



## How the Maths Teams Challenge Works

This article explains how I, David Ilsey, have run the Maths Teams Challenge in the past. While a similar format might be used at other venues, there may be some differences.

### Before the Competition

Schools can enter teams of 5 students. They can enter as many teams as they like. They should register their teams with the host school no later than two weeks before the competition. The cost is \$40 for the first team and \$20 for each subsequent team. This covers stationery, preparation of materials, trophies and medallions, lunch for supervisors etc.

Teams should be in one of the four divisions: Years 5-6, 7-8, 9-10 and 11-12. Each team must include at least 2 students from the lower year level.

Once students are selected, they should be familiarised with how the competition works and given some practice at both the Team and Relay events using past papers which can be downloaded from this site. It is advisable also for each team to work out strategies, e.g. how many people will work on a question in the Teams event, how to manage time in the Relay event etc.

Each team must be accompanied by a supervisor who will supervise a team from a different school. The supervisor can be a teacher, another school worker, a parent or, for the Years 5-6 and 7-8 teams, a Year 11 or 12 student.

Teams should bring writing implements, paper for working out and a calculator for each member of the team.

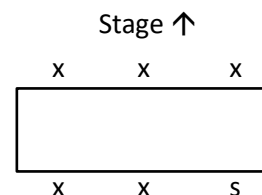
### Competition Timetable

10:00	Suggested arrival time
10:15	Seating of teams
10:30	Welcome and explanation of the team event
10:40	Team event
11:25	Collection of papers

- 11:30 Lunch – e.g. a sausage sizzle and drinks for sale for participants, free to supervisors
- 12:00 Seating of teams
- 12:05 Results for team event
- 12:10 Explanation of relay event
- 12:20 Relay event
- 1:20 Collection of papers
- 1:30 Results and presentation of winners
- 2:00 Finish

## Arrival

On arrival, teams may enter the hall, find their tables and sit down. Tables will be marked with School, Division and Team Number, e.g. *Holmview State High School – Years 9-10 – Team B*. Supervisors should initially sit with their own teams as shown to the right.



At 10:30, supervisors will be asked to move to a different table so that they are supervising a team from a different school. Supervisors will then be asked to open the envelope on the table. This envelope will contain all the question and answer sheets required for the competition. The sheets will be colour coded for ease of reference.

## Teams Event

When instructed, supervisors should place a Teams Event question sheet (white) face down in front of each student and a student response sheet (white) face up in the centre of the table. The answer sheet (coloured) should stay in the envelope. One of the students should write the team name on the student response sheet.

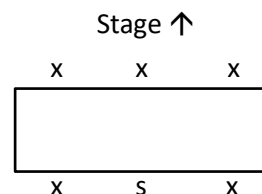
On the word 'GO', students may work individually or together to answer as many of the questions as they can and write their answers on the student response sheet. They have 45 minutes. Time remaining will be shown on a projector screen. Supervisors should check that there is no contact between teams and no use of phones or other sources of information. Students may use calculators, however: four-function, scientific, graphics and CAS are all allowed.

On the word 'STOP' the supervisor should pick up the students' response sheet and mark it against the coloured answer sheet, giving the appropriate number of marks for each question. The total score should then be calculated and recorded. A member of the team should watch to ensure that the paper is marked correctly. Once the supervisor and team have agreed on the score, the supervisor should ensure that the team name is on the response sheet and then hold it up to be collected.

Supervisors may then discuss any of the questions with the team. Once all the papers have been collected, the teams will be invited to leave the hall for lunch. Sausages and drinks will be available for purchase by team members, free to supervisors.

## Relay Event

After lunch, teams and supervisors should return to the same tables that they worked at during the Teams event. This time, however, they should be arranged as shown to the right.



The student opposite the supervisor is the contact person; the pair on the supervisor's left is *the left pair*; the pair on the supervisor's right is *the right pair*.

When instructed, the supervisor will take the relay questions (20 strips of white paper stapled together) and place them face down in front of him/her. He/she should also take the answer sheet (which is coloured and folded) and the score sheet from the envelope.

On the word 'GO', the supervisor will tear off the top question strip and hand it to the contact person. Note that the strips should be face down on the desk. This way the first question to be torn off the top will be Question 1. The contact person will then hand the question to the left pair. The left pair may then work on the question as for as long as they like. When they have an answer, they write it on the strip and pass it to the contact person, who hands it to the supervisor.

The supervisor then checks whether the answer is correct, being careful not to let anyone else see the answers (including students at other tables).

If it is correct, the supervisor says 'CORRECT', then hands the contact person the second question and the contact person hands the question to the right pair. Then the supervisor places a tick in the first box on the answer sheet and records the number of marks for that question and the cumulative score.

If the answer is incorrect, the supervisor hands the question back to the contact person and says 'INCORRECT'. The contact person may hand the question back to the **same pair** for another go. Then the process repeats. Each time a wrong answer is submitted, the supervisor places a cross in the next box for that question and the value of the question reduces by 1.

At any stage, the contact person, may instead say 'PASS' and hand the question back to the supervisor, in which case the supervisor hands the next question to the contact person for the next pair. The supervisor then records 0 for that question. Once passed, a question cannot be retried later. After passing, the pair may discuss the question with the supervisor, but not for other tables to hear.

No students other than the assigned pair may play any part in answering a question. All members of the team may, however, discuss whether the pair should have another go after getting a question wrong.

Question 1 goes to the left pair, Question 2 to the right pair, Question 3 to the left pair and so on. After every 4 questions, the team stands up and moves one place clockwise around the table. The supervisor stays put. Thus each team member will get equal time in each position.

The team has 60 minutes to get as many points as possible. If they run out of time before trying all the questions, they do not get any points for the remaining questions; if they finish the questions before the end of the 60 minutes, they cannot revisit any questions. Keeping an eye on the time is an important strategy and can be done by the pair that is not answering the question.

Time remaining will be shown on the projector screen. Once 'STOP' has been called, the supervisor should add no more points to the score sheet. The supervisor then shows the sheet to the team who may check for errors in adding etc. Once agreement is reached, the supervisor should hold up the sheet for collection.

Teams should then remain seated while the results are calculated. Supervisors may return to their own teams.

## **Trophies**

Points for the two events are added to get a total. The winning team in each division will be presented with a shield which they can keep until the next competition. Members of the top three teams in each division will be presented with medallions which they can keep for ever.