MATHS MATTERS

Newsletter of the Australian Mathematics Trust

February 2015

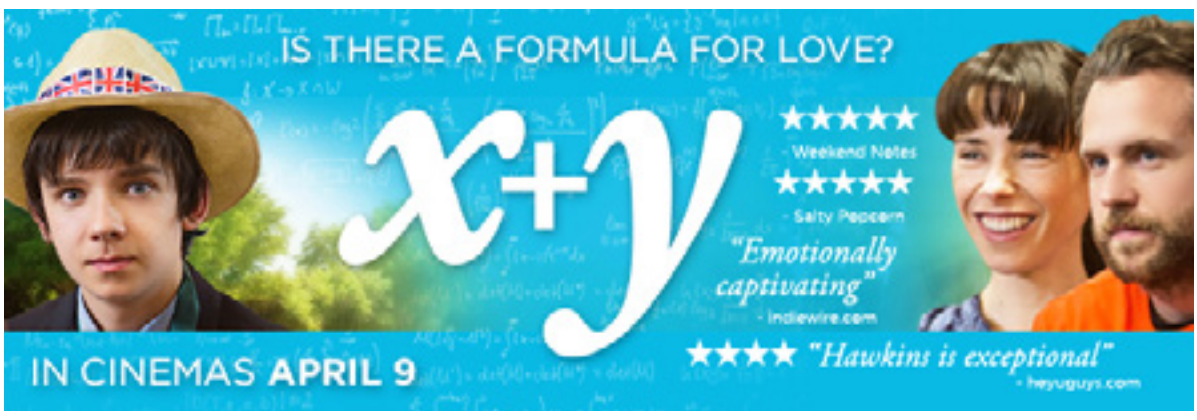
Australian Mathematics Competition sponsored by the Commonwealth Bank | Computational and Algorithmic Thinking | MCYA Challenge and Enrichment | Bookshop | 2015 Events and Dates

Welcome to the 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.

2015 Events

This year promises to be a very exciting year for the AMT. Our move to online competitions begins with the Computational and Algorithmic Thinking (CAT) competition available in an optional online format in March (see below for more information). In addition, the GetSet training program is available for both mathematics (GetSet AMC) and informatics (GetSet CAT). These can be purchased from the edfinity website amt.edfinity.com, which you can also access directly from the AMT website www.amt.edu.au.

Critically acclaimed movie adds maths and love



Another exciting initiative is the AMT involvement in the launch of the $x+y$ film which hits the cinema circuit in early April. We have been working with the Australian distribution company on promoting the film and have been able to invite many of our volunteers and competition coordinators to premiere events being held shortly in most states.

Directed by BAFTA award winner, Morgan Matthews, who also made the BBC documentary *Beautiful Minds*, the film has an excellent cast which includes Sally Hawkins (*Blue Jasmine, An Education*), Asa Butterfield (*The Boy in the Striped Pyjamas, Hugo*), Rafe Spall (*Life of Pi, Prometheus*), Jo Yang and Eddie Marsan (*War Horse, Sherlock Holmes*).

$x+y$ follows Nathan, an awkward, idiosyncratic teenager, grappling with the sudden death of the one person who understood him; his father. As he struggles to connect with those around him, he is introduced to an anarchic and unconventional maths teacher who takes Nathan under his wing.

Soon Nathan finds himself selected for the UK mathematics team and, against the odds, representing his country in Taipei. Over there, the academically gifted aren't bullied but celebrated, envied and even invited to parties. Nathan's rational brain can cope with the most complex of maths problems just fine, the real test comes when he meets his female exchange partner, Zhang Mei, and has to cope with falling in love: the most irrational thing of all.

We hope that this film will encourage more young people to become involved in mathematics competitions. Through our competitions and programs, the AMT aims to support teachers and students to build their confidence and enjoyment of mathematics and to expand the participation in the mathematical olympiad program.

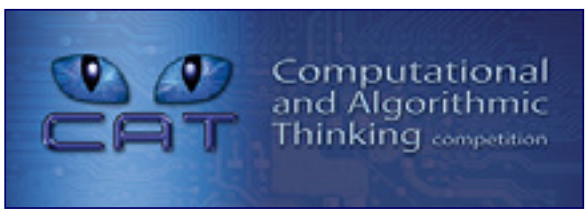
We highly recommend this film to you, your friends and families.

This link http://youtu.be/tWAS-q2PpnA will take you to a trailer of $x+y$.

CAT competition

On Tuesday 24 March schools will be participating in the Computational and Algorithmic Thinking (CAT) competition. This competition, formerly known as the Australian Informatics Competition (AIC), is being offered in an online format as well as in a paper format. Schools will have the option to sit either format according to their circumstances. The online format is a very exciting venture and one we hope will prove very popular in the future.

CAT offers a Junior paper for years 7–8, Intermediate for years 9–10 and Senior for years 11–12. This year CAT is also offering an Upper Primary paper for students in years 5–6. The competition is open to students who have an interest or talent in problem solving.



Each paper consists of 15 questions and students have one hour (60 minutes) to complete the questions. Each student who participates receives a certificate according to their score.

CAT entry is still open, click here to enter.

CommBank Teaching Awards

Would $10,000 help your financial learning program? The CommBank Teaching Awards recognise and reward teachers from schools across Australia who are making an outstanding contribution to developing the essential money management skills of their students. Applications open on 11 May 2015 and more information can be found at www.commbank.com.au/teachingawards.

Mathematics and Informatics Olympiads

For many of our brightest students, the Olympiad journey is about to begin. A number of students were recently invited to take the Australian Mathematical Olympiad (AMO) or the Australian Invitational Informatics Olympiad (AIIO) and the results of these competitions can be found here AMO and AIIO. These results will be used (along with other information) to determine invitations to the April selections schools for the 2015 international Olympiad events.

Challenge 2015

This year's MCYA Challenge is about to get underway in schools and it is not too late to enter.

The Challenge offers students the opportunity to expand their problem-solving skills over a three-week period. The Challenge can lead students onto other competitions such as the AIMO, the final stage of MCYA, and AMO (see above).

Each year we ask teachers to provide us with some feedback on our programs and this is very helpful to our problems committees in preparing new programs. Here is a sample of the feedback from the Challenge in 2014:

- *I liked the progression in the Junior problems from quite accessible questions at the start to more demanding questions later on.*
- *It was a bit hard to coordinate across two campuses and used up quite a bit of organisational time.*
- *We ran the activity as an after-school session once a week, using a past example as an introduction the first week, and then they had 3 weeks to complete the questions as a pre-enrichment activity.*
- *We ran the program late due to a new enrichment program. The Challenge fits well into our school program.*
- *I chose the timing to fit in with our school calendar, so it was ok for us. We just got the marking in before the major work of writing reports had to be done! This year I found it difficult to get staff to volunteer to mark Maths Challenge….sign of the times I suppose, everyone is always so stressed and busy.*
- *All questions good - challenging but that's as it should be.*
- *I haven't done it before and wasn't organised with the timing.*
- *All above questions were suitable for Upper Primary. We provided more grid and isometric dot paper. Some schools provided 'hands-on' play coins and shapes to assist with problem solving. All good.*
- *No problem at all. Instructions are straightforward. Materials arrived promptly and I'm pleased that results can be returned electronically.*
- *All positive from my viewpoint. However it is difficult to give students zero marks for providing 8 possibilities instead of 9, for example in Q2 Money Matters.*
- *I thought all questions were challenging but well-structured so all could make a start.*
- *It is fairly involved with no time allowance / recognition back at school.*
- *All materials were of the highest quality.*

Of course, this is only a small sample, but my thanks to all those teachers who take the time to provide us with this valuable feedback.

MCYA Enrichment and AMC

Students who have enjoyed the MCYA Challenge might like the opportunity to enter the MCYA Enrichment which runs from April to September. And, of course, schools should be entering the Australian Mathematics Competition (AMC) sponsored by the Commonwealth Bank which this year takes place on 30 July. Details of all our competitions are available on the website www.amt.edu.au.

Expansion of professional learning opportunities

We are currently working on a plan to develop the range of professional learning opportunities offered by AMT. Within a couple of months there will be a page available on our website for schools. More information about this will be in the April *Maths Matters*.