EGMO press release

UK student places first at European maths competition

Eleanor MacGillivray, 18, a student at King's Ely, has earned a gold medal at the European Girls' Mathematical Olympiad (EGMO). Eleanor was placed first out of 123 European contestants at the competition held in Eger, Hungary.

Eleanor was competing as part of a team of four UK students, which was entered into the competition by the United Kingdom Mathematics Trust (UKMT) and supported by XTX Markets. The other team members, Raka Chattopadhyay, Rebekah Glaze, and Tatiana Mouzykantskii all received bronze medals. The United Kingdom was placed 9th amongst official European teams.

Eleanor said: "Representing the UK at EGMO has been an incredible experience and one I will never forget. Ever since I read an article about a British girl starring at EGMO when I was in Year 9, getting a medal at EGMO was something I aspired to, but never thought possible, so to win gold is an amazing feeling. I'm very grateful to everyone who has supported me - an enormous thank you must go to everyone at the UKMT! "

The UK team leaders Jenny Owladi and Kasia Warburton, both UKMT volunteers, said "The UK students produced elegant and creative solutions to some tricky questions, which would be challenging for any mathematician. We're really proud of the commitment and determination the team showed towards EGMO, and their medals are very well deserved. After two years of virtual events, it was great that this year's EGMO could take place in person, giving the girls the opportunity to meet other participants from around the world, and to take part in a busy programme of activities as well as the main exams. We hope their participation in EGMO will give them inspiration and confidence for their further study of mathematics and beyond."

The UK team was identified through a rigorous selection process, which included the British Mathematical Olympiad held over two rounds in UK schools and organised by the UKMT. Dr Geoff Smith, Chair of the British Mathematical Olympiad said, 'Congratulations to all the UK team on their performance at this challenging EGMO, and to Eleanor for her outstanding 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."

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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 2022

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:

Eleanor MacGillivray (King's Ely) – 34/42 Gold medal
Raka Chattopadhya (The Queen's School, Chester) – 17/42 Bronze Medal
Rebekah Glaze (West Kirby Grammar School) – 16/42 Bronze Medal
Tatiana Mouzykantskii (Sevenoaks School) – 19/42 Bronze Medal

Photos Photographs of participants are available for download at the EGMO site. https://www.egmo.org/egmos/egmo11/people/summary/

Statistics 23 gold medals (scores ≥ 29), 32 silver medals (scores ≥ 22), 62 bronze medals (scores ≥ 15), 47 honourable mentions from 222 contestants total.
From official European teams: 10 gold medals, 22 silver medals, 33 bronze medals, 27 honourable mentions from 123 contestants total.

EGMO 2022, the 11th EGMO, took place from 6-12 April 2021 in Eger, and was organised by Hungary. The competition consisted of two papers on 8th and 9th April, each with three problems of increasing difficulty, targeting the strongest school-aged mathematicians. 23 students were awarded gold medals, out of 123 European competitors and 99 from further afield.

EGMO is the most prestigious olympiad of its kind. It is a problem-solving contest for female secondary 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 2021 International Mathematical Olympiad were girls). Today, more than 50 countries take part, with guest participation from countries far outside Europe, from Peru to Japan.

Eleanor was one of three European students to give a perfect solution to the hard EGMO problem which was authored by two British mathematicians. That problem, and the others, can be found at https://www.egmo.org/egmos/egmo11/solutions.pdf

That problem mentioned above is too technical for a wide readership, and some media outlets may find the typesetting a challenge. The following problem is a good example of a recent maths olympiad problem which will be accessible to a far wider group of readers, and is easy to typeset. This was Problem 2 of the British Mathematical Olympiad in 2021 and permission is given for this to be reprinted:

One day Arun and Disha played several games of table tennis. At five points during the day, Arun calculated the percentage of the games played so far that he had won. The results of these calculations were exactly 30%, exactly 40%, exactly 50%, exactly 60% and exactly 70% in some order. What is the smallest possible number of games they played?