



**Advanced Mathematics  
Support Programme®**

# About the AMSP

- A government-funded initiative, managed by MEI, providing national support for teachers and students in all state-funded schools and colleges in England.
- It aims to increase participation in AS/A level Mathematics and Further Mathematics, and Core Maths, and improve the teaching of these qualifications.
- Additional support is given to those in priority areas to boost social mobility so that, whatever their gender, background or location, students can choose their best maths pathway post-16, and have access to high quality maths teaching.

# MEI holds the NCETM CPD Standard

The CPD Standard supports maths teachers to access information about the wide range of CPD provision on offer and to be assured of its appropriateness and quality.

*[ncetm.org.uk/cpdstandard](http://ncetm.org.uk/cpdstandard)*

Continuing Professional  
Development  
Standard

National Centre  
for Excellence in the  
Teaching of Mathematics





# Coffee and Pi

## Y12 to Y13 Transition

Continuing Professional  
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# Making them think!

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The good old days...

## What did we do before AS?

- We didn't worry as much
- We expected students to revise without us holding their hands
- We aimed to finish the course by Easter of y13 and *not before*
- We *did* have y12 exams
- We *did* use y12 exams to make predicted grades for UCAS
- We encouraged students to reflect on whether or not they should continue with the course

# October year 13

- Y12 skills were revised as we applied them to y13 content
- Students were completing UCAS forms and became more aware of the need for good grades
- Students just seemed to start working harder



# What can we do post-AS?

- Can we replicate any of the situations or strategies that used to work?
- Do I have a rose-tinted recollection of halcyon days before league tables?!
- Does over-assessment lead to students not taking assessments seriously?
- Does assessment eat into too much of the teaching time?

# What should we expect of new y13 students?

- Complete fluency with
  - quadratic functions
  - basic calculus
  - logs
  - trigonometry and basic trig graphs
- A strong understanding of the links between
  - graphs and coordinate diagramsand
  - the algebra of circles and calculus
- Familiarity with the Large Data Set
  - fluency with Excel

# How do we achieve this?

- Resources for summer holiday practice:
  - Quadratics
  - Calculus
  - Logs
  - Trigonometry
  - Large Data Set

# How do we achieve this?

- Making links between graphical and algebraic forms needs to underpin the teaching in year 12
  - Underground Maths – Pick a card
  - Risp 17 – six parabolas
- I struggled to find a good source of that develop the ideas of working with normals and/or tangents of functions and/or circles

# How do we achieve this?

- There are resources on Integral for working with the Large Data Sets, but basically set them to clean the data, ask some questions, make some hypotheses and do some analysis
- There are help videos for how to use Excel to analyse data. There is a link to YouTube which you can give to your students.

# Over to you...

- Think back to last September...
  - What frustrated you about your students?
  - What did most of them actually sort for themselves?
  - What absence of skills and/or understanding continued to get in the way of progress?

# Next year...

- There will still be a team organising Coffee and Pi
- If we don't have an Area Coordinator in place, we will contract an AMSP Associate to cover this.
- **What do you want??**
  - Network meetings – sharing
  - CPD – receiving
    - Whole day
    - Half day
    - Twilight

# What else is on offer?

- Lots! See other PowerPoint



# Contact the AMSP



07962 871828



*alexandra.hewitt@amsp.org.uk*



*oxfordshiremathematicscommunity.weebly.com*



AdMathsSouth

# Contact the AMSP



01225 716 492



*admin@amsp.org.uk*



*amsp.org.uk*



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