

Further Mathematics Support Programme



Yorkshire and The Humber (2) Year 10 Mathematics Team Competitions 2011

This is team competition for students in Year 10 testing mathematical, communication and teamwork skills.

Entry requirements:

- An [online entry form](#) must be submitted. The fee is £15 per team and this should be paid by cheque in advance. Please make cheques payable to 'University of Leeds', cheques to any other payee cannot be accepted. Please ensure that the cheque is sent with a clear indication about who the payment is from and that it is for the Year 10 Team Maths Challenge 2011. Please send payments to Jane West, School of Mathematics, University of Leeds, Woodhouse Lane, Leeds, LS2 9JT
- Each team must consist of four Year 10 students preferably (but not necessarily) of mixed gender (2 boys, 2 girls).
- It is essential that a teacher accompanies their team and actively participates in the event by supervising a team and marking each round. (Please note that if you wish to bring two teams then each team must have an accompanying teacher).
- A signed form (by the teacher) needs to be submitted at the start of the competition giving permission for photographs to be taken.
- There is no requirement for students to attend the competition in their school uniform. However, this decision is left to the discretion of the school.
- Schools who enter a team will need to be registered (updated since July 2010) with the Further Mathematics Support Programme (this is free and can be done online by visiting: <http://www.furthermaths.org.uk/Eregister.php>)

Competition content and details:

- The challenge involves each team working together at a table on a set of problems.
- All questions will be 'team questions'.
- Questions will include recreational mathematics as well as some questions of a more 'traditional' nature.
- There will be five 'rounds' in the competition and the winning team will have the highest total score.
- Before the competition heats, students will be required to familiarise themselves with an area of mathematics outside of the GCSE syllabus. A round of the competition will ask questions on the topic of **Pascal's Triangle and the Binomial Probability Distribution**. The key points will include: Understand the patterns in Pascal's Triangle; calculating probability in a Binomial situation using Pascal's triangle, expressing answers as fractions; using Pascal's triangle in a situation when the probability of success or failure are not equally likely. It is anticipated that students will have had the opportunity to prepare for this round in advance. This link may be helpful: <http://nrich.maths.org/5347>
- Calculators and equipment (e.g. rulers, protractors etc) are not permitted.
- For a sample competition materials used in a past year, click [here](#) for questions and click [here](#) for the solutions.

Venue:

- There are four venues across the region. For details, enquiries and booking arrangements, please visit http://www.furthermaths.org.uk/centre/Yorkshire3.php?view_info=true
- We will aim to have tea and coffee available for teachers, however refreshments will not be provided for students and teams will need to bring along their own drinks and snacks.
- Please arrive in good time as each heat of the competition will start 15 mins. after the published arrival time. Please note the competition is expected to last for approximately 2 hours 30 mins.
- Parking details specific to your chosen venue will be provided when an online booking is received.

If you have any other queries regarding the Year 10 Team Mathematics Quiz please contact Jane West email address janewest@furthermaths.org.uk