

Mathematical Association of Tasmania Inc.

Mail: PO Box 313 Sandy Bay, 7006

Email (Competition Coordinator): bstephenson@gyc.tas.edu.au



ATTENTION: Head Mathematics Teacher

The Mathematical Association of Tasmania Problem Solving Competition is a maths competition focusing on problem solving and mathematical reasoning. Three divisions (Junior 7/8, Intermediate 9/10, Senior 11/12) sit a 2 hour paper consisting of 10 - 12 questions of varying difficulty. The questions are designed to elicit mathematical thinking and may require students to apply their mathematical thinking to topics outside of the standard curriculum or to link different topics of mathematics together which are traditionally taught separately. Each question may require some experimentation and different approaches before a student makes significant headway. For each question, students need to explain their reasoning and working (using literacy as well as numeracy as necessary) to gain full marks for a question. A correct answer with little or no working will receive few marks. As such students will not be able to complete all questions fully in the timeframe. They will receive a better mark if they answer several questions very well rather than many questions poorly.

Example Question (NOTE: This also appears on the flier later in this document for your students)

- a) Write down the first ten prime numbers.
- b) I picked two different prime numbers and multiplied them together. My answer was 51. What were my numbers?
- c) How many numbers below 51 do **not** share a factor with 51? (For example: 15 and 35 share a factor as they both divide by 5, while 16 and 35 do not share a factor.)
- d) Pick two different prime numbers and multiply them together. How many numbers less than your total do **not** share a factor with your total? Repeat.
- e) I picked two more prime numbers, 3301 and 1030201, and multiplied them together. How many numbers less than my total do **not** share a factor with the total?

The Mathematical Association of Tasmania will be conducting its Annual School Mathematics Competition on Thursday 30th March 2017. It is important to adhere closely to the schedule outlined below so that the organisation of this state wide competition runs smoothly.

If you are unable to run the competition on this date, contact the coordinator, Brett Stephenson, via email at bstephenson@gyc.tas.edu.au. All communication from the competition coordinator, including distribution of papers, solutions and certificates, will be via email.

Participation Certificates can be awarded to all candidates. These will be included in the electronic distribution of the Competition Papers to schools on Tuesday 28 March 2017. Schools may present these to candidates as they leave the Competition Room or at a later date, for example to coincide with the release of the results. If the Certificates are distributed at a later date, a list of candidates will need to be retained by the school.

As in recent years, schools can award a number of School Achievement Certificates to recognise worthy performances by non-prize-winning students within their school. The number of such certificates is left at the discretion of individual schools but is suggested to be at most 10% of the number of entries from the school. Teachers within the school may use their own criteria to select the students.

COMPETITION SCHEDULE

- By Friday 24 March 2017* **ENTRY FORMS AND PAYMENT DUE**
Complete the entry form (below on page 4), **email** entry numbers to bstephenson@gyc.tas.edu.au, and forward entry fees (\$4.00 per student).
- Tuesday 28 March 2017* **COMPETITION PAPERS EMAILED**
Competition papers will be emailed to all entering schools by this date. **PLEASE CONTACT THE COMPETITION COORDINATOR VIA EMAIL ON MARCH 28th IF THEY HAVE NOT ARRIVED.** Each school will need to print and **securely** store the appropriate number of papers for their students. The paper is designed to be a single-sheet, double-sided paper.
- Thurs. 30th March 2017* **COMPETITION DAY**
Each school will allocate member(s) of staff to supervise the competition for two hours, preferably in the morning – all sections (Junior, Intermediate and Senior) have the same duration. Students will require scrap paper for working out and lined paper for their final solutions.
- Monday 3 April 2017* **SOLUTIONS EMAILED**
Solutions to Competition papers will arrive via **email**. Each school must examine their students' final solutions and forward (email or snail mail) their best few to the competition coordinator.
- Wednesday 12 April 2017* **CLOSING DATE**
Wednesday April 12th is the closing date for the "best few" scripts to arrive at Competition Post Office Box. Final marking cannot begin until **ALL** scripts are in so please keep strictly to this date.

Results, certificates and prizes will be announced in Term 2, 2017.

Schools are asked to assist the MAT in the following ways:

1. Print/photocopy suitable numbers of the papers and store them securely.
2. Provide scrap paper for rough working and lined paper (A4) for final solutions (please staple these).
3. Supervise the Competition.
4. Vet scripts after the Competition and forward the best entries; in most cases this will mean between 1 and 5 scripts in each section. (email preferred, but snail mail OK)

I trust that teachers will continue to give their students every encouragement to enter this worthwhile Competition which aims to seek out mathematically gifted young people, attract interest in Mathematics and stimulate more enthusiasm in its study. Please note that this year the question papers have been set in such a way that all students should get satisfaction in solving some problems. Questions do not directly test traditional class work but seek to challenge and stimulate students with interesting problem solving situations where they can apply mathematical skills or methods. Please find below a flyer advertising the event, which can be displayed in schools, and the entry form.

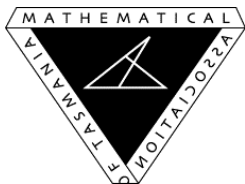
Brett Stephenson – MAT President and Competition Coordinator

Ph. 6238 4350 (School)

Email: bstephenson@gyc.tas.edu.au

Post: PO Box 313 Sandy Bay, 7006

Mathematical Association of Tasmania Inc.



2017

MAT SCHOOL MATHEMATICS COMPETITION

DIVISIONS:	JUNIOR	YEARS 7 & 8
	INTERMEDIATE	YEARS 9 & 10
	SENIOR	YEARS 11 & 12
PRIZES:	FIRST	\$100
	SECOND	\$60
	THIRD	\$40

\$25 Outstanding Achievement Awards are awarded to 1% of entries per division
We also recognise the best Year 7, 9 and 11 students as they compete against older students.

Participation Certificates for all Students
School Achievement Certificates

Competition Date: THURSDAY 30 MARCH 2017

ENTRY FEE: \$4.00 per student

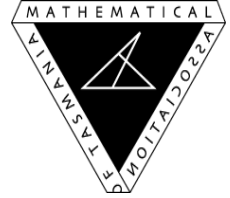
Example Question

- Write down the first ten prime numbers.
- I picked two different prime numbers and multiplied them together. My answer was 51. What were my numbers?
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- Pick two different prime numbers and multiply them together. How many numbers less than your total do **not** share a factor with your total? Repeat.
- I picked two more prime numbers, 3301 and 1030201, and multiplied them together. How many numbers less than my total do **not** share a factor with the total?

ENTRY FORMS AND PAYMENT DUE FRIDAY 24 MARCH 2016

SEE YOUR MATHEMATICS TEACHER FOR FURTHER DETAILS

**MATHEMATICAL ASSOCIATION OF
TASMANIA Inc.
SCHOOL MATHEMATICS
COMPETITION**



SCHOOL ENTRY FORM/TAX INVOICE

ABN: 99 841 054 827

School name	
Address	
Phone	
Contact person	
Contact email	
Note that future communication will be via email. PLEASE PRINT CLEARLY.	

ENTRIES (Please indicate clearly):

Division	Number of Students
Junior (Years 7 & 8)	
Intermediate (Years 9 & 10)	
Senior (Years 11 & 12)	

ENTRY FEES: \$4 per student

TOTAL ENTRY FEE ENCLOSED: \$

No GST has been charged

PAYING BY MAIL

Post payments to:

Competition Coordinator
Mathematical Association of Tasmania
PO Box 313
SANDY BAY TAS 7006

Cheques payable to:

Mathematical Association of Tasmania

PAYING ONLINE (preferred method)

EFT Payments:

Commonwealth Bank of Australia

Account name:

Mathematical Association of Tasmania

BSB: 067000

Account no.: 00090941

Reference no.: [SCHOOL NAME]

Confirm payment via email to Brett Stephenson

(bstephenson@gyc.tas.edu.au)