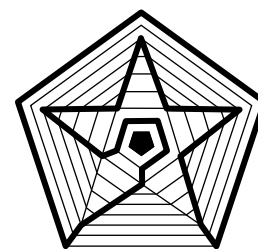


# SHORT CIRCUIT



Newsletter of  
the Canberra Mathematical Association INC

#### Coming Events:

Wednesday, October 22 *Afternoon workshop series*

Wednesday, November 12 *Afternoon workshop series*

November 19 *2014 CMA Annual General Meeting and  
dinner - Erindale College, 7 pm.*

#### Afternoon workshops:

Term 4: 22 October, Namadgi School

12 November, Radford College

FRACTIONS

(See back page for details.)

VOLUME 5 NUMBER 3

SEPTEMBER, 2014

## FROM THE EDITORS

By any measure the 2014 CMA annual conference was a remarkable success. Over 180 people attended.

A conference with this many participants has not occurred for many years, if ever. The feedback has been positive concerning the quality of presentations, the opportunities for professional discussions with colleagues and the overall organisation of the event.

CMA is grateful to the Australian Catholic University for again making available their facilities and for providing an excellent catering service.

In this edition of Short Circuit you will find a piece from CMA President Bronwyn Welch ranging over several topics.

On page 3, Ruth Edge gives an account of an enrichment event involving Erindale College and some neighbouring schools that was modestly supported by CMA. It is anticipated that other schools that have devised events of a like kind will be similarly supported.

On the back page there is information about the Term 4 Wednesday Workshops. Demand for the workshop series has been strong and the CMA council is considering how to make sure everyone who wishes to

attend will be able to.

Thinking further afield, readers will be interested in a communique recently released by the national forum, *Assumed knowledge in maths: Its broad impact on tertiary STEM programs*, which was convened in Sydney in February 2014.

The forum addressed a problem that directly affects the university sector but its conclusions will have an impact on what happens in secondary schools.

['STEM', acronym; Science, Technology, Engineering and Maths]

## ANNUAL GENERAL MEETING

Members are encouraged to attend the AGM. The date has been put back to Wednesday 19 November. The location, probably Erindale College, is yet to be confirmed. A further announcement will be made shortly.

Please consider whether you could offer your services as a CMA councillor.

## MEMBERSHIP

Membership of the CMA includes automatic affiliation with the Australian Association of Mathematics Teachers and a free AAMT journal.

Members are entitled to cheaper rates for CMA professional development events and the annual conference.

**CMA members can also attend conferences of other AAMT affiliates, MAV, MANSW, etc. at member rates.**

A membership application form for the CMA can be downloaded from our website:

<http://canberramaths.weebly.com/>

Note:

Receipts for membership and other payments are normally sent out by e-mail. If you have paid for your membership but have not received a receipt or if your AAMT journal(s) have not been arriving, please advise CMA treasurer, Paul Turner, or another committee member.

### PUZZLE

As posed, this problem, apparently involving geometry and trigonometry, is particularly vexing. Its origin is unknown to the editors but it has been around for some time.

But, as sometimes happens in mathematics, the problem yields quite easily when a suitable alternative point of view is adopted.

- ◆ Triangle ABC is isosceles with  $AB=AC$  and angle A is  $20^\circ$ . Let a line through B cut side AC at a point D so that  $AD=BC$ . What is the measure of angle BDA?

### GLOBAL EDUCATION

Council of ACT Education Associations

Five Global Education workshops are being held after August, with each being on one of the 'Five Pillars' of Global Education – Sustainable Futures, Peace Building & Conflict Resolution, Social Justice & Human Rights, Identity & Cultural Diversity, & Interdependence & Globalisation.

For details visit the website:

<http://www.globaleducation.edu.au/>

### ANU—CONFERENCE: Effective Visualisation in the Mathematical Sciences

The organisers are planning a focus on mathematics education for the conference. Below is a link to the conference website.

21–23 November 2014

Contact: Louisa Barnsley

<http://maths.anu.edu.au/events/effective-use-visualisation-mathematical-sciences-evims-2>

### CMA MERCHANDISE

Contact Elaine Hooke on 0407 788 493 or e-mail [cmamerchandise@gmail.com](mailto:cmamerchandise@gmail.com) for the following items:

Canberra Mathematics Association Navy Polo shirts \$36 with logo, Pi Earrings \$15, Easy as Pi badges and Pi pins \$8.

Free delivery to your ACT school. Elaine can attend your Maths staff meeting.

### AAMT

If you are a member of CMA, you are automatically a member of The Australian Association of Mathematics Teachers and should receive your journal and other communications directly from the AAMT office in Adelaide.

Some resources:

Top Drawer Teachers – <http://topdrawer.aamt.edu.au>

### AAMT—CONNECT WITH MATHS

There are three *Connect with Maths* online communities teachers can join.

[Make it count with Indigenous Learners](#) community

[Early Years Learning in Mathematics](#) community

[Maths in Action \(Applications and Modelling\)](#) community

Subscription to these communities is FREE. If you would like to join one or more communities, click on the link or on the name.

*Coming Soon...*

[Engaging Students \(Catering for Diversity\)](#) community

### ATSIMA—CONFERENCE

The inaugural conference for the Aboriginal and Torres Strait Islander Mathematics Alliance (ATSIMA) will be held in Adelaide, 10-11 November, 2014.

Theme: *[Creating Connections and Growing Understanding](#)*

## SHORT CIRCUIT

### PRESIDENT'S REFLECTION

The CMA was delighted at the response to the workshops provided in Terms 1 & 2. We were then further delighted that we had an outstanding turnout to the annual conference, as more than 180 people attended on the day, with 120 expected initially. There was a terrific buzz around the place and we have received very positive feedback.

With such increases in numbers at our workshops and conference, we have cause to reflect on what we do, what we provide and how we navigate towards the future. It seems to me that a few things contributed to the increases:

- CMA continues to provide outstanding PL opportunities for teachers, that are accessible and pertinent to the needs of teachers in the ACT
- New requirements from TQI and registration pressures have highlighted PL requirements, resulting in an increase in teacher involvement in PL sessions
- The Australian landscape and dialogue of “STEM” deficits continue to be portrayed negatively in the media.

It is difficult to assess the individual reasons for an increase in PL involvement in the current climate but I am confident that the end result is more teachers being able to engage in professional conversations and, ultimately, professional experiences that positively impact on the students we teach, in this subject, discipline, way of thinking, that we call mathematics.

It has been a pleasure to work with the CMA council during 2014, and I admire their commitment, enthusiasm and discussions that have promoted a conscientious effort to provide these opportunities this year. We are looking forward to the AGM, Wednesday November 19, and encourage those in our community to step forward and put their hand up to be part of our dynamic council.

Our achievements this year have been:

- Provision of south- and north-side opportunities for PL in Primary and Secondary Maths in Terms 1 and 2, with a further workshop planned for Term 4
- Successfully promoted and supported the Na-

tional Mathematics Summer School 2015 process

- Provided feedback through our AAMT Affiliation on the mathematical and STEM education debate
- Engaged with TQI and AITSL regarding the Australian Professional Standards in order to better understand how we can support maths teachers in the ACT, being aware of PL requirements for registration purposes.

I would like to take the opportunity to thank Namadgi School and Radford College for providing facilities for our workshops and I also thank the ACU for providing facilities for our conference.

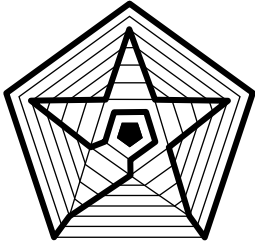
Don't forget that your CMA membership is recognised by other state affiliates of AAMT, and you can receive discounts for conferences and workshops that other affiliates provide. Also, keep an eye on our [website](#) for upcoming events, information and support materials.

Thanks for your support.

**Bronwyn Welch**

*President*

**Canberra Mathematical Association**



**NEWSLETTER OF  
THE CANBERRA MATHEMATICAL  
ASSOCIATION INC**

PO Box 3572  
Weston ACT 2611  
Australia

E-mail: [canberramaths@yahoo.com.au](mailto:canberramaths@yahoo.com.au)

We're on the Web!  
<http://canberramaths.weebly.com/>

## ABOUT THE CMA

The Canberra Mathematical Association (Inc.) is the representative body of professional educators of mathematics in Canberra, Australia.

It was established by, among others, the late Professor Bernhard Neumann in 1963. It continues to run - as it began - purely on a volunteer basis.

Its aims include

- \* the promotion of mathematical education to government through lobbying,
- \* the development, application and dissemination of mathematical knowledge within Canberra through in-service opportunities, and
- \* facilitating effective cooperation and collaboration between mathematics teachers and their colleagues in Canberra.

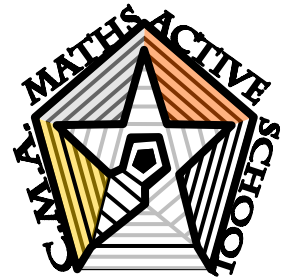
## THE 2014 CMA COMMITTEE

President	Bronwyn Welch
Vice Presidents	Erin Gallagher Jurek Paradowski
Secretary	Theresa Shellshear
Treasurer	Paul Turner
Councillors	Sue Wilson Heather Wardrop Andy Wardrop Valerie Barker Jo McKenzie Patricia Tandy Peter McIntyre Bruce Ferrington Ed Staples Elaine Hooke Michael Klinkert Caroline Evers Gavin Scales Aruna Williams

### CSIRO

Telopea Park School  
Australian Catholic University  
Erindale College  
Australian Catholic University  
Lake Tuggeranong College  
Erindale College  
University of Canberra  
Namadgi School  
Melrose High School  
University of NSW Canberra  
Radford College Junior School

St Edmund's College  
Dickson College  
Gungahlin College  
Erindale College



**Find us on Facebook**

## SHORT CIRCUIT

### AN ENRICHMENT DAY FOR SCIENCE AND MATHEMATICS

On Tuesday 19<sup>th</sup> August, during National Science Week, Erindale College ran its annual Science and Mathematics Enrichment Day. Students from seven Canberra High Schools, as well as students from Erindale College, participated in activities designed to encourage curiosity and interest in Science and Mathematics and to promote further study in these areas.

Year 11 and 12 students from Erindale College ran many of the events, role modelling their own interest and enthusiasm for both Mathematics and Science.

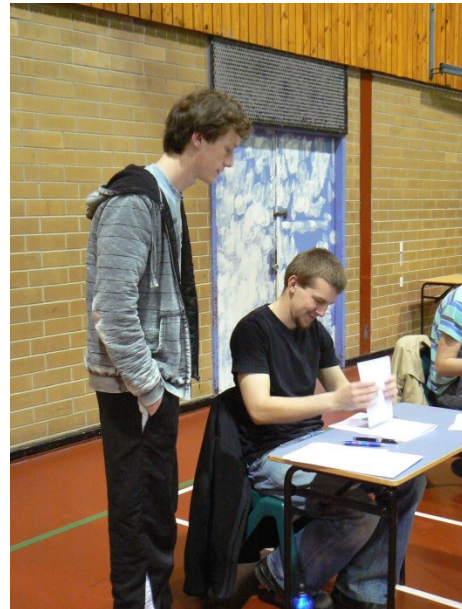
During the morning session the focus was on Science. Students started the day with a team trivia quiz followed by a team challenge where students designed and made a self-propelled boat that would both travel the length of a water tub and carry the most weight. They then participated in experiments including extracting DNA from strawberries and they watched a demonstration on light: electrons and waves versus particles.

In the afternoon students were immersed in a range of Mathematics events that stretched their thinking and problem solving skills. These included an energetic team relay, an individual student Mathematics competition and a team Swiss competition. These activities were based on those used in the ANU Maths Day, but were targeted at high school students.

Erindale College is very appreciative of the support of the Canberra Mathematical Association whose assistance provided materials for the activities, allowed us to issue hotly contested team prizes and nourished the minds and stomachs of our participating students.

Ruth Edge

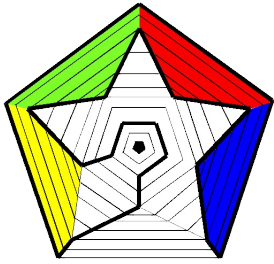
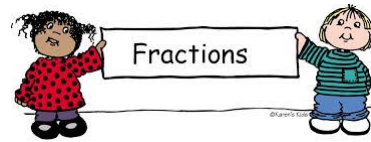
*... appreciative of  
the support of the  
Canberra  
Mathematical  
Association*



Erindale College students running Maths events



High school students testing their boat

**SHORT CIRCUIT****CMA WEDNESDAY WORKSHOPS**

The Canberra Mathematical Association Councillors are excited to announce the details of the  
*2014 Term 4 Wednesday Workshops.*

Four wonderful workshops were held in Terms 1 and 2, and these, together with our extremely successful CMA conference on 16 August 2014, have provided around 350 registrants with some powerful professional learning experiences.

The term 4 series will be targeted at the Primary Sector, and will be presented by Caroline Evers of Dickson College, ACT who has a wealth of knowledge and experience to share with us.

Good understandings of fractions are critical to young minds, particularly so in the later years of their school education and beyond. If you are looking for powerful and proven strategies to use in your classroom around fraction concepts, then this workshop is not to be missed!

**PLACES ARE LIMITED, SO ACT QUICKLY TO SECURE YOUR SPOT**

Simply register by emailing Ed Staples from the CMA website:  
<http://www.canberramaths.org.au/professional-learning-opportunities.html>

Details:

***Fraction Folding Fun:***

*Fractions and decimals are often misunderstood by students, of all ages. This workshop will introduce participants to a range of concrete activities which will assist students in gaining a firm understanding about what a fraction is. The activities match the Australian Curriculum for years 3 to 6.*

***Target: Primary Sector***

*South side: Namadgi School: 5.00pm - 6:30pm Wednesday 22 October 2014  
(Coffee/Tea served from 4:30pm to 5:00pm)*

*North side: Radford College: 5.00pm - 6:30pm Wednesday 12 November 2014  
(Coffee/Tea served from 4:30pm to 5:00pm)*

***Cost:***

*\$20 for non-members, free for two participants from an institutional member, and free for full members  
(Have exact cash at the door, please. Receipts will be emailed at a later time).*