

# FURTHER MATHEMATICS SUPPORT PROGRAMME WALES

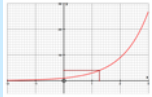
## NEWSLETTER

Autumn 2018  
Issue 10



### Masterclass Year 11 Bangor

Over 50 students attended a one day Advanced Maths Masterclass at Bangor University in September. Students were given an introduction to Complex Numbers, Proof, Polynomials, Matrices and Series. 72% students agreed that they had learnt a lot from the class.



### NEWS RELEASE TO SCHOOLS AND COLLEGES, August 2018

Wales has achieved a significant increase in the numbers of AS Further Mathematic qualifications awarded this year while the number of A-level Further Mathematics qualifications awarded remained stable. According to the Joint Council for Qualifications (2018) the following changes took place in the number of qualifications awarded in Wales since 2017:

- A-level Mathematics numbers are up from 3931 to 3950, a 0.5% increase;
- A-level Further Mathematics numbers changed from 588 to 587, 0% decrease;
- AS Mathematics numbers have declined from 5409 to 4767, a 12% decrease;
- AS Further Mathematics numbers are up from 498 to 599, a 20% increase.

The proportion of A-level Mathematics students who were also awarded Further Mathematics A-level remained at approximately the same level in Wales, with 14.95% in 2017 and 14.86% in 2018 (JCQ, 2018). While the number of A-level Further Mathematics qualifications awarded remained around the same level as last year in both England and Wales, the trend for AS Further Mathematics numbers, differed substantially in the two countries. This year's increase in the number of AS qualifications awarded is the highest in Wales since 2009(JCQ, 2018). In England, AS Further Mathematics numbers are down by 35%.

Read more at <http://furthemaths.org.uk/wales-news>



### Year 10 Conferences Swansea, Glyndwr, Bangor and Aberystwyth Universities, Pembrokeshire College and the University of South Wales,

#### Glyndŵr and Bangor University

124 students from 10 schools across North Wales enjoyed a full day of workshops and talks on maths to encourage them to take maths at A level. Over 57% of the pupils were female and students workshops included 'Financial Times'; 'What is Infinity...or 0?' and 'The Unexpected Maths of Juggling'. "Great fun and exciting" and "Useful for the future and gave a taste of maths as a career" and a teacher wrote "Workshops were engaging and introduced some aspects of maths they don't usually get to see in school".

#### Swansea and Pembrokeshire

A combined conference for both areas was held in Swansea in July with attendance from 5 schools, 46 boys and 55 girls, topics included Euclidean Maths, exploring the ninth dimension and Mathematical magic.

#### University of South Wales, Treforest, Pontypridd Campus

A total of 136 students (67 males and 69 females) attended the conference from 11 schools in the CSC, EAS and Powys areas. Of these, 5 have never attended a University of South Wales conference before. Five workshops were held. Including Game Theory, Mechanical and Aeronautical Engineering, Mathematics and Motorsports and What do Chemistry and Maths have in common?



### Maths Challenge Aberystwyth University

An awards evening was held at Aberystwyth University on the 7<sup>th</sup> June 2018 in celebration of the Maths Challenge for students in Year 8 & below, and Year 10 & below. Overall some 80 students took part in the challenge with at least 40 of them able to attend the awards ceremony.

Dr Debra Croft, Director at the Centre for Widening Participation and Social Inclusion gave an introduction to the ceremony, followed by Prof Simon Cox Head of Maths at Aberystwyth University who gave a short presentation. Pupils from Penglais School in Aberystwyth, were the winners in both categories. Christina Narain in the Year 8 & below, with Daniel Narain in Year 10 & above. Lucy Hodson, Director of Planning presented our awards.

### Year 11 Conference—Aberystwyth University

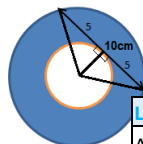
The conference was held in September 2018. Some 60 students, which over 50% were girls, attended the event which consisted of a variety of different workshops including two delivered bilingually. Feedback from the day has been most encouraging with comments such as "Rydw I wedi dysgu bod gan Mathemateg lawer mwy o gymwysiadau nag y feddyliais yn wreiddiol, ac yn sicr yn ddewis yrfa gwyb" and "Thoroughly enjoyed 'Maths In A Twist' ..... it blew my mind". A short mathematical quiz was held on the day with joint winners from both Penglais School and Tywyn High School.

# EVENTS

For more information about any of these events please visit <http://www.furthermaths.org.uk/wales>

**Tuition 2018/19**  
Any students, teachers, or parents who are interested in FMSP tuition, please follow this link to find out more: <http://furthermaths.org.uk/wales-tuition>. If you are ready to sign up for FMSP tuition please contact Beth Eakins  
[B.Eakins@swansea.ac.uk](mailto:B.Eakins@swansea.ac.uk) or Kerensa Huber  
[K.M.Huber@swansea.ac.uk](mailto:K.M.Huber@swansea.ac.uk)  
Phone: 01792 602334.  
Lessons will either be provided face-to-face or during real-time online tutorials.

## Student events—Autumn Term 2018



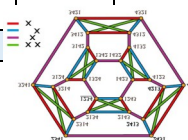
### Solving Unusual Maths Problems - Year 12

The course is aimed for year 12 students planning to apply to study STEM subjects at Russel Group Universities.

Location	Dates								
Aberystwyth University	27/10/2018	24/11/2018	19/01/2019	16/02/19	23/03/2019	06/04/2019			
Bangor University	22/09/2018	20/10/2018	10/11/2018	08/12/2018	12/01/2019	09/02/2019	09/03/2019	06/04/2019	
Cardiff University	13/10/2018	17/11/2018	08/12/2018	19/01/2019	09/02/2019	16/03/2019	06/04/2019		
Swansea University	06/10/2018	20/10/2018	10/11/2018	24/11/2018	08/12/2018	12/01/2019	26/01/2019	09/02/2019	16/02/2019
Cwm Rhymy	TBC								
Coleg y Cymoedd, RCT	10/10/2018	14/11/2018	17/01/2019	13/02/2019	05/03/2019				
Wrexham University	29/09/2018	27/10/2018	24/11/2018	15/12/2018	19/01/2019	16/03/2019	13/04/2019		
Pembrokeshire College	TBC								

### STEP II and III—Year 12 and 13

This course is being run in Swansea, Cardiff, Bangor, Wrexham and Mid Wales and is aimed at students planning on applying to study STEM subjects at the University of Cambridge and the University of Warwick.



Location	Dates								
Aberystwyth University	24/11/2018	19/01/2019	16/02/2019	23/03/2019	06/04/2019				
Bangor University	22/09/2018	20/10/2018	10/01/2018	08/12/2018	12/01/2019	09/02/2019	09/03/2019	06/04/2019	
Cardiff University STEP II and III	17/11/2018	15/12/2018	16/02/2019	23/03/2019	13/04/2019	27/04/2019			
Cardiff University STEP I	10/11/2018	08/12/2018	12/01/2019	09/02/2019	09/03/2019	06/04/2019			
Swansea University	10/11/2018	25/11/2018	09/12/2018	TBC					
Wrexham University	29/09/2018	27/10/2018	24/11/2018	15/12/2018	19/01/2019	16/02/2019	16/03/2019	13/04/2019	
Pembrokeshire College	TBC								

For more information visit [http://furthermaths.org.uk/Wales\\_enrichment](http://furthermaths.org.uk/Wales_enrichment)

### One-day conference for Year 12 Mathematics students

The 'Let Maths Take you Further' conference will be held in Universities in Wales giving inspiring Mathematics workshops and talks to year 12 students.

**Bangor University - 18th December**

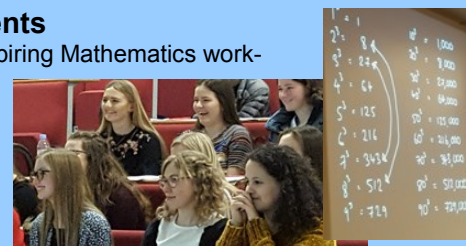
**Aberystwyth University - 22<sup>nd</sup> January**

**Cardiff University - January (date TBC)**

**Swansea University—January (date TBC)**

From 09.15 to 14.00 Places will be allocated on a first-come, first-served basis.

To apply please visit [http://www.furthermaths.org.uk/Wales\\_enrichment](http://www.furthermaths.org.uk/Wales_enrichment)



### Careers in Maths talks

FMSP offers a free workshop to schools where students will be given an insight into how specific Mathematics topics are used in real life, examples of careers where Mathematics-rich degrees are required, university ratings and university entry requirements and will receive leaflets with information related to careers in Maths-rich subjects.

Please email [infomsp-wales@wimcs.ac.uk](mailto:infomsp-wales@wimcs.ac.uk) to request a workshop

## Professional Learning for Teachers

FMSP Wales offers tailored in-school support on any topics from the following WJEC modules: A Level Maths Unit 2 or Unit 4, Further Maths: FM1, FM2, FM3, FM4 FM5 or FM6. with the aim to help schools/colleges to provide better A Level provision for Maths and Further Maths and to increase teaching capacity. FMSP can provide free full or half day workshops for 2 or more members of staff. If you are interested and would like more information please contact us [infomspwales@wimcs.ac.uk](mailto:infomspwales@wimcs.ac.uk)

### Courses Autumn term 2018:

#### A Level Maths

Unit 4

Online—4 session course—5th, 12th, 19th and 26th November—1-3pm

M4 Mechanics and Statistics

Saturdays—South Wales

#### A Level Further Maths

FM 4—South Wales—Weekdays

FM6—South Wales—Weekdays

FM5—Bangor University—Saturdays

For more information about courses please

email [infomspwales@wimcs.ac.uk](mailto:infomspwales@wimcs.ac.uk) / 01792 606845