MATHS MATTERS

NEWSLETTER OF THE AUSTRALIAN MATHEMATICS TRUST   NOVEMBER/DECEMBER 2014

Welcome to the new look newsletter of the Australian Mathematics Trust (AMT). Our vision at AMT is that all young Australians have the opportunity to realise their intellectual potential in mathematics and informatics. Through this newsletter we want to provide teachers with inspiration and resources for the classroom and highlight the endless possibilities and creativity of mathematics and informatics.

AWARDS PRESENTATIONS

During October and November AMT held a number a awards presentations both nationally and internationally to recognise the oustanding achievements of students who sat our competitions. Medals or certificates were awarded for the Australian Mathematics Competition (AMC) sponsored by the Commonwealth Bank, Australian Informatics Competition (AIC) and the Australian Intermediate Mathematical Olympiad (AIMO).

This year a record 77 medals were presented at ceremonies around the world to students who sat the AMC. Of these, 44 were Juniors, 16 were Intermediates and 17 were Seniors. There were also an outstanding number of perfect scores, 64 from all five divisions.

During October the first medals were presented in Singapore, New Zealand, Malaysia, Philippines, Hong Kong and Indonesia.

Australian medals were presented at Government House Brisbane by His Excellency the Honourable Paul de Jersey AC, Governor of Queensland, on 7 November. A complete list of all medallists can be found here.

After the medal ceremony at Government House representatives from the Commonwealth Bank, sponsor of the AMC, hosted a celebratory luncheon for the medal winners, their families and teachers from their respective schools. It was a wonderfully relaxed affair, where the attendees heard some inspiring and inclusive words from medallist Seyoon Ragavan, from Knox Grammar School and were also treated to a wonderful piano performance from William Hu, from Christ Church Grammar School.

Isabella Mannix, Senior Manager Schools and Not-for-Profit Sector Banking, hosted the event and spoke of the Commonwealth Bank's commitment to financial literacy. 'From a broader perspective, since the day we first opened

The 2014 Australian AMC medallists with His Excellency the Honourable Paul de Jersey AC, Governor of Queensland.

our doors, we've been teaching students about managing money. Put simply, we believe that maths is central to understanding finance, and financial literacy is crucial to the success of our economy.'

Local presentations were held in Brisbane, Adelaide, Perth, Sydney, Melbourne, Darwin and Canberra. Local presentations included awards for perfect scores or high distinctions in the AIC and AIMO.

TEACHER AND STUDENT WORKSHOPS

In conjunction with the awards presentations teacher and student workshops were held throughout Australia. The latter were heavily subscribed.

The teacher workshops were open to all teachers with the focus on enrichment opportunities for students and development of problem-solving techniques.

The student workshops aimed to teach students how to 'think mathematically' using some topics not found in the standard school curriculum. There were plenty of hands-on activities and the opportunity to mix with some other able young mathematicians.

ONLINE CAT COMPETITION

Currently known as the Australian Informatics Competition (AIC), a multiple-choice written competition, this competition will be re-badged as the Computational and Algorithmic Thinking (CAT) competition. The new name better explains what the competition is about because the term informatics is not well understood. This competition introduces students to algorithmic thinking, now a component of the Australian Curriculum, without the need for programming expertise.

Once again, we want to reach a wide range of students to find out who our potential programmers are, without the need for specific expertise in schools. In 2015, the CAT will also be available online. Whether schools choose to sit the competition online or by the written version, it will be held on Tuesday 24 March. In early 2015 all schools will be sent information on how to enter the CAT and all our other programs and competitions. Dates and fees for Australian schools can be found here.

AMT RESULTS AND STATISTICS

In the past AMT has annually produced two books which cover the AMC and AMOC competitions and programs. Solutions and Statistics covers the AMC and includes the papers, solutions, results and statistics. Mathematics Contests–The Australian Scene includes MCYA Challenge Stage, AIMO, the AMOC Senior Contest, Australian Mathematical Olympiad (AMO), Asian Pacific Mathematical Olympiad (APMO) and the International Mathematical Olympiad (IMO). From this year neither of these books will be printed. We have produced a new book called 2014 Solutions which contains the papers and solutions to all five divisions of the AMC. Results and statistics from the 2014 AMC are now available on our website at www.amt.edu.au/mathematics/amc/amc-2014-results/ and results and statistics from AMOC events will be available early in the new year on our website.

CATALYST PROGRAM ON FERMAT'S LAST THEOREM

AMT and AMSI (Australian Mathematical Sciences Institute) worked together with the ABC in assisting with a recently aired edition of *Catalyst*. Mathematical comedian Simon Pampena outlined the history of one of the most intriguing theorems in mathematics, Fermat's Last Theorem, which was finally solved in the early '90s by English mathematician Andrew Wiles.

The AMT identified appropriate audience participants, including some of our Olympians or Olympiad trainees, and these students were able to ensure that the audience for the production filming was a lively one.

The *Catalyst* episode aired on 27 November and can be viewed at www.abc.net.au/catalyst/stories/4136224.htm
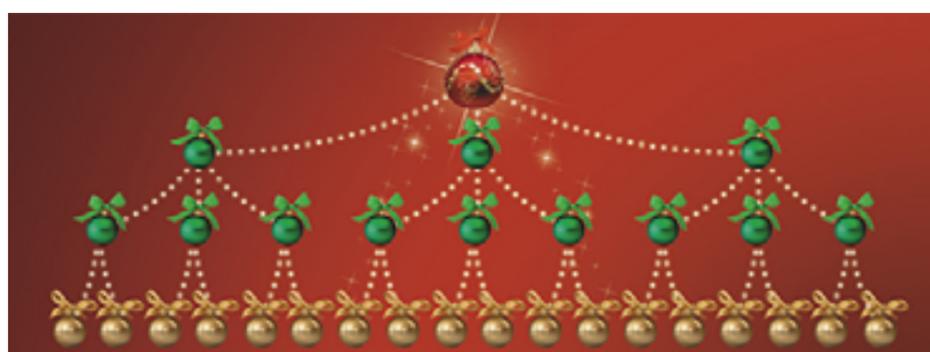

NEW BOOK AVAILABLE

Problem Solving Tactics, by A Di Pasquale, N Do & D Mathews is an exciting new addition to our catalogue. It is a compilation of tricks and tactics useful in solving mathematical problems at the Olympiad level. More than 150 ideas are illustrated in the fields of number theory, geometry, algebra and combinatorics. With an informal style, clear diagrams and hundreds of practice problems,

this book will be attractive to those aspiring to Olympiad training, mathematically able students and others interested in problem solving. The authors, all research mathematicians and past Australian IMO medallists, are members of the training team for the Australian Mathematical Olympiad Committees School of Excellence.

ONLINE TRAINING

Our online training program called GetSetAMC has been established for the AMC to prepare for the 2015 competition. Schools will have the opportunity to purchase bulk access to this competition (at a much-discounted price) when making entries to the AMC next year. We will also have GetSet CAT available shortly.

We wish you a merry Christmas and happy new year.