers [#mathsCPDchat](#)



**Jenny Hill-Parker** @JennyHillParker · 19h

That's a great idea! [#mathscpdchat](#)



**Mel** @MrsWilliamsAC · 19h

Great idea! Thanks for this going to do that next year ❤️

To Jenny's third question ...



**Jenny Hill-Parker** @JennyHillParker · 19h

Q3 of tonight's [#mathscpdchat](#)

What are you planning to ask your year eleven classes to do over half term in preparation for papers 2 and 3?  
Can you link to any good resources?

... there was the following reply ...



**Peter Williams** @MathsImpact · 19h

Not yet, but after paper 1 there will be loads.

We're planning a walking talking mock in the half term using one of the predicted papers, but I won't know which one until I've seen paper 1, and compared what people put together.

[#mathscpdchat](#)



**Jenny Hill-Parker** @JennyHillParker · 19h

What are your go to sites for predicted papers? And how do you run a walking talking mock. We have very different views in my school and I'm intrigued to know what it means in other schools and settings!

[#mathscpdchat](#)

... and this interesting next quote-reply (suggesting that students' preparation during the half-term break for the second and third GCSE Maths papers include working with a Physics A level book), which then prompted some more comments:





**Joanne Green** ✓ @MsJoanneGreen · 21h

...

#mathscpdchat @JennyHillParker @NCETM A book that's rammed with great maths questions and maths study tips is AQA Physics A-Level 2nd Edition by Jim Breithaupt Oxford University Press. ISBN 9780198351870. Yes, it's physics, but it's maths is GCSE.



**Jenny Hill-Parker** @JennyHillParker · 21h

Q3 of tonight's #mathscpdchat

What are you planning to ask your year eleven classes to do over half term in preparation for papers 2 and 3?

Can you link to any good resources?



**Jenny Hill-Parker** @JennyHillParker · 21h

...

There's such a huge crossover isn't there? #mathscpdchat



**Joanne Green** ✓ @MsJoanneGreen · 21h

...

@JennyHillParker #mathscpdchat @NCETM In the book? Yes, and in all subjects that are STEM. Maths is maths!



**Jenny Hill-Parker** @JennyHillParker · 21h

Replying to @MsJoanneGreen and @NCETM

There's such a huge crossover isn't there? #mathscpdchat



**Atul Rana** @atulrana · 21h

...

Great for revising two GCSE grades worth in there then!



**Joanne Green** ✓ @MsJoanneGreen · 21h

...

@atulrana Hi Atul. #mathscpdchat @NCETM @JennyHillParker Fabulous book for maths, the study tips are well laid out. Lots of thorough examples too. I think it would help any pupils considering STEM A-Levels too.



**Atul Rana** @atulrana · 21h

Replying to @JennyHillParker @MsJoanneGreen and @NCETM

Great for revising two GCSE grades worth in there then!

The host followed her fourth question ...



**Jenny Hill-Parker** @JennyHillParker · 19h

Question 4 of tonight's [#mathscpdchat](#)

Have you perceived an increase in anxiety and stress levels as the exams approached. If so, how has this manifested itself?

... with a tweet about a relevant resource ...



**Jenny Hill-Parker** @JennyHillParker · 19h

there's a blog here about how to use correct mathematical language to reduce maths anxiety in the classroom [#mathscpdchat](#)



[ncetm.org.uk](https://ncetm.org.uk)

Four ways to create better mathematical talk in y...

Four ways to create better mathematical talk in your classroom, and resources to explore

... and a report from Atul Rana about a common 'obstacle' generated the following discussion:



**Atul Rana** @atulrana · 19h

Random but unit conversions of area and volume came up with two of my tutees tonight. Particularly the misconception that area scales the same way as length..I need to revisit this regularly with tutees [#MathsCPDchat](#)



**Mary Pardoe** @PardoeMary · 19h

Interesting ... I wonder how common that misconception is!  
[#mathscpdchat](#)



**Yorkshire Steve** @Yorkshire\_Steve · 19h

When markings GCSEs often saw  $1m^2 = 100cm^2$



**Atul Rana** @atulrana · 19h

Saw two tutees today do this and I felt I failed as I just taught it to them a few months ago 😞



**Jenny Hill-Parker** @JennyHillParker · 19h

That happens so often! Do you have any go to resources for overcoming this misconception? [#mathscpdchat](#)



**Jenny Hill-Parker** @JennyHillParker · 19h

How do you approach teaching this @atulrana?



**Atul Rana** @atulrana · 19h

Well I dived into covering conversions between mixed-base unit areas.  $ft^2$  to  $in^2$ , discussing acres, yards, chains and all 😊 [#MathsCPDchat](#)



**Atul Rana** @atulrana · 19h

...

Cuisenaire rods to literally look at squares and cubes, followed by pictorial representations. But some of them just forget after a few months and default to 'linear scaling always' thinking. So I need to recap more regularly until embedded [#MathsCPDchat](#)



**Atul Rana** @atulrana · 19h

...

Most tutees tend to do [@Corbettmaths](#) five-a-days from year 8 or 9. So by Year 11 they are used to daily mixed questions and method selection. There are so many long term benefits to this spaced practice! [#MathsCPDchat](#)



**Atul Rana** @atulrana · 19h

...

I felt I wasn't teaching this conceptually enough before. But now I realise that it is mostly about retrieval practicing it as well every few weeks. Area scaling is fairly un-intuitive until you do the maths enough times. Same sort of thing with exponential thinking [#mathsCPDchat](#)



**Pip - Mathematics** @AccomplishEdu · 19h

...

Let children 'play' with metre sticks (and Dienes) to create a  $m^2$  and a  $m^3$  - they are not only building it but also creating an image in their mind. Good talk tasks support the Build it, Say it, Write it! No procedure just understanding and retention for the future incl exams!

To Jenny's fifth main question ...



**Jenny Hill-Parker** @JennyHillParker · 20h

...

Q5 in tonight's [#mathscpdchat](#)

Do the current year tens feel like they have had an easier journey through key stages three and four? What will the key priorities be with them?

[#mathscpdchat](#)

... there was just one reply:



**Ally** @LinearColada · 20h

...

I don't necessarily think the Y10s have had an easier journey. In my crossover class, they have large gaps. Practice of the essential skills is currently being implemented alongside after-school interventions [#mathscpdchat](#)

Because there were no replies to the host's sixth question ...



**Jenny Hill-Parker** @JennyHillParker · 21h

...

Q6 of tonight's [#mathscpdchat](#)

To HoDs, what logistical challenges have you had with equipment, timetabling, behaviour, routines with the current key stage four? Does it feel like the issues we have faced will dissipate as the younger students enter ks4?

... or to her last one ...



**Jenny Hill-Parker** @JennyHillParker · 21h

...

And finally a wish list for q7 of tonight's [#mathscpdchat](#)

If ALL challenges were removed, what would your dept look like? What equipment, resources, timetabling would you have? What would maths enrichments look like? How would we assess the students?

... both having been posted only a few minutes before the end of the hour-long chat, they both remain as possible prompts/topics for future helpful discussions.

The host closed the [#mathsCPDchat](#) with this message:



**Jenny Hill-Parker** @JennyHillParker · 21h

...

And that's a wrap! Thank you to all who contributed, and for all the resources that were shared [#mathscpdchat](#)  
Off to watch [@bbceurovision!](#)