

Newsletter No. 183  
April, 2002

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Office hours: 8.30am – 5.00pm  
Monday to Friday

President: Dr Max Stephens  
Print Post Approved Publication  
No.: PP32803/00103

## 2002 Ford Maths Talent Quest - Don't Miss Out!

*Entries Close Friday 26 April!*

Have you sent in your application for the 2002 Ford Maths Talent Quest? Entries close Friday 26 April. Information was sent out to all members in February, but if you have misplaced it, you can download the information booklet and application form from our website at: <http://www.mav.vic.edu.au/studact/mtq.htm>

## 2002 MAV Membership

If you have not renewed your MAV subscription for 2002 this will be the last mailout you receive. If you have mislaid your renewal invoice, or are unsure if you have renewed, just contact the MAV office on 03-9380 2399 and we can send you a copy. **Don't let your membership lapse and miss out on the extensive benefits available in PD and publications that the Association can offer both you and your school.**

## MAV Annual Conference 2002 - Call for Options

*"Valuing Mathematics in Society"*

This year's conference will be held on Thursday 5 and Friday 6 December at Monash University's Clayton campus. A Call for Options form was enclosed with last month's Common Denominator and can also be found on our website at:

<http://www.mav.vic.edu.au/pd/confs/index.html>

Don't miss the opportunity to present at this fantastic event and have a paper published in

the Conference Proceedings book! **Closing date for applications is Friday 10 May.**

## Full Day PDs 2002

Bookings are now being taken for the following full day Professional Development events.

### *Middle Years Maths Days*

**Traralgon - Tuesday 4 June**

**South Morang - Friday 23 August**

These two PD days will be particularly useful to teachers coping with mixed ability, mixed experience students in their 5-9 classrooms. Common student misconceptions will be explored, as well as suggestions and activities to support student learning in the middle years of schooling. See enclosed flyer for further details.

### *Primary Maths Days*

**Bendigo - Monday 17 June**

**Moorabbin - Friday 6 September**

The focus for these two PD days will be on teaching strategies to assist all learners, and will include open questions, games, hands-on activities, mental computation and technology. See enclosed flyers for further details.

Program details and application forms for these 4 full day PD events are also available to download from the MAV website:

<http://www.mav.vic.edu.au/pd/index.html>

## Education Week 2002

This year the MAV is delighted to be hosting 2 FREE public lectures for Education Week:

**Tuesday 21 May (7:30pm)** - *The Maths of a Beautiful Mind* with Dr Marty Ross

**Thursday 23 May (7:30pm)** - *The Secret of Soap Bubbles* with Dr Burkard Polster

Venue to be confirmed. Suitable for Year 10 students to adults. To book contact the MAV office on (03) 9380 2399, email [office@mav.vic.edu.au](mailto:office@mav.vic.edu.au) or use the PD application form on the back of this issue.

# From the President

## *About Numeracy (Part I)*

Numeracy programs are enjoying a prominence throughout Australia that would have been unheard of ten years ago. Many MAV members in primary schools have either been involved in or heard of the Early Numeracy Research Project (ENRP), conducted in Years Prep to Year 2 as a joint venture by the Australian Catholic University, Monash University, the Victorian Department of Employment, Education, and Training (DEET), the Catholic Education Office (Melbourne) and the Association of Independent Schools of Victoria, from 1999 to 2001.

At about the same time, the Middle Years Numeracy Research Project (MYNRP) was conducted by Royal Melbourne Institute of Technology (RMIT) University and the same school sectors. The focus for this latter project was on Years 5 to 9. Both projects adopted a broad definition of numeracy which extended far beyond basic competence with number to include all or most strands of Mathematics as indicated in the Victorian Curriculum and Standards Framework (CSF II).

A principal emphasis of the ENRP has been to describe, assess and analyse children's conceptual development and performance in number, measurement and space. One of the project's achievements has been to delineate growth points in numeracy in much greater detail than they are depicted in CSF II. In the MYNRP, a key focus has been to assess and analyse students' capacity to apply mathematical knowledge to a range of practical problems in different contexts. For the MYNRP, it was not just a question of what mathematics students knew but whether they were able to apply that knowledge in a given context. And having obtained an answer, how did students interpret their answer? For example, there is no sense in talking about a school having to order 11.6 buses in order to take students to a sports venue. The result of the calculation needs to be interpreted appropriately.

I mention these two important Victorian projects because there are shades of difference in how numeracy is defined in each project. In the present climate of government policy, I don't think that we can escape using the term, but we need to recognise that 'numeracy' is not a simple and unambiguous term. The MAV is, of course, delighted that projects relating to numeracy should be receiving financial support from state and federal authorities. We have a long way to

catch up with the kind of research funding and systemic support that has been given to literacy.

Over the past decade, there has been a strong and coherent focus on literacy in all school systems. The position with numeracy has been less coherent, with teaching and assessment strategies being more piecemeal. In contrast to the varied modes now used for assessing literacy performance, assessment of numeracy is generally confined to pen-and-paper testing. (One must note that the ENRP has provided some outstanding models of one-to-one assessment in the early years.) Unlike the literacy area, there are few established intervention programs in numeracy to deal with students at risk.

Given the relatively solid grounding now provided for literacy teaching, we should be careful of importing generic recipes from literacy, since these may fail to take note of important differences between how children acquire language (reading, writing, speaking, listening) and their acquisition of mathematical ideas, and their capacity to apply those ideas. These are some issues that I hope to discuss next month.

**DR MAX STEPHENS**

President

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## *Common Denominator Deadlines – 2002*

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Receipt of copy:	Monday 15 <sup>th</sup> April, 2002
Receipt of inserts:	Monday 29 <sup>th</sup> April, 2002
For mailing on:	Monday 6 <sup>th</sup> May, 2002

*Products and services advertised and opinions expressed are not necessarily those of the Editor or the MAV*

# From the Executive Officer

## *Membership Review*

As part of our strategic review the MAV council is currently undertaking a review of the services and pricing of MAV membership for introduction in 2003. The Membership Marketing & Communications committee has already met once, and we are currently working on a new model that we hope will improve cost effectiveness and service provision for all categories of membership of the Association. Some of the issues that members have asked us to address include:

- Pricing for Small/remote schools
- Pricing for Multi-campus schools
- The possibility of introducing joint memberships for two teacher households
- The possibility of schools ordering multiple copies of newsletters/journals

- Increasing services to primary schools
- Pricing for individual memberships

Over the next month or so we will be working on developing a new structure, which we will then discuss with member and non-member schools in short telephone interviews. If you would like to be involved in these telephone interviews - probably about 10 minutes in length - please contact our Member Services Officer, Jo Howard, on 03-9380 2399 or at [jhoward@mav.vic.edu.au](mailto:jhoward@mav.vic.edu.au)

In the meantime, if you have any suggestions, requests or comments about any of the above issues, or membership with the MAV in general, please don't hesitate to call me on 03-9389 0302 or drop me a line at [sturnbull@mav.vic.edu.au](mailto:sturnbull@mav.vic.edu.au)

**SALLY TURNBULL**  
Executive Officer

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## 2002 Maths Games Days

Below is a list of the schools that are running Games Days in Terms 2 and 3 this year. If you are planning to host one and would like the MAV to promote it or provide any advice/assistance, contact Pauline Rogers at the MAV on 03-9389 0304.

- |                   |  |
|-------------------|--|
| Wednesday 8 May   | Year 5 Games Day, St Catherine's School. Contact Hayley Graham for further information on 03-9822 1285 or via email <a href="mailto:hayley.graham@stcatherines.net.au">hayley.graham@stcatherines.net.au</a> Applications close Thursday 28 March.                               |
| Wednesday 19 June | Year 9 Games Day, Blackburn High School. Contact Mike Westbrook for further information on 03-9878 4477 or via email <a href="mailto:mwe@blackburnhs.vic.edu.au">mwe@blackburnhs.vic.edu.au</a> Applications close Monday 3 June. Application form on page 7 of this newsletter. |
| Wednesday 24 July | Year 8 Games Day, Penleigh and Essendon Grammar School. Contact Roger Blackman for further information on 03-9336 1855 or via email <a href="mailto:roger.blackman@pegs.vic.edu.au">roger.blackman@pegs.vic.edu.au</a>   |
| Tuesday 6 August  | Year 7 Games Day, Scotch College. Contact Michelle Linossier for further information on 03-9810 4374 or via email <a href="mailto:michele.linossier@scotch.vic.edu.au">michele.linossier@scotch.vic.edu.au</a>   |
| Friday 9 August   | Year 10 Games Day, Methodist Ladies' College. Contact Allason McNamara for further information on 03-9274 8108 or via email <a href="mailto:mcnamaam@mlc.vic.edu.au">mcnamaam@mlc.vic.edu.au</a>   |
| Friday 30 August  | Year 6 Games Day, Genazzano FCJ College. Contact Phil Tascone for further information on 03-8862 1000 or via email <a href="mailto:tascop@gen.melb.catholic.edu.au">tascop@gen.melb.catholic.edu.au</a>  |

## AUSTRALIAN RACING MUSEUM EDUCATION KITS

How fast can a racehorse run?  
Why was Phar Lap so special?  
Who is Bart Cummings?  
When was the first Melbourne Cup run?

Find out the answers to these questions and more with the Australian Racing Museum, 'Horsing Around' education kits.

Based on CSFII, 'Horsing Around' comprises of two kits, each consisting of over 25 fun-filled worksheets, a racing glossary, and full colour information sheets.

Available:       Horsing Around for Level 3  
                      Horsing Around for Level 4  
Cost:               \$34 per kit (inc .GST & postage)

For more information contact the ARM (03) 9257 7279 or visit:  
[www.racingvictoria.net.au/museum/Educational%20material.htm](http://www.racingvictoria.net.au/museum/Educational%20material.htm)



AUSTRALIAN RACING MUSEUM  
Gate 22, Caulfield Racecourse, Caulfield,  
VICTORIA 3162

web: [www.racingmuseum.com.au](http://www.racingmuseum.com.au)  
email: [racingmuseum@vatc.net.au](mailto:racingmuseum@vatc.net.au)



P. O. Box 1068  
ECHUCA 3564

Ph 03 5480 9466

Fax 03 5480 9462

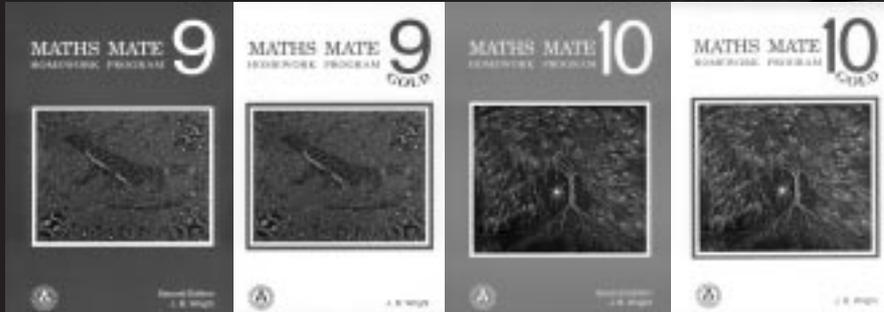
email [info@mathsmate.net](mailto:info@mathsmate.net)

**Maths Mate Homework Program**



# MATHS MATE

**NEW EDITIONS**



Contact us to receive your free "upgrade" Teacher Resource Books for Maths Mate 9 and 10 second editions.

## Problem of the Month

### Chocolate Maths

Work this out as you read. You'll appreciate a calculator! Be sure you don't read the bottom until you've worked it out!

1. First of all, pick the number of times a week that you would like to have chocolate. (try for more than once but less than 10)
2. Multiply this number by 2 (Just to be bold)
3. Add 5. (for Sunday)
4. Multiply it by 50 I'll wait while you get the calculator\_\_\_\_\_
5. If you have already had your birthday this year add 1752 \_\_\_\_\_

If you haven't, add 1751 \_\_\_\_\_

6. Now subtract the four digit year that you were born. You should have a three digit number \_\_\_\_\_

The first digit of this was your original number (i.e., how many times you want to have chocolate each week).

The next two numbers are \_\_\_\_\_

YOUR AGE!

2002 IS THE ONLY YEAR IT WILL EVER WORK

(Last Month's Solution: BACON)

## Free Conference Mugs

The MAV has an assortment of past years' annual conference mugs that are looking for good homes. There are approximately 70 mugs from 1998 to 2001, FREE to anyone who would like to come into the office (61 Blyth Street, Brunswick) and pick them up. Start your collection today!

## Footy Tipping

Want a new challenge, all you expert footy tipsters? Try your hand at Monash University School of Computer Science and Software Engineering's probabilistic football prediction competition. The more you back your judgement the greater score you can receive! Entry is free, and there is up to \$512 in prizes to be shared amongst the top 10 secondary student tipsters in the competition.

Details on the scoring system for the competition and further information is given at <http://www.cs.monash.edu.au/~footy/about.shtml> and <http://www.csse.monash.edu.au/~footy>

## Web Review

### Daisy Maths

[www.daisymaths.com.au](http://www.daisymaths.com.au)

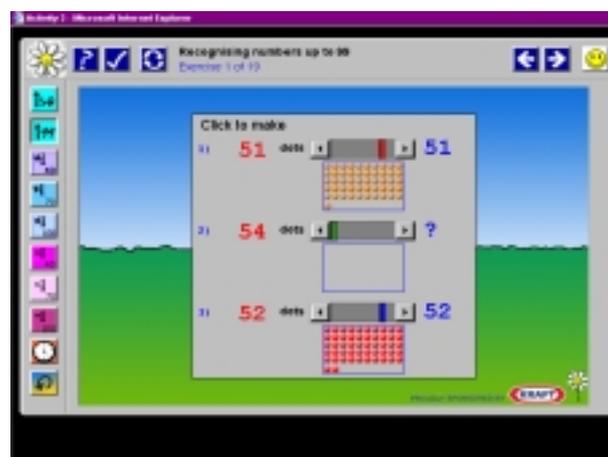


Kraft DaisyMaths is a program designed to help young Australians enjoy learning maths. It is specially made to be FREE, informative, and fun for Australian kids.

Kraft DaisyMaths was originally designed by an Australian professor of maths, Professor Myles Harding, to help his young daughter (Daisy) understand the basic concepts of mathematics. Hence it was initially targeted at pre-schoolers and early years students, and now the materials are constantly expanding to make the program suitable for all primary school students. There are currently 12 different levels in the program looking at all facets of primary mathematics.

Kraft Daisy Maths can be viewed online or downloaded for FREE and it is a dynamic program with sound educational ideas behind it. It is particularly useful for parents who wish to help their children at home with mathematics.

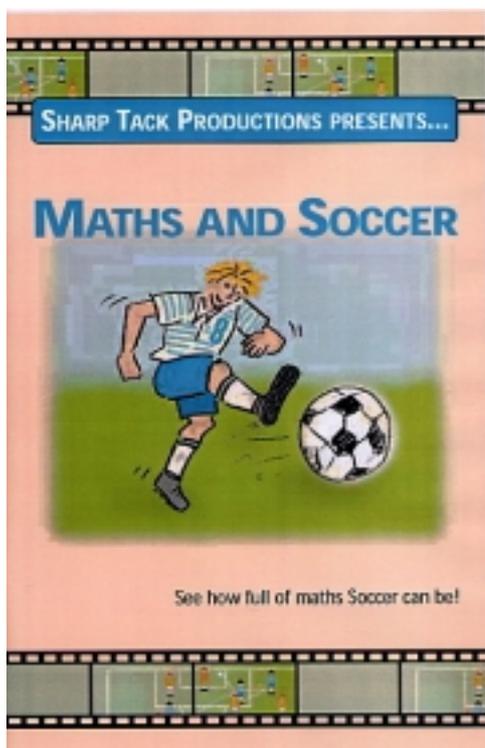
Here is a sample screen below, and this site is well worth looking at!



## New MAV Resources

### *Video & Resource Kit - Maths & Soccer*

The Perfect Companion to the World Cup



This is a chance for a light-hearted mathematical journey through the world of soccer, by joining a group of sports fans as they discover how:

- numbers, graphs and measurement help players train for the match
- geometry plays a vital role in deciding tactics on the pitch
- algebra helps a manager with his match ups
- players rely on getting their angles right, and much more!

Designed with a close eye on CSF II, and with a strong mix of entertainment and information, *Maths and Soccer* is suitable for Upper Primary and Junior Secondary students and is sure to provide a wonderful addition to any maths curriculum.

The video comes with a set of teacher worksheets and a 'stats pack' full of soccer facts and figures.

**Cost: \$75.00 (inc. GST) plus postage**

## *WERMS Books*

*(Written Exam Revision for Maths)*



Student exam revision books for Year 12 students of Maths Methods, Further Maths and Specialist Maths.

Based on past MAV trial exams, these books feature:

- Multiple choice questions
- Short answer questions
- Analysis questions
- Answers and/or worked solutions
- 2 complete past MAV papers

Suitable for the current accredited VCE maths courses.

**\$28.50 per subject (inc. GST) plus postage**

Discounts for multiple copies:

**10 or more copies of a single title - \$26.00 each (inc. GST) plus postage**

**20 or more copies of a single title - \$23.00 each (inc. GST) plus postage**

An order form is included with this mailout.

**Maths Methods available now!** Other subjects to follow.

## *Solutions to 2001 Maths Exams*

Prepare effectively for the 2002 VCE Mathematics Examinations by ordering your copy of the solutions to the 2001 Written Exams now. All three studies catered for. Available in either hardcopy (\$30 per study or \$75 for the complete package) or electronic format (\$40 per study or \$90 for the complete package). All prices include GST.

**An order form is included with this mailout.**

## **Diagnostic Topic Tests 2000 Edition**

**Maths Methods – Units 1, 2, 3 & 4**

**Further Maths – Units 3 & 4**

**Specialist Maths – Units 3 & 4**

*Diagnostic Topic Tests*

- have been specifically written for the currently accredited VCE Mathematics courses.
- allow teachers to monitor and identify students' strengths and weaknesses throughout the year.
- contain fully-worked solutions with diagnostic comments and mark allocation.
- provide questions which develop skills and competencies appropriate to each topic.
- include approaches to answering questions.
- identify concepts being tested.
- identify rules and formulas to be applied.
- offer advice and hints on effective examination techniques.

*Also available for Biology, Chemistry, Physics & Accounting.*

## **Trial Examinations 2002**

**Maths Methods – Units 1, 2, 3 & 4**

**Further Maths – Units 3 & 4**

**Specialist Maths – Units 3 & 4**

- Exams for Units 1 & 2 are ideally suited to be used by teachers for their final testing of students.
- Exams for Units 3 & 4 allow teachers to prepare their students for the style and difficulty of the final exams.

*Also available for Biology, Chemistry, Physics, Psychology, English, Accounting, Business Management, Economics and Legal Studies.*

## **Smartstudy® Titles Now Available!**

**Smartstudy Maths Methods for Exam 1**

**Smartstudy Maths Methods for Exam 2**

**Smartstudy Specialist Maths for Exam 1**

**Smartstudy Specialist Maths for Exam 2**

- Each book contains a comprehensive set of exam questions by topic along with 3 complete practice exams.
- Call NEAP for discount pricing of class sets.

*Also available for Biology, Chemistry and Physics.*

**For further information or to be placed on the NEAP teacher mailing list, contact:**

**National Educational Advancement Programs (NEAP) Pty Ltd**

**58 Pelham Street Carlton Victoria 3053 Tel 03 9663 2523 Fax 03 9663 7182 Web Site [www.neap.com.au](http://www.neap.com.au)**



## **AUTHOR "BOX CARS" GAMES WORKSHOPS**

"Box Cars" author Jane Felling will be visiting Victoria in May 2002, conducting hands-on sessions with teachers, numeracy leaders, lecturers and Maths Association members.

This will be a day of incredible motivational Box Cars games covering number skills, operations, fractions, place value, probability, spelling and much, much more! Book now to avoid disappointment!



**MELB NORTH:** Venue Mandalay Reception Centre, Clarke St Northcote  
Thursday 16th May 9.30am to 3.00 pm (lunch included)



**MELB SOUTH:** Venue Kingston Arts Centre, 979 Nepean Hwy Moorabbin  
Friday 17th May 9.30am to 3.00 pm (lunch included)



**BENDIGO:** Venue All Seasons Motor Inn, 171 McIvor Rd Bendigo  
Saturday 18th May 9.30am to 3.00 pm (lunch included)

- \* Fun & flexible
- \* Multi-sensory
- \* Non-threatening
- \* Links to Outcomes
- \* Inexpensive

*"Fantastic inservice-  
what a new world"*  
teacher, St Lukes SA



*"Sensational  
whole school PD!"*  
WA teacher, July 2001



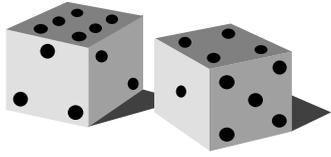
*"Absolutely enjoyable,  
packed full of goodies"*  
teacher, Lawnton S.S. Qld



- \* CSF Level 1-5
- \* Motivational
- \* Hands-On
- \* Assessment tools
- \* No preparation

Cost: \$135 Includes morning tea, lunch and GST

For a **Booking Sheet** please contact; **Warmatek** fax (03) 9482 5460 ph (03) 9482 1436



# YEAR 9 GAMES DAY AT BLACKBURN HIGH SCHOOL



A Games Day for Year 9 students, organised by Blackburn High School in conjunction with the MAV, will be held on Wednesday 19 June, 2002, at Blackburn High School, found on the corner of Springfield and Williams Roads in Blackburn (Melways Reference: 47 K7).

Schools may nominate one or two teams of four students each, at a fee of \$25 per team. The day's activities will start at 9:45am and conclude at approximately 2.30pm and lunch will be provided. The Games Day promises to be a challenge as well as fun.

Please detach the form below and mail it, along with your entry fee to the address shown below, by 3 June, 2002. The fee is \$25 per team (Food \$11.50 inc. GST, Registration \$13.50)

**Make cheques payable to Blackburn High School (ABN: 26 609 438 650).**

Further enquiries should be made to Michael Westbrook on 03-9878 4477, or fax 03-9894 2435. Email: mwe@blackburnhs.vic.edu.au

Details: Students need to bring writing implements, a scientific calculator (graphics calculators are not permitted) and something for morning tea. Lunch will be provided.

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## *MATHEMATICS GAMES DAY FOR YEAR 9 STUDENTS, 19 June 2002*

**\* Tax Invoice - ABN: 26 609 438 650**

Blackburn High School  
60 Springfield Road  
BLACKBURN VIC 3130

NAME OF SCHOOL: \_\_\_\_\_

ADDRESS: \_\_\_\_\_ POSTCODE: \_\_\_\_\_

PHONE: \_\_\_\_\_ FAX: \_\_\_\_\_

TEACHER CONTACT: \_\_\_\_\_

NUMBER OF TEAMS: \_\_\_\_\_

Send this form with your payment to:

Mr M. Westbrook, c/- Blackburn High School, 60 Springfield Road BLACKBURN, VIC 3130, **by 3 June, 2002.**

**IMPORTANT:** A completed copy of this form becomes a **\*Tax Invoice** on payment. Keep a copy of the completed form for your records. The original must be returned with your payment.

Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

# Professional Development 2002

Bookings are now being taken for the following professional development activities in 2002 (registration form on the back of this issue). Further workshops and their details will be published here monthly, and online at [www.mav.vic.edu.au](http://www.mav.vic.edu.au)

## COST:

**After School PDs:** \$40 per session for members; \$50 for non-members (inc. GST).

**Special members offer - make 4 bookings for any combination of after school sessions and only pay for 3!**

**Full Day PDs:** \$120 per day for members; \$150 for non-members (inc. GST). Includes lunch.

**Special members offer - \$100 per person for schools sending 4 or more teachers (inc. GST)**

<i>TERM 2</i>				
Date	Title	Yr Level	Location	Time
Wed 8 May	Challenging 9s & 10s	9-10	Geelong	4:30-6:30pm
Thur 9 May	Challenging 9s & 10s	9-10	Keilor	4:30-6:30pm
Wed 15 May	Challenging 9s & 10s	9-10	Heathmont	4:30-6:30pm
Wed 15 May	Interactive Worksheets for 9s and 10s	9-10	Geelong	4:30-6:30pm
Wed 22 May	Interactive Worksheets for 9s and 10s	9-10	Keilor	4:30-6:30pm
Wed 29 May	Interactive Worksheets for 9s and 10s	9-10	Heathmont	4:30-6:30pm
Wed 29 May	From Filing Cabinet to Classroom	9-10	Geelong	4:30-6:30pm
Mon 3 June	Open Ended Activities and Numeracy Teaching for P-6	P-6	Mildura	4:30-6:30pm
Tue 4 June	Middle Years Maths Teachers' Day	5-9	Traralgon	9:30am-3:30pm
Thur 6 June	From Filing Cabinet to Classroom	9-10	Keilor	4:30-6:30pm
Wed 12 June	From Filing Cabinet to Classroom	9-10	Heathmont	4:30-6:30pm
Wed 12 June	Classroom Strategies for Students with Learning Difficulties	9-10	Geelong	4:30-6:30pm
Mon 17 June	Primary Maths Teachers' Day	P-6	Bendigo	9:00am-3:30pm
Tue 25 June	Integrating Computers into Level 4 CSF II Maths	5-6	Swan Hill	4:30-6:30pm
Tue 25 June	Integrating Computers into Level 5 CSF II Maths	7-8	Swan Hill	4:30-6:30pm
Wed 26 June	Integrating Computers into Level 4 CSF II Maths	5-6	Shepparton	4:30-6:30pm
Wed 26 June	Integrating Computers into Level 5 CSF II Maths	7-8	Shepparton	4:30-6:30pm
<i>TERM 3</i>				
Date	Title	Year	Location	Time
Wed 24 July	Classroom Strategies for Students with Learning Difficulties	9-10	Heathmont	4:30-6:30pm
Thur 25 July	Classroom Strategies for Students with Learning Difficulties	9-10	Keilor	4:30-6:30pm
Fri 23 Aug	Middle Years Maths Teachers' Day	5-9	South Morang	9:30am-3:30pm
Fri 6 Sep	Primary Maths Teachers' Day	P-6	Moorabbin	9:00am-3:30pm

See over for further details.

**Cost for after school PDs (4:30-6:30pm):** \$40 per session for members; \$50 for non-members (inc. GST). **Special members offer - make 4 bookings for any combination of after school sessions and only pay for 3!**

<b>CHALLENGING 9'S AND 10'S SERIES</b>	<b>Venue</b>	<b>Date</b>
<b>1. Challenging 9's and 10's</b> <i>(Presented by Charles Lovitt)</i> Teaching at Grade 9 and 10 levels can be rich, invigorating, cheerful as well as purposeful. Teachers have created some wonderful lessons at this level to achieve such an atmosphere in the classroom - a selection of these lessons will be workshopped and discussed. The most exciting aspect is how a multiplicity of features can all exist simultaneously within the one lesson, greatly increasing the probability of both engagement and progress.	Oberon High School, Geelong	Wed 8 May
	Overnewton College, Keilor	Thur 9 May
	Heathmont Junior Coll, Heathmont	Wed 15 May
<b>2. Interactive Worksheets for 9's and 10's</b> <i>(Presented by Sandy Fletcher)</i> This hands-on workshop will enable participants to experience a range of activities, which incorporate the use of technology. This allows students to learn at their own rate, thereby helping teachers to cope with mixed ability classes. Part of this session will involve instruction on how to create your own interactive worksheets. Teachers will leave the workshop with examples of worksheets that they have created.	Oberon High School, Geelong	Wed 15 May
	Overnewton College, Keilor	Wed 22 May
	Heathmont Junior Coll, Heathmont	Wed 29 May
<b>3. From Filing Cabinet to Classroom</b> <i>(Presented by Pauline Rogers)</i> This session will concentrate on providing teachers with a wide range of ready to go activities. A smorgasbord of practical, hands-on fun activities to be used with those hard to challenge, hard to motivate year 9s and 10s. Opportunities to work through some of the activities and share ideas on enthusing students and teachers will be given.	Oberon High School, Geelong	Wed 29 May
	Overnewton College, Keilor	Thur 6 June
	Heathmont Junior Coll, Heathmont	Wed 12 June
<b>4. Classroom Strategies for Students with Learning Difficulties</b> <i>(Presented by Sharon Azzopardi &amp; Laura Gregory)</i> This session will look at students in the middle years with mathematical learning difficulties, in view of improving their learning outcomes with a language focus. Various strategies, which can be used to make tasks accessible to all students, will be demonstrated, as well as steps on how to clarify problem solving activities. The application of mathematical investigations, using the computer as an option to structure tasks, will be outlined. This approach can be made to be adaptive in response to student learning difficulties.	Oberon High School, Geelong	Wed 12 June
	Heathmont Junior Coll, Heathmont	Wed 24 July
	Overnewton College, Keilor	Thur 25 July

<b>OTHER AFTER SCHOOL EVENTS</b>	<b>Venue</b>	<b>Date</b>
<b>Open Ended Activities and Numeracy Teaching for P-6</b> <i>(Presented by Peter Sullivan)</i> This session presents a range of open-ended activities, describes the ways that such activities can be used to support student learning, and outlines the contribution that such approaches can make to school and level planning, and the building of classroom learning communities. <i>The MAV and La Trobe University Mildura are co-hosting this professional development session.</i>	La Trobe University, MILDURA	Mon 3 June
<b>Integrating Computers into Level 4 CSF II Mathematics</b> <i>(Presented by John Vincent)</i> This session will introduce participants to the ways MSWord and Excel (or equivalent word processors/ spreadsheets) can be used in many creative ways in the mathematics curriculum, not just those mandated by the CSF. Participants will also learn how to use the creative multimedia programme MicroWorlds, and mention will be made of other applications as time permits. We will work with the CSF strands of Chance and Data, Shape and Space and Number to construct useable teaching units integrating the technology with the curriculum so that small groups can use the material in the numeracy block. <b>To practice some of the activities please bring a laptop to the session.</b>	Swan Hill College, SWAN HILL	Tue 25 June
	Guthrie Street PS, SHEPPARTON	Wed 26 June
<b>Integrating Computers into Level 5 CSF II Mathematics</b> <i>(Presented by Jill Vincent)</i> This workshop session will introduce participants to the dynamic geometry software, Cabri Geometry II, and show how it can be used in Years 7 and 8. The software may be used with pre-prepared files to demonstrate relevant geometry or may be used in an open-ended manner, where students can explore, discover relationships and, with teacher guidance, develop explanations for their discoveries. The session will also include some examples of the use of spreadsheets at Years 7 and 8, and a glimpse of how the software MicroWorlds can be used to enhance understanding and enrich the learning of mathematics at this level. <b>To practice some of the activities please bring a laptop to the session.</b>	Swan Hill College, SWAN HILL	Tue 25 June
	Guthrie Street PS, SHEPPARTON	Wed 26 June

# MAV Publications Order Form

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The Mathematical Association of Victoria - ABN 34 004 892 755  
61 Blyth Street  
BRUNSWICK VIC 3056

# Professional Development Application Form

## TAX INVOICE

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Principal's Endorsement (if required): \_\_\_\_\_

MAV Membership:  Institutional  Individual  Non-member

JCSAN Member:  If member, name of Association: \_\_\_\_\_

Please note that school/institutional members can send up to 4 people at the member's rate. Any more attendees must pay the non-member rate.

Please reserve places for the following:

Date	Title of Session	Name of Attendees	Cost (inc. GST)
<b>TOTAL COST INC. GST</b>			

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The Mathematical Association of Victoria (ABN 34 004 892 755)

Cliveden, 61 Blyth Street, BRUNSWICK VIC 3056, Tel. 9380 2399, Fax. 9389 0399

### ACKNOWLEDGEMENT LETTERS

Letters of acknowledgement are only sent out to attendees for full day professional development sessions. Those people attending after school professional development sessions will only be notified if a place is not available.

### CANCELLATION:

If you are unable to attend a session that you have booked into, refunds will not be issued if you cancel your booking less than 48 hours prior to the session.