EGMO press release

Double gold for UK at European maths championship

Yuhka Machino, a student at Millfield School, and Jenni Voon, a student at Landau Forte College, have earned gold medals at the European Girls Mathematical Olympiad (EGMO). Yuhka and Jenni, both 17, came 6th and 7th respectively at a competition of over 140 students representing 37 European countries.

This is the first time the UK team, which is entered into the competition by the United Kingdom Mathematics Trust (UKMT) and supported by XTX Markets, has brought home two gold medals. The team also won a further silver and bronze, with each member receiving a medal. This fantastic all-round performance meant the UK finished 3rd in Europe, their second ever podium finish.

Jenni, who was competing in EGMO for the first time, said "EGMO was a really enjoyable event, with interesting problems and a chance to meet people from other countries. I'm very happy with how EGMO turned out, especially since the UK came third."

Eleanor MacGillivray, 16, who won a silver medal, said "Being a part of the UK team has been a dream come true for me! It has been great to meet and work with other girls who are also really passionate about maths, and even though we couldn't be together in person, it was an amazing experience. The paper was a fantastic challenge and I am thrilled that the hard work has paid off."

The UK team leaders Jenny Owladi and Kasia Warburton, UKMT volunteers, said "The UK students produced elegant and creative solutions on some tricky questions, which would be challenging for any mathematician. We're really proud of the commitment and determination the team showed towards EGMO, especially given the event, as well as all the team training, had to take place virtually. The UK position of 3rd in Europe and the teams' individual medals are all very well deserved. We hope their participation in EGMO will give them inspiration and confidence for further study of mathematics and beyond."

Yuhka had already participated twice at EGMO and once at the International Mathematical Olympiad (IMO), earning gold medals at each. Ceri Fiddes, Head of Mathematics at Millfield School, said "To win her third consecutive Gold at EGMO is an astounding achievement. Teachers and students at Millfield are incredibly proud and humbled by Yuhka's achievements."

The UK team was identified through a rigorous selection process, which included two British Mathematical Olympiad competitions held over two rounds in UK schools and organised by the UKMT. UKMT Director Hannah Telfer said, 'Congratulations to all the UK team on their performance at this challenging EGMO, and to Yuhka and Jenni for their golds! For the UK to finish in third place is a fantastic achievement. We thank all those involved, from the teachers supporting our work in schools, to the mathematicians who volunteer to run the academic preparation for EGMO and our sponsors XTX Markets for inspiring the country's most enthusiastic young problem-solvers."

For further information contact:
Hannah Telfer, Director of the UK Mathematics Trust
Email director@ukmt.org.uk
Phone (office hours) - 0113 365 1121
Phone (out of office hours) - 07712 105977

Jenny Owladi
Email - jenny.owladi@gmail.com
Phone - 07709 182820

About UKMT

The UK Mathematics Trust is a registered charity whose aim is to advance the education of children and young people in mathematics. It organises national mathematics competitions and other mathematical enrichment activities for UK secondary school students. Further information about the Trust and its activities is available at ukmt.org.uk.

More about EGMO 2021

The UK team entry was organised by the UK Mathematics Trust and supported by XTX Markets. Information about selection and training for the EGMO can be found at bmos.ukmt.org.uk

The four students representing the UK team were:
Aanya Goyal (Alleyn's School) - Bronze medal
Eleanor MacGillivray (King's Ely) - Silver medal
Yuhka Machino (Millfield School) - Gold medal
Jenni Voon (Landau Forte College) - Gold medal

EGMO 2021, the 10th EGMO, took place from 10-15 April 2021, and was organised by Georgia. It was scheduled to be held in Kutaisi, but was rearranged into an online format. The UK team sat the papers from home. The competition consisted of two papers on 11 and 12 April, each with three problems of increasing difficulty, targeting the strongest school-aged mathematicians. 27 students were awarded gold medals, out of 144 European competitors and 69 from further afield.

EGMO is the most prestigious olympiad of its kind. It is a problem-solving contest for female high school students, held in a different European country in April every year. The first EGMO was held in Cambridge in 2012, with 19 countries taking part. One of the aims of EGMO is to increase female participation in STEM Olympiads (fewer than 10% of participants at the 2020 IMO were girls). Today, more than 50 countries take part, with guest participations from countries far outside Europe, from Peru to Japan.

The problems from this year's EGMO can be found at https://www.egmo.org/egmos/egmo10/.

The UK team achieved a perfect score on the following problem:

EGMO 2021 Problem 1 (proposed by Australia)
The number 2021 is fantabulous. For any positive integer m, if any element of the set {m, 2m + 1, 3m} is fantabulous, then all the elements are fantabulous. Does it follow that the number 2021^{2021} is fantabulous?