UKMT Team Maths Challenge 2009

General information for teachers

Eligibility

The Team Challenge is a competition designed for teams of four pupils in:

- ✓ **Y8 & Y9** (England and Wales)
- ✓ **S1 & S2** (Scotland)
- ✓ **Y9 & Y10** (Northern Ireland)

with no more than two pupils from the upper age group.

How the competition works

There are three stages to the competition.

Round One refers to the selection and preparation of your team prior to the Regional Finals. This is not an official stage of the competition and you do not have to run a practice event in your school – however, most schools find the material provided from past competitions useful for selecting a team of four and for additional resources. Material from the last few years is available to download from the Team Maths Challenge section of the UKMT website (www.ukmt.org.uk).

The **Regional Finals** will be held across the UK between February and May 2009.

Each event will involve the following rounds:

1. Group Competition
2. Cross-number
3. Head-to-head Contest (NB - the previous Head-to-head round has been replaced by a new activity similar to the Mini Relay piloted at the 2007 and 2008 National Finals)
4. Relay Race

The **National Final** will be held in London on Monday 22 June 2009.

The rounds differ slightly from those in the Regional Finals and are as follows:

1. Group 'Circus' Competition (this is similar to the regional Group Competition with the addition of practical materials for use in solving certain questions)
2. Cross-number
3. Head-to-head Contest
4. Relay Race

In addition, all schools take part in the Poster Competition which is judged and scored separately from the other rounds.

How to enter

Information and entry forms for the 2009 competition will be posted to Team Maths Challenge contacts at schools in early October 2008 (and made available on the UKMT website) once the majority of Regional Final dates have been confirmed. Schools should then check the list of venues, dates and availability which will be added to the Team Maths Challenge section of the UKMT website and updated as places at venues are filled. The deadline for entries will be **Friday 5 December 2008.**

Explanation of rounds

Group Competition *(45 minutes, 6 points per correct question)*
- The contestants are given a set of 10 questions, which they should divide up among themselves so that they can answer, individually or in pairs, as many as possible in the allotted time.
- A team captain should be made responsible for the completion of the answer grid to be handed in for marking at the end of the round.

Cross-number *(up to 45 minutes, 1 point per correct digit)*
- Teams are divided into pairs, with one pair given the across clues and one pair given the down clues.
- Each pair answer as many questions as possible (on their own grid), showing their answers to the supervising teacher as they go. The teacher will then either confirm or correct the answer, showing the correct answer to both pairs to make sure that they have the most up-to-date version of the grid.
- The sole communication permitted between the two pairs is to request, via the supervising teacher, for a particular clue to be solved.

Head-to-head Competition *(6 minutes per round, 2 points per answer if correct on first attempt or else 1 point if correct on a subsequent attempt: in addition, a bonus of 2 points to the first team in each pair to present a correct set of answers)*

A new activity (as described below) has replaced the previous Head-to-head round. More detailed guidelines, particularly in relation to the logistics and scoring, will be available on the UKMT website from early October 2008.

- Teams are paired up for this activity and play against a different team for each round.
- Each team is divided into two pairs, with Pair A given Questions 1 and 3 (along with the record sheet on which to write the answers) and Pair B given Questions 2 and 4.
- Question 1 can be solved independently of the others, but the answer to each of the subsequent questions is dependent on the previous answer.
- Once they have calculated the solution to Question 1 and written it on the record sheet, Pair A pass the sheet to Pair B. This continues with Pair B passing the answer to Question 2 back to Pair A and so on. Apart from passing the record sheet back and forth, no communication is allowed between the two pairs.

- Students can work on any of their given questions at any time and the questions have been designed so that pairs can carry out preparatory work before receiving the answer to the previous question.
- If a pair know that the answer they have received must be wrong (e.g. if they were expecting a square number), they can pass it back to the other pair.
- Once all questions have been answered, Pair B hand the record sheet to the supervising teacher to mark, starting from Question 1. If all answers are correct, the team has successfully completed the round. At the first incorrect answer, the teacher stops marking and passes the sheet back to the relevant pair to reattempt the question.
- If a pair realise (*before* the completed record sheet is handed to the teacher) that they may have passed on an incorrect answer, they can ask the teacher to retrieve the record sheet from the other pair.

Relay Race (*up to 45 minutes, 2 points per correct question*)
- The aim here is to have a speed competition with teams working in pairs to answer alternate questions.
- Each team is divided into two pairs, with each pair seated at a different desk away from the other pair and the supervising teacher.
- One member of Pair A collects question A1 from their supervising teacher and returns to his/her partner to answer the question together.
- When the pair are certain that they have answered the question, the runner returns to the front to submit their answer to the teacher. If it is correct, the runner receives question B1 to give to the other pair (Pair B) from their team. If it is incorrect, Pair A then have another go at answering the question, then the runner returns to the front to resubmit their answer and receive question B1 to deliver to Pair B. (Pair A can only have one extra attempt.)
- The runner then returns, empty handed, to his/her partner.
- Pair B answer question B1 and a runner from this pair brings the answer to the front, as above, then takes question A2 to Pair A. Pair A answer question A2, return it to the front, collect question B2 for the other pair and so on until all questions are answered or time runs out. Thus one set of pairs (the A pairs) answer only A questions and the other set (the B pairs) only B questions.
- Only one pair from a team should be working on a question at any time and each pair must work independently of the other.

Group Circus (*National Final only, one hour*)
Teams move around a number of stations to tackle a variety of activities, some of which involve practical materials.

Poster Competition (*National Final only, one hour*)
Prior to the Final, teams prepare information based on a given topic, and then on the day of the competition they build a poster answering questions about the topic.

For any further information about the Team Maths Challenge please call 0113 343 2339, or email: enquiry@ukmt.org.uk