

Calendar November 2008 – February 2009	
November 2008	
25	Preparing to be a Head Teacher Long Inservice finishes
29	HSC Solutions Day, MANSW Office
February 2009	
28	HSC & SC 2008 Feedback and Advice Day, Macquarie University

From the President

The Annual General Meeting was held at MANSW office in Kent Road, Eastwood, on Thursday 16 October. The executive committee is largely unchanged; although Sue Thomson and Sharon London have switched roles, Glenn Langford is our PTC representative, and Diane McPhail retired from her position of Manager, Primary Programs. Diane has worked tirelessly for the interests of members in Primary classrooms, and her contribution was acknowledged at the AGM. Stepping up to the role of Manager of Primary Programs is Cathy Attard; we welcome her back to the executive after a short break. Cathy was elected to this position for 2009.

I would like to acknowledge again the wonderful efforts of all volunteer members of MANSW, particularly the executive committee members, editorial committee members, and members who organize regular events. Thank you also to Peter Gould, Manager of Mathematics at the Department of Education and Training, who spoke at our AGM. Peter's talk was inspiring. He drew our attention to special features of Master teacher lessons with selected video segments. Thanks also to Bernice Beechey and Peter and Anne Dinning who work so well together keeping the MANSW office running smoothly and who put in many extra hours whenever major events such as a conference or *Investigating Maths* are being planned, implemented, and evaluated.

Also at the AGM, I announced the very saddening news that our Professional Officer Bernice Beechey, will retire from full-time employment at

the end of this calendar year. We have come to rely on Bernice over the eight years that she has been employed. She is just the most fantastic Professional Officer we know of. Volunteer positions at MANSW are mostly occupied by full-time teachers and academics, and these people have all been supported superbly by the fabulous work of Bernice. She will remain closely associated with MANSW, in fact Bernice will work in a part-time capacity next year, to update the history of MANSW. The last time our MANSW history was written was 25 years ago. As we approach the centenary celebration of our association, we are most fortunate that Bernice, with her extensive network of people linked in one way or another to MANSW, will be writing our history.

Feedback from participants of this year's Annual MANSW Conference held at the Novotel at Northbeach, Wollongong, indicates that it was our most successful in many years. Participants felt engaged in sessions and left with lesson ideas to discuss and implement back in the classroom. Paul Brock, our keynote speaker, was both entertaining and enlightening. His talk, addressed to a packed ballroom, had the audience on the edge of their seats, and he included visuals, displayed simultaneously on three floor-to-ceiling screens, and these visuals were expertly timed to add humour and reality to his message. The 2009 conference plans are under way; the conference to be held in Brighton, Sydney. More details from our conference committee will be passed on to members in our next newsletter.

Professional development that reaches the extremities of our state is a priority. At MANSW we have undertaken to work closely with DET to use video conferencing facilities. As a first trial, during Term 4, 2008, we will present one of the most popular presentations from the Wollongong Conference. A few rural centres will be chosen to pilot this professional-development opportunity, with plans already in train to expand in 2009. Teachers who are located near the chosen rural centres will be informed of the opportunity, and we expect a good turnout. Another initiative for 2009: we are working towards having our profes-

sional-development sessions endorsed so that participation is recognized.

I would like to remind all members that there is a very important website we all need to be visiting: www.ncb.org.au. On this site we find the very latest information about the National Curriculum. Along with Holly Gyton, Vice President, and Jim Grant, representing the interests of Primary Mathematics members, I participated in a set of round-table discussions, thrashing out issues such as the meaning of Numeracy, the place of Working Mathematically, and so on. This event is mentioned on the National Curriculum website, along with plans for the future. I encourage all members to stay informed.

I trust that the last few weeks of Term 4 will be productive, and you will glide into a well-earned Christmas holiday. Your next newsletter will arrive in 2009, so on behalf of MANSW let me wish you a safe and relaxing break, ready to return refreshed for another year.

DAVID KEANAN-BROWN

HSC Solutions Workshop

A reminder that members are cordially invited to attend a workshop on **Saturday 29 November** at the MANSW Office to assist in the compiling of solutions to the 2008 Mathematics papers.

At the workshop we will work in small groups, with each group being responsible for compiling a single paper. Bringing your own set of solutions (to the paper you would like to work on at least) would help.

The workshop will run from 10 a.m. to 3 p.m, with lunch provided.

If you are unable to attend on the day, you can still help by:

- sending in solutions to a question or questions from one of the papers; or
- sending in a set of solutions for one (or several) of the papers.

The efforts of the volunteers who attend the workshop and the members who send in their solutions are greatly appreciated. The HSC Solutions Books are an invaluable resource for teachers, students, and the Association.

If you can help in any way, please notify Bernice Beechey at the MANSW Office by telephone (02) 9878 1487 or fax (02) 9878 1675. Your solutions can be sent to the office by fax (02 9878 1675) or by email (office@mansw.nsw.edu.au).

Solutions will be available to members at the HSC and SC Feedback Day in February 2009.

Secondary Program

The new secondary program committee has been busy organizing Institute-Registered activities for 2009. A full summary of activities, dates, and locations will be included in the January newsletter. In addition, information will be available on the MANSW website from the end of November and in the Professional Teachers Council calendar.

**2009 HSC and SC Feedback and advice day
Saturday 28 February, 8.45 a.m. – 4.00 p.m.
Mason Theatre, Macquarie University**

Program

9.00	School Certificate
9.30	General Mathematics
11.30	Mathematics (2 Unit)
1.40	Mathematics Extension 1
2.50	Mathematics Extension 2

Cost: Free to members / \$35 for non-members (includes a copy of the HSC solutions book).

Institute status: This course is endorsed by the Institute of Teachers.

Prior registration is *not* required for this course. New scheme teachers wishing to include part or all of this course with the Institute of Teachers must sign the appropriate registration form at the Association's desk prior to all sessions. Institute accreditation numbers will be required on the registration forms.

Advanced Notice Term 1 Professional Development Courses


Prior registration with payment is required for the following courses. Numbers are limited, so if you would like to attend you should complete a registration form that is available on the MANSW website and send it with payment to the MANSW Office. The courses will be cancelled if there are insufficient registrations by the closing-date.

**Extension 1 Mathematics Long course
Tuesdays, 5.00–7.30 p.m.**

**17, 24, 31 March; 7, 28 April, 5 May
Macarthur Girls' High School, Parramatta**

Cost: Members \$160, non-members \$240

Closing-date: 1 March 2009



Did you find the choice of sessions at the Conference so great this year that you had to miss some that you would have liked to attend? Look on the MANSW website to see if the presentation notes are available for the sessions you are interested in.

Extension 2 Mathematics Long Course
Wednesdays, 5.00–7:30 p.m.
18, 25 March; 1, 8, 29 April, 6, 13, 20 May
Location: To be confirmed

Cost: Members \$210, non-members \$320

Closing-date: 1 March 2009

Early career teachers' program
28 March and 1 August, 9.00 a.m. – 3.30 p.m.
Parramatta area, venue to be confirmed

This 11-hour program will run on two Saturdays.

Cost: To be confirmed depending on the venue

Closing-date: 1 March 2009

Customized professional development

Would you like MANSW to provide a customized professional development course for your school or group of local schools? Special courses can be arranged on a cost-plus basis. Contact the office for further information.

Institute recognition for professional activities

Did you know that you can record involvement in professional association activities with the Institute? Activities like presenting or organizing a professional development activity, writing a *Reflections* article, writing the Association's activities for students, judging entries in Investigating: mathematics, or committee membership. If you are a teacher accredited at Professional Competence, these activities can be entered into your professional experience record through the 'My Account' section of the Institute's website at www.nswteachers.nsw.edu.au.

Student Services

National Mathematics Talent Quest

The National Mathematics Talent Quest is the national version of our NSW project-based competition entitled Investigating: Mathematics. The winning entries from the NSW competition are submitted to the national competition for judging. This year NSW has done very well at the national level, with a large number of winners and merits across the range of categories. In particular, Veronica Sebesfi from Abbotsleigh was awarded the Overall Winner in the Years 5–8 Category with a project called 'What is the best sized rain-water tank for homes in Sydney?' and Calvin Tam from North Sydney Boys' High School was awarded overall winner in the Years 9–12 Category with his entry on 'How can we send yottabytes across optic fibres?'. Congratulations to Veronica, Calvin, and all of the students receiving awards and participating in this worthwhile competition. Also thank you to the many teachers

involved in supporting their students in Investigating: Mathematics. The full results list is included at the end of this newsletter.

Dates for 2009

Now is a good time to write down all of the exciting MANSW student activities in your planning diary for 2009. Activities relevant to secondary students are listed below—note that some dates given here are approximate, with firm dates available on the MANSW website and in the first newsletter of 2009. Be prepared because next year some of our regular activities have been moved to much earlier in the year.

Mathsearch

- A take-home competition for the J. L Williams Award
- For Year 11 students (plus exceptional Year 9 and 10 students)
- Run between late Term 1 and early Term 2, 2009
- Expressions of interest from schools will be due in March 2009

Talented Students' Day

- A day of lectures on Mathematics enrichment and HSC related topics
- At Macquarie University in 2009.
- For Year 12 Extension 2 students and their teachers
- A new timeslot in Term 2, during June–July 2009.
- Expressions of interest from schools will be due in early April 2009.

HSC Lectures

- A day of revision lectures across all levels of HSC mathematics for students preparing for Trial and HSC examinations
- At Sydney University.
- For all Year 12 students
- Registrations close in early June 2009
- Day will be held on Monday 13 July 2009

Investigating: Mathematics

- A project-based competition for individuals, groups, and whole classes
- For all school students from Preschool to Year 12
- Registrations due in early Term 2
- Student projects to be submitted early Term 3 2009 for judging.

Mathematics at Luna Park

- A day at Luna Park where students work mathematically as they ride.
 - For students in Years 5–12 and their teachers
 - A large range of 2009 dates are available
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Errata

Please note the following errors in MANSW 2007 HSC solution books. The corrected solutions will appear in the 2008 books (and in subsequent years).

If you or your students notice errors in any of the MANSW Solution Books, please notify the MANSW Office by email, fax or mail so that the relevant corrections can be made. Thanks to Nikky Vanderhout and student Wilson Tao for noting the errors below.

Note: Page numbers below refer to the 2007 course-specific Solution Books, not the lilac-covered versions issued to members in February.

Mathematics: 2007 HSC Question 10(b)(ii) (page 17)

In the second line of the first column on this page, remove the negative sign from the first fraction. The line would now read:

$$\frac{2L_1}{x^3} = \frac{2L_2}{(m-x)^3}$$

and the solution continues correctly from this point.

Mathematics: 2005 HSC Question 4(b)(ii) (page 7)

Insert a negative sign in front of the y -value in the minimum turning point in the fourth line of the second column. The fourth line of the solution would now read:

\therefore Minimum turning point at $(1, -32)$.

Member of the Month

This month's lucky winner is Barbara D'Angelo of Willoughby. Congratulations, please contact the MANSW Office to claim your book-voucher prize.

I wish you all a happy and safe break at Christmas—Ed.

2008 NATIONAL MATHEMATICS TALENT QUEST RESULTS

Award	Year	Category	Project Title	Name(s)	School	State
Winner	Prep	Class	Investigating Smarties	KJS	St Joseph's School, Kingswood	NSW
Merit	Prep	Class	How Many Wheels?	Prep 0MR	Serpell Primary School	Vic.
Winner	Prep	Group	Clifford's Kennel	Lachlan King, Campbell Woods, Riana Alessi, Bradley Hearn, Austin Dean, Jackson Barker	Jells Park Primary School	Vic.
Merit	Prep	Individual	Two weeks with a 5 year old mathematician	Bailey Clements	Immanuel Primary School	SA
Winner	1	Class	Where's the Maths?	Class 14A	Hendon Primary School	SA
Merit	1	Class	Our Healthy Class Party	Room 1	Thornlie Primary School	WA
Merit	1	Group	Mathematics in Healthy Snacks	Clarisse Wong, Zachary Finch, Jonathan Woods, Oskar Jakubowski	Sunrise Christian School, Paradise Campus	SA
Winner	1	Individual	Deal or No Deal	Jack Lee	Burnside Primary School	SA
Merit	1	Individual	Maths In Footy Jumpers	Ned Gentile	St Christophers	Vic.
Merit	2	Class	Tank Maths	Room 3	Modbury West Schools	SA
Winner	2	Individual	Taking Maths Steps	Andrew Catley	Carey Baptist Grammar, Donvale	Vic.
Merit	2	Individual	Maths Party	Asimina Gretsas	Burnside Primary School	SA
Winner	3	Class	Caring for our Environment	Mrs Kelly's Maths Group	St Peter's Collegiate Girls' School	SA
Overall Winner K-4	3	Individual	Little Athletics - Could I Be A World Record Holder?	Ally Rose Ogden	Carey Baptist Grammar, Donvale	Vic.
Merit	3	Individual	Ballarat Camping Trip	Cassandra Ellis	Galilee Catholic School	SA

Award	Year	Category	Project Title	Name(s)	School	State
Winner	4	Class	How Does Your Garden Grow?	Grade 4C	Darley Primary School	Vic.
Merit	4	Group	Puppy Diary	Ellie Williams, Emily Braggs, Georgia Naughton	Burnside Primary School	SA
Merit	4	Group	Queenie, One Elephants Story	Sophia Manalran, Blake Lloyd, Gurkrat Sidhu, Shaun McManus, Anne Lovegrove, Jack Criss	St Joseph's School Kingswood	NSW
Winner	4	Individual	Maths and Beauty	Imogen Gerraty	Carey Baptist Grammar Junior School, Kew	Vic.
Merit	4	Individual	Food: Weighing on my mind	Emma Cheney	Burnside Primary School	SA
Merit	4	Individual	Flags	Sarah Desmond	Marmion Primary School	WA
Merit	4	Individual	Painting Our House	Annalise Loveridge	St Joseph's School Kingswood	NSW
Merit	5	Class	Maths and Dance	Room 12	Northfield Primary School	SA
Winner	5	Group	Symmetrical Time	Bronwen Anderson, Joel Bendotti, Heather Kostiw-McFarlane	All Saints' College (Junior School)	WA
Winner	5	Individual	Sir Cumference and The Mathematical Quest of Maximus Radius	Cristian Stella	Carey Baptist Grammar, Donvale	Vic.
Merit	5	Individual	Braille	Alannah Maclaurin	Presbyterian Ladies' College	WA
Merit	5	Individual	Dried Apple Business	Danielle Keyser	Sunrise Christian School, Paradise Campus	SA
Winner	6	Class	Humpty Who? HUMPTY DOO?	Yr 6 Piper	Humpty Doo Primary School	NT
Winner	6	Class	Chips & Lollies	Year 6 Maths Group	St Peter's Collegiate Girls' School	SA
Winner	6	Group	Council Waste Collection	Kate Worley, Heidi Grace	Sunrise Christian School, Fullarton Campus	SA
Overall Winner 5-8	6	Individual	What is the Best Size Rainwater Tank for Homes in Sydney?	Veronica Sebesfi	Abbotsleigh	NSW
Winner	6	Individual	Domino Magic Square	Samuel Alsop	Frederick Irwin Anglican School	WA
Merit	6	Individual	Deal or No Deal	Audrey Lim	Carey Baptist Grammar Junior School, Kew	Vic.
Merit	6	Class	Soccer! Soccer! Soccer!	Yr 6 Watson	Humpty Doo Primary School	NT
Merit	6	Group	TASS	Tessa Ferreira, Alexandra Gnaden, Serena Ong, Sally Gilfillan	Methodist Ladies' College	WA
Merit	6	Individual	2008 International Year of the Potato	Emily Prout	Family Entry	SA
Merit	7	Class	Mathematics in the Olympics	7 Advance Maths	Kincoppal Rose Bay	NSW
Merit	7	Class	Sale of the Number System and Our Investigation and Appreciation of Place Value and Base 10	The Terrific Tessellators	St Peter's Lutheran School	SA
Merit	7	Group	Bows	Ira Fung, Shawn Pho	St Pius X, Chatswood	NSW

Award	Year	Category	Project Title	Name(s)	School	State
Winner	7	Group	Savings for our Weekly News	Emily Wishart, Christine Gayen, Tillie Scholten, Cinnamon Henry	St Peter's Collegiate Girls' School	SA
Winner	7	Individual	Prehistoric Proportions	Ashley Dunne	Presbyterian Ladies' College	WA
Merit	7	Individual	Fat sheep have more	Tim Johnsson	Kingscote Campus	SA
Merit	7	Individual	Dynamics of Shipping	Max Enthoven	St Pius X, Chatswood	NSW
Winner	8	Group	The Mathematical Principles Involved in Cricket	Nimesh Ching, Jeffery Hamilton, Joshua Rose	Werribee Secondary College	Vic.
Merit	8	Group	Maths in the Xylophone	Marina Boutros, Anastasia Attia	St Ursula's College	NSW
Merit	8	Individual	Pringles	Rafal Banasiak	Cabra Dominican College	SA
Merit	8	Individual	Spherical Maths	Joash Arulpraksam	Lyndale Secondary College	Vic.
Winner	8	Individual	The Mathematics of Backgammon	Ruth White	Masada College	NSW
Merit	9	Class	Is This The Right Image?	9 MATEN	Tara Anglican School for Girls	NSW
Winner	9	Group	Soap Bubbles	Ben Massam, Luke Geoghegan	Trinity College	WA
Winner	9	Individual	Inaccessible heights, inclinometers and immense imaginary triangles!	Jack Pendlebury	Camberwell Grammar School	Vic.
Merit	9	Individual	Killer Shoes	Jordan Kilmartin	Cabra Dominican College	SA
Merit	9	Individual	To See or Not To See: That is the Question... or is it?	Luke Shakespeare	Hunters Hill/ home school	NSW
Merit	9	Group	Crazy Cash Crops	Alexandra Garner, Sarah Gulliver	Loreto Normanhurst	NSW
Merit	9	Group	The 'Stair' Case	Brandon Munn, Anthony Vasileff	St Michael's College	SA
Merit	9	Group	Building Our Own Legoland	Sarah Jaensch, Rita Liao	Viewbank College	Vic.
Winner	10	Group	The Random Test	Billy Lu, Nicholas Mitchell	St Michael's College	SA
Merit	10	Group	The Analysis of Frequencies and Amplitudes in Music	Andy Chen, Stephen Ke	North Sydney Boys' High School	NSW
Overall Winner 9-12	10	Individual	How Can We Send 'yottabytes' Across Optical Fibres?	Calvin Tam	North Sydney Boys' High School	NSW
Merit	10	Individual	Patterns of Pascal's Triangle	You na Shin	St Aidan's Anglican Girls School	QLD
Winner	11	Individual	Polynomial Encryption	Nicholas Siebert	Cabra Dominican College	SA
Winner	11	Group	Bridges	Markus Dunatov, Justin O'Donohoe, Mathew Tripodi	St Michael's College	SA
Winner	12	Individual	Optimums of Accuracy	Anne van der Giessen	KICE, Kingscote Campus	SA