

# NANAMIC Newsletter

June 2006

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National Association for Numeracy and Mathematics in Colleges

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## Motivating Learning in Mathematics and Numeracy

### Report on the 2005 NANAMIC Annual Conference, Leicester University

NANAMIC were delighted that Professor **Celia Hoyles**, the Government's Chief Advisor for Mathematics gave the keynote address. Professor Hoyles discussed what the proposed new 'functional maths' specification might actually mean, coming to the conclusion that nobody really knows yet! She stressed the importance of those who will be delivering 'functional maths' being involved in the discussions leading to the development of the qualification framework<sup>1</sup>. She also discussed the 14-19 white paper and CPD for mathematics and Numeracy specialists and identified and clarified other recent developments in mathematics education. There was an extremely useful opportunity for delegates to ask

questions, which were answered with honesty and humour.

**Jane Imrie**, the National Subject Lead in Mathematics at the DfES Standards Unit, used her session to introduce the project, its emphasis on activity-based learning and some examples of the resources developed. The resource pack was sent to all post-16 mathematics providers last October – there are some marvelous materials here for levels 2 & 3, but most are easily adaptable by tutors for all levels. The Standards Unit are now working with Maths4Life to extend the materials to entry levels. Further information on the project and the Subject learning Coach scheme can be found at [www.successforall.gov.uk](http://www.successforall.gov.uk), or by contacting Jane directly by e-mail at [jane.imrie@dfes.gsi.gov.uk](mailto:jane.imrie@dfes.gsi.gov.uk).

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<sup>1</sup> NANAMIC Committee members have been involved in this work.

**Oonagh Gormley** gave a very informative outline of the vision and work of the Maths4Life initiative. It is well worth looking at their website to find out more: [www.maths4life.org](http://www.maths4life.org)

**Viv Brown**, University of Sunderland and Gateshead College, led an inspirational session whose title—Resources, ideas and activities (Entry 1 to Level 2)—did not really do it justice. Viv and her colleagues have developed these as part of a Numeracy Subject Specialist course. A lot of truly innovative ideas and activities were discussed and sampled, with participants leaving eager to try them with their own learners.

Participants won't forget **Lesley Way's** pancake tossing activity, which was a good example of an imaginative approach to data collection and handling.

A session on dice, card and board games was very much hands-on, with participants trying the games and looking at how they can be used to practice skills and to have fun in the classroom. Few teachers and trainers have large budgets for such 'luxuries' as games, so time was spent discussing how they can be created cheaply and easily. A free CD of games resources from Oxford & Cherwell Valley College was provided for participants.

The infectious enthusiasm of **Alan Cately**, Tynemouth College, won many over to his philosophy that "Hands on technology for the teacher = minds on maths for learners". His session was a most convincing demonstration of the potential power, effectiveness and enjoyment that IT can bring to the classroom.

There were other sessions on a wide variety of topics – those mentioned above are just a sample.

Overall, the conference was a great success and the vast majority left with a smile on their face. If you are at all interested in developing your skills as a mathematics and Numeracy teacher or trainer, then the NANAMIC Annual Conference provides a very cost-effective and enjoyable way of meeting colleagues, hearing about developments in the areas and trying out a range of activities. We hope to see you at the **2006 conference** at Derby College – mark **Wednesday 28<sup>th</sup> June** in your diary now.

**David Ireland**

"A man is like a fraction whose numerator is what he is and whose denominator is what he thinks of himself. The larger the denominator the smaller the fraction."

Count Lev Nikolgeevich Tolstoy  
(1828–1910)

**NANAMIC website:** [www.nanamic.org.uk](http://www.nanamic.org.uk)

- News on society activities, consultations and mathematics and numeracy in general.
- Extensive, categorized links to recommended numeracy and mathematics websites and resources.
- Details of forthcoming meetings and training events.
- Membership information.

## ***NANAMIC Annual Conference 2006***

Annual Conference and 14<sup>th</sup> AGM

Wednesday June 28<sup>th</sup> 2006

Enterprise Park, Mackworth, Derby

**Keynote Speaker: Dr. Malcolm Swan,**  
*Nottingham University*

Workshop leaders include:

- Tim Button – Further Maths Network
- Bob Francis – Decision Maths
- Jane Imrie - NCETM
- David Ireland – History & Culture of Maths
- Ian Porteous – Fun Maths Roadshow
- Geoff Wake – Maths in Context
- Susan Wall – Active Learning, Assessing, Questioning

Registration from 9.15

The conference will start at 10 am and finish at 4 pm

Details of the Annual Conference will appear on [www.nanamic.org.uk](http://www.nanamic.org.uk) soon.

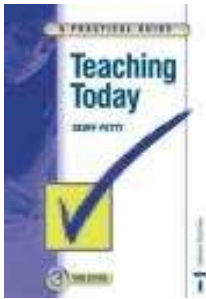
To book, please go to the registration form on the NANAMIC web site.

If you need further information, please contact:-

Lesley Way, 26 Roulstone Crescent, East Leake, Loughborough, LE12 6JL

Phone/fax: 01509 820298      email: [ways2teach@ntlworld.com](mailto:ways2teach@ntlworld.com)

## Book Reviews



### Teaching Today, 3<sup>rd</sup> Edition

Geoff Petty

Published by Nelson Thornes, 2004

ISBN 07487 8525 6, 562 pages

Price approx £19.50 (Paperback)

If you have been fortunate enough to meet Geoff Petty you will know why I am recommending his book. Geoff is a former FE lecturer who now works as a teacher trainer and his book is a “how to teach” manual like no other. Geoff has refined his ideas on teaching in the light of his experiences in the classroom and his book has something to offer everyone who works in education.

The book is split into five sections, including one on the needs of the learner and another that is a toolkit for teachers. The chapters in each section are bite sized, written in jargon free English and suitable for dipping into on train journeys or when a short period of free time presents itself. Chapters usually contain tables, lists, summaries and sketches that make the text both easy to read and memorable. There are copious references to underpinning research and to further reading for those who wish to investigate a topic in more depth.

I commend the book to you as a cheap and accessible form of CPD and a jolly good read, whether you are new to teaching or an experienced professional looking for some new ideas.

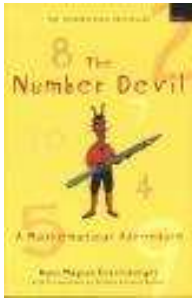
**Joan Ashley**

#### **BOOK REVIEWS**

NANAMIC members are invited to submit a review of a book that would be of interest to the membership. If you wish to submit a book for review or to write a review, please contact the Newsletter Editor, David Ireland, [direland@ocvc.ac.uk](mailto:direland@ocvc.ac.uk)

#### **ADVERTISING**

Potential advertisers should contact [direland@ocvc.ac.uk](mailto:direland@ocvc.ac.uk) for information and advertising rates.



## The Number Devil

Hans Magnus Enzensberger,  
Michael Henry Heim (Translator)

Granta Books, 2000

ISBN 1862 07828 9, 264 pages

Price Approx £6.50 (Paperback)

I found this among the children's books, but it is much too good to be reserved for children only. The Number Devil comes to visit Robert each night in his dreams and illustrates the world of numbers in a most engaging way. He needs one thing and one thing only: one. Fractions are dealt with easily because one piece of chewing gum can be broken in two: one gum, two people – the gum goes on top, the people on the bottom -  $\frac{1}{1+1}$ . He finds out that the Romans had no zero and is introduced to powers

and place value through 'hopping numbers.' By the third night he has met numbers of the garden variety and the prima donnas too. Unreasonable numbers follow and coconuts help with triangle numbers. The entertainment continues with Fibonacci numbers investigated through generations of rabbits and then there's the blankety-blank 1.618.... Enzensberger includes a useful list of "official" terms. He says this is "... just in case The Number Devil falls into the hands of mathematics teachers." It made me smile a lot, which I feel is a good recommendation for a book about maths!

**Viv Brown**

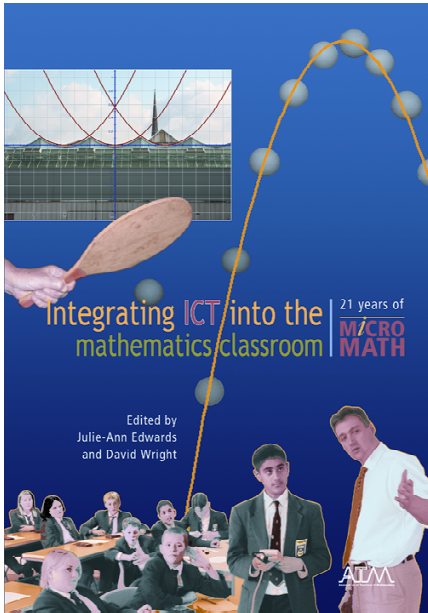
### Books received for review:

- David Wells, Prime Numbers: The Most Mysterious Figures in Maths (Wiley)
- Clifford A. Pickover, A Passion for Mathematics: Numbers, Puzzles, Madness, Religion, and the Quest for Reality (Wiley)

### Puzzle

A question posed originally by Paul Erdős.

Can you find any solutions to  $n! + 1 = m^2$ , where  $n$  and  $m$  are integers? (There are at least three solutions)



## Integrating ICT into the Mathematics Classroom: 21 Years of *Micromath* (Book and CD)

Julie-Ann Edwards  
& David Wright (Eds.)

Association of Teachers of Mathematics,  
2006, 128 pages, Price £20.00

This book is a treasure chest of ideas for incorporating Information and Learning Technology (ILT) into mathematics lessons. It is a collection of articles from the past five years from *Micromath*, a journal of the Association of Teachers of Mathematics (ATM). The book has been provided free to every secondary school in England, thanks to funding by the DfES, but alas it is not free for FE.

The articles in the book look at how dynamic geometry, graph plotters, spreadsheets, graphical calculators, interactive whiteboards and the internet can be used to develop mathematical understanding in the classroom. It mixes the practical details of how to do this with the underlying pedagogy. It talks about the many successes and the times of 'failure'. The book has a wide coverage and hence does not stop to linger long on any particular area. The included CD is rich with further resources including files related to the articles in the book and a further selection of articles from the 21 years of *Micromath*.

I recommend the book to those beginning in ILT in mathematics as an excellent starting point for approaches and activities and for those experienced in this area to gather together ideas and to be an encouragement for further development.

Copies of the book are available from the ATM, price £20.00, including p&p, with discounts for ATM members (email [admin@atm.org.uk](mailto:admin@atm.org.uk) or look on the web [www.atm.org.uk](http://www.atm.org.uk)).

**David Martin**

### **Puzzle**

What is the only number that is spelled alphabetically?

What is the smallest number spelled in reverse alphabetical order?

# Learner Contribution

## Mode, Median, Mean, Range!

by **Aaron Williams**, (Foundation FSMQ student)

Listen to the poem, it won't take long.  
Think of the poem as a mathematics song.

The mode is showed, not by Morse code,  
But the mode is showed by the number shown most.

Think of the median as the middle one,  
Think of the median as the most fun.

The mean is the hardest – but don't get worried  
– as it can be messed up if the formula is hurried.

Add all the numbers then divide by them all,  
I bet you can do it now – you're not a fool!

The range is easy, so don't get wheezy,  
The biggest take the smallest is the answer which is coolest.

To conclude my song I will say this –  
All you maths fans give me a kiss!

We welcome contributions from practitioners and learners on any aspect of numeracy and mathematics. They may be serious or purely for entertainment. Send to [direland@ocvc.ac.uk](mailto:direland@ocvc.ac.uk).

**Puzzle** Which fraction is the odd one out?

$$\frac{17}{74}, \quad \frac{29}{98}, \quad \frac{35}{152}, \quad \frac{42}{162}, \quad \frac{87}{372}, \quad \frac{74}{372}$$

From *A Passion for Mathematics*, by Clifford A. Pickover



# Numeracy Briefing

**Numeracy Briefing** is a new independent newsletter focusing in depth on adult numeracy. It provides a forum for debate and good practice for adult numeracy practitioners and policy makers.

It is edited by Europe Singh and is published 3 times a year by Simon Boyd Publishing Ltd.

**Numeracy Briefing** focuses specifically on numeracy and key skills, and covers new developments such as the development of functional skills.

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## NANAMIC Consultations

NANAMIC represents the particular needs of the Further Education Mathematics Community on various advisory groups. These include the Joint Mathematical Council of the UK (JMC) and the Mathematics Expert Group of the DfES Standards Unit. Our consultations include those with the Advisory Committee on Mathematics Education (ACME) and the Qualifications and Curriculum Authority (QCA). This enables us to give an effective voice to the FE Maths community. We work closely with other organisations such as the Association of Teachers of Mathematics (ATM) and the Mathematics Association (MA). We value hearing your opinions and invite you to consider joining our email consultancy group.

## NANAMIC Executive Committee

email [committee@nanamic.org.uk](mailto:committee@nanamic.org.uk).

**Chair:** David Martin, *Broxtowe College*

**Vice Chair:** Fiona Allan

**Secretary:** Joan Ashley, *Cambridge Regional College*

**Treasurer:** Alan Cossins, *Peterborough Regional College*

**Administrator & Conference Organiser:** Lesley Way

**Committee Members:** David Blower, *Joseph Chamberlain Sixth Form College*;

Alison Brittle, *Hopwood Hall College*; Viv Brown, *University of Sunderland*; David Ireland (Newsletter

Editor), *Oxford & Cherrwell Valley College*, Graham Griffiths, *London South Bank University*; Jane Imrie,

*DfES Standards Unit*; Sheila Robinson, *Oxford & Cherrwell Valley College*; Valerie Simmonds, *Amersham &*

*Wycombe College*

### Puzzle Solutions

**Page 5.** Three solutions are  $4!+1=5^2$ ,  $5!+1=11^2$  and  $7!+1=71^2$ . There may be others.

**Page 6.** Forty. One.

**Page 7.** The last in the list; in all the others if you remove the number that appears in the numerator and the denominator you are left with a fraction that simplifies to a quarter.