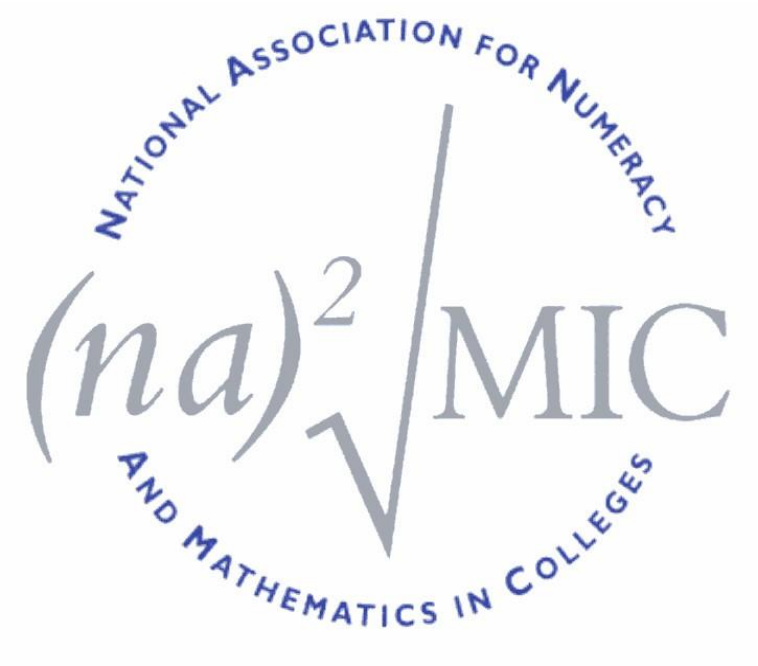

The Newsletter of the National Association for Numeracy and Mathematics in Colleges

An association for all in the Lifelong Learning Sector

Autumn 2007

CONTENTS

Summer Conference 2007

On June 27th NANAMIC held its summer conference and AGM at the newly built Tresham Institute in Kettering. Despite the appalling weather conditions and roadworks, all but three of the 87 delegates managed to attend. The keynote address was given by Rob Eastaway, President of the Mathematical Association. Rob is co-author of several books including 'Why Do Buses Come in Threes: The Hidden Mathematics of Everyday Life'. Some of the engaging and creative ideas that he shared with us on the day can be found on Rob's web site at www.robeastaway.com where he has links to various initiatives across the UK to promote mathematics to the unconverted of all ages.

Norma Honey from NCETM gave the closing remarks offering delegates food for thought and encouragement to continue to promote the effective teaching and learning of mathematics. You can engage with the mathematics community and professional development across all the regions via www.ncetm.org.uk

Key Note Address — Popularising maths

Rob Eastaway (www.robeastaway.com/index.html) is a man with a mission. He enjoys mathematics and wants others to enjoy it too. In his talk he gave us an account of his career to date, liberally sprinkled with interesting personal anecdotes and thought provoking mathematical situations. With a first degree in engineering, he is the current President of the MA and the only non mathematics graduate ever to hold the post.

His multi facetted career has so far included

- writing a puzzle column for New Scientist
- developing a system for rating international cricketers
- writing books on popular mathematics, aiming for accessible topics which people might talk about in pubs
- giving talks
- working with various groups to popularise mathematics, for example Mathsinspiration (http://www.mathsinspiration.com/) .

Rob has a clear view about what does and does not stimulate an interest in mathematics and gave us some suggestions about what might attract people to mathematics. He focussed on activities which, at first glance, may not be thought of as mathematical eg how many people would there need to be a room before it was more likely than not that two would have the same birthday?

Rob finds that school children can be influenced by these activities. They are open to listening where others are not and are often bored by a diet of examination preparation. In order to popularise mathematics teachers need to be passionate about mathematics, caring and to want to learn more mathematics themselves. I think everyone who listened to Rob's talk had their mathematics curiosity thoroughly stimulated. We went away to follow up some of his suggested activities and do our own bit towards popularising mathematics.

At the summer conference delegates had a choice of sessions:

Maths4life — Fiona Allan

Fiona introduced the Thinking Through Mathematics pack to the delegates who had not had time to explore it. She explained that the pack was developed in collaboration with the Standards Unit team to provide material suitable for use in the classroom with Entry and Level 1 learners as well as containing seven CPD sessions. Her passion for the subject showed through as she encouraged us to try out some of the games and more practical approaches that are contained in the pack, along with some useful tips on the storage of the cards – coloured lunch bags! She also told us about some very useful web links for jigsaws and offered to email them on request, she particularly mentioned the Formulator Tarsia 2006 which offers not only jigsaws and dominoes but various other card activities. This was an extremely useful and fun session which gave us the opportunity to explore some of the resources in the Thinking Through Mathematics pack.

Order your copy of pack from
http://www.ncetm.org.uk/Default.aspx?page=13&module=res&mode=100&resid=5845

TARSIA Software Workshop — Sally Barton

Sally initially divided us into two groups: the novices and the more experienced! We then had a go at some dominoes on the multiples of 5 which looked the same but had subtle differences and would enable the teacher to differentiate for students in a subtle way. Likewise with an Area and Volume hexagon jigsaw, where one was more difficult than the other.

Sally gave us some useful tips on using the expression library when creating puzzles with the Tarsia Software. It makes it 'much much easier' to share puzzles and adapt them for different levels.

We were all able to log on and practise creating puzzles and try out Sally's tips, with the experienced ones helping the novices.

This session certainly opened my eyes to the possibility of using these puzzles in my own teaching from A level to Access Mathematics and developing puzzles to suit my students on lots of different topics, whereas previously I had only used ready made (by someone else) puzzles.

Now I really must download the software and have a go at creating my own puzzles ……

Download the newest copy of Tarsia software from
http://www.mmlsoft.com/index.php?option=com_content&task=blogsection&id=15&Itemid=58

Autograph — Douglas Butler

As is usual with Douglas this was a fast moving session. He took us through key features of the latest version of Autograph, allowing time for us to experiment too.

We started off by learning how to cut and paste a formula from a website into Autograph to draw a heart shape, and explored the equation of the shape. We then looked at the potential of Autograph for exploring data sets dynamically, with Douglas throwing in occasional real life statistics e.g. why luggage at airports is weighed but not the passengers.

We were a very mixed ability group, with some who had never used Autograph before, and those with some knowledge of it but all went home with a number of new ideas to try out.

ICT in A level Statistics — Bob Francis

Bob Francis showed us the potential for using Excel spreadsheets to demonstrate underlying concepts central to statistics at A-level. He started by showing us that, that in a group of 23 people, the probability that two people share a birthday is just about ½. This was illustrated using a spreadsheet with built in graph. He then showed how to use a spreadsheet containing a table of a discrete frequency distribution to calculate mean and standard deviation. The real strength is that the data appears simultaneously as a vertical line graph and so it is easy to lead a discussion on how changing the frequency of one value affects the mean and standard deviation. He shared a wealth of files with us covering all the most common statistics topics at A-level.

Get the files from www.nanamic.org.uk

Games for Level 1 & 2 Numeracy/Mathematics — David Ireland

In this session we looked at some ideas for games and activities for level 1 and 2 numeracy and mathematics classes. The games are designed to help make mathematics more fun and to practise essential skills. The session was very much 'hands on' and we enjoyed playing the games and discussing how we could use them with our own learners. As a bonus a CD of games resources was given to each of us by David.

Building Successful Games — developing sustainable learning through enjoyment — John Parsons

John allowed us to experience a new game from his learner's point of view. We learnt the rules by playing as a group and asking questions until we had it all sorted! He shared his experiences of using learner's knowledge of other games to invent new ones in the classroom and emphasised the importance of thinking from the player's

perspective to answer the question 'What makes a game good?'

- Quick to learn
- Fun to play (a big factor)
- Capacity to improve
- Intrigue

Amongst lots of helpful advice John advocated some basic principles for game design.

- Focus on one/two skills - actively exclude other skills
- Do not use games where students drop out
- Lean towards skill, but include luck to level the playing field
- Try to allow players to disrupt each other's progress
- You have to play it regularly for it to result in sustained learning

His strategies include involving the target audience in the game design, giving criteria to focus analysis and encouraging suggestions, with testing the games with learners, getting them to name the game and working on familiarization activities all leading to further engagement. He also provided a template for printing labels for use with blank playing cards.

John is the inventor of Fractis, a game involving fractions which is the first of a series of games to be published.

Blank playing cards are available from http://www.synergy-group.co.uk/maths4a.html

14-19 reforms — Sue Pope

Sue introduced the session by referring to the Smith Inquiry and the Tomlinson report and their recommendations concerning low 16+ participation, ensuring a basic grounding, better vocational routes, stretching and re-engaging learners. The aim is to increase participation and achievement through developing an appropriate mathematics curriculum and associated qualifications. Delegates were given a handout summarising the assessment models being trialed and piloted. Sue spoke about the proposals for A-level and gave information on how these are likely to be assessed and graded. The new 2nd GCSE in mathematics was explained and also how the FSMQs are being developed to be used within the GCSE and A-level structure. There is a 3 year project developing Functional Mathematics which will replace both Key Skills Application of Number and Adult Numeracy. The assessment will not be portfolio based. New GCSEs and functional mathematics will be available in 2010 (first awards for GCSE will be in 2012). New GCEs will be available in 2011.

Sue finished by saying that feedback would be welcomed and she can be contacted though QCA (www.qca.org.uk).

Graphic Calculators — Jay St. Timotheus

Jay from TI^3 ran two fascinating workshops on using graphic calculators in A-level work. He gave a good general introduction to the use of graphic calculators that was excellent for those who are less experienced in their use but this also served as a good reminder to those who use them regularly.

2008 Easter Conference Information

The **2008 Easter Conference** is a joint conference between the MA and the ATM, supported by NANAMIC and AMET.

The theme is to be Joined Up Mathematics and the speakers will include Anne Watson, John Mason, Rob Eastaway, Mike Askew, with many more soon to be added.

So put the date 2nd - 5th April 2008 into your diary and look out for further information. Please be aware that the dates have been arranged to make the best of the shifting patterns of Easter holidays around the country.

On Friday 4 April, join us in an interactive workshop sharing successful approaches from 'Improving Learning in Mathematics', Thinking Through Mathematics' and other active learning ideas. The workshop will be lead by members of the NANAMIC committee, and you will be able to develop and make resources to take away on the day.

NANAMIC Training Days

In May NANAMIC ran two training days. The first, held in Loughborough College and attended by 26 delegates, was presented by Malcolm Swan with the theme 'Putting Learning before Teaching'. Malcolm based the day on the 'Improving Learning in Mathematics' and 'Thinking Through Mathematics' approaches giving the delegates a greater insight into the background and benefits of the strategies advocated. He illustrated these with examples of resources that encourage learners to discuss mathematics and to see how relevant it is to everyday life.

Malcolm is an interesting and inspiring speaker who injects a great deal of humour into his presentations and now, after seeing a clip from an old black and white film, we can all see why 13 x 7 = 28. If you have a problem with this maybe we can put the answer in the next issue.

The second training day in May was presented by Julie Kay. This is the fourth of these days we have run and was back by popular demand. Julie is an acknowledged expert on teaching students with dyslexia and has an international reputation. She looks at assessment, the impact of dyslexia on understanding mathematics and gives many useful practical strategies for supporting students. We hope that we will be able to repeat this event during the next academic year, covering regions we have not yet reached such as the South West, East of England and the South Coast.

Functional Skills

Developing Functional Skills Qualifications — QCA 26 April 2007

The purpose of this meeting, attended by Alison Brittle, was to update participants on the final report and recommendations on standards and assessment approaches for Functional Skills in mathematics, English and ICT. The standards were shown to be based on the Adult Core Curriculum, with a need to have appropriate alignments with relevant national curriculum programmes of study.
Most of the day was spent on the arrangements for the piloting of assessment. There will be a number of awarding bodies piloting mathematics. All English awarding bodies will use tests based on generic contexts.

Link to the discussion forum:
http://www.ncetm.org.uk/Default.aspx?page=14&module=com&mode=102&comcid=623&comuid=5109&comcmd=reg

Functional Mathematics — QCA June 2007

This event, hosted by QCA, was intended to identify the parameters within which the awarding bodies could develop an acceptable assessment strategy for Functional mathematics. In other words this was setting the scene for assessment rather than moderating anything that existed.

This may disappoint NANAMIC members who want to know the specific content of the Functional mathematics assessments; however, the importance of having a NANAMIC presence at this early stage of development was significant. We could make comments that related specifically to the FE sector at the planning stage, rather when the final shape of the assessment regime was decided. For example, we commented on the timing of assessments and how the FE sector followed a different calendar of events to that of the school sector. Our presence also meant that we can alert NANAMIC members to the main issues for QCA and the Awarding Bodies that affect the FE sector.

We examined the proposals put forward by each awarding body for the assessment of Functional mathematics. The proposals were submitted anonymously and varied in detail from specific papers with marking schemes to broad-brush proposals and statements of intent. These were used to identify issues with the different proposals and begin to identify modes of assessment that would be appropriate for Functional mathematics.

To achieve the last aim we were asked to identify elements of assessment that would not be acceptable, and so provide the awarding bodies with parameters within which they could produce assessment packages.

Option 1
The assessment was in two parts. The first paper consisted of short questions which had no context as such and was described as a "competency" test. The second paper was described as testing "Functionality". The candidates could use a calculator for this paper. A data sheet was provided but the questions were not included, these were provided on a separate sheet. The candidates had 15 minutes reading time in the examination room. The same data sheet applied to all levels; there was no attempt to differentiate between levels.

Option 2
This looked like a BTEC Assignment, but with lots of reading to do.
The information was in context, the questions were not. 15 minutes reading time was allowed.

Option 3
This consisted of an outline of what would be contained in a skills assessment that would be available on-line and on demand. The questions would be set in a context.

Option 4
There was a set of areas that would be used to provide contexts. These were:

- work and education,
- community , citizenship and environment
- media and communication
- family, home and social issues

The remainder of the proposal was a detailed evidence list of what would constitute a pass. In appearance this was very similar to a coursework grid.

Three options proposed longer questions which were set in a functional context. Some questions were open ended to allow for a variety of answers. There was an expectation that the mark schemes would be more open than traditional mathematics marksschemes.

It is difficult to summarise the debate that ensued over the next 24 hours but these are my understandings of what took place:

- There is an issue about the need for a tight technical marking scheme and the need to set open-ended questions. There was an attempt to grapple with the conflict between the need for accuracy and the need for functionality. Accuracy made for tight mark schemes but poor functionality because there was too much leading through a question. An emphasis on functionality made the mark schemes looser. The same issues underpinned the debate between 'skills assessment' and 'problem solving'.
- No specific type of question was ruled out.
- The model for assessment is intended to be developmental over the next three years. There is a genuine commitment to get things right but an understanding that this will not happen at the first time of asking. However, over the 3 year period there was encouragement to be innovative.
- The use of pre-release material will be acceptable during the pilot, in some cases the pre-release material will have a time constraint (as with Free Standing Mathematics Qualifications) but this will be optional and material without constraint can be used.

- A lack of context was acceptable as long as the skill had a potential functional use. No more than 25% could be tests of competence .
- Some Boards will provide tiered papers, others will have tiered questions within the same paper, others will have overlapping questions. That is the same questions on more than one tier of entry. All these variations would be acceptable for the pilot.
- A greater level of direction would be acceptable at Entry level than at Level 2. In general the greater the level of direction the lower the level of entry.
- The language used to set questions would be at one level below that which was being assessed.
- Centre marked assessments are not ruled out but the use of a portfolio is A centre may be given a framework within which they set the context. QCA direction is that the environment for assessment is supervised and controlled.
- There is no limit to the number of questions in the assessment during the pilot.
- Non-calculator questions will be allowed.
- On-demand assessment would not be required during the pilot, but a minimum of two assessment opportunities would be needed.

Alan Cossins (NANAMIC Chair)

$$6 \div 1 = 6 \text{ and } 6 \div 2 = 3 \text{ and } 6 \div 3 = 2$$

$$1 + 2 + 3 = 6$$

The search for perfection

As a Mathematician you may think that all numbers are perfect, but some numbers are more perfect than others. For example, take the number 6. Numbers that divide into 6, **NOT** including 6 itself, are called divisors. This means that the divisors of 6 are 1, 2 and 3. Add them together and you get 6. This defines perfection, so 6 is the first perfect number. You might like to check that the next perfect number is 28. Now it gets a bit tricky. How many more perfect numbers can you find before you get to 100? There are none between 200 and 300. Perfection is also missing for numbers between 300 and 400, but there is one between 400 and 500. Can you find it?

Book Review

Clausen-May, T. (2005) ***Teaching Maths to Pupils with Different Learning Styles*** published London, Paul Chapman Publishing.

The book states its purpose as being about teaching mathematics to pupils who have learning differences, not learning difficulties and draws our attention to the school curriculum that is largely based on print rather than on visual or kinaesthetic learning. There is an emphasis on looking for different approaches, finding out what works best and ensuring that hearing, seeing and doing support one another using pictures, models and activities to give greater meaning to the spoken or written words.

It is an easy book to follow with clear instructions and diagrams throughout and a useful list of key points at the end of each chapter. Number, decimals, fractions, ratio, shape, space and measures, angles and circles are all discussed as well as data handling and algebra. References and web sites are given for the suppliers of some of the resources, while others are easily produced from readily available classroom materials and there are also some photocopiable resource sheets provided.

Although written with pupils/children in mind, if you are working with adult learners at Entry Level or Level 1 and beyond there are several useful ideas here that would help deepen the understanding of mathematical concepts and clarify some of the misconceptions that make mathematics a struggle for many.

Viv Brown

The Mathematics of paint-balling

Mr Black, Mr White and Mr Grey are three mathematicians who go paint-balling. Being mathematicians, they work out the probability that each individual will hit the target. Black has a probability of one-third that he will hit the target. Grey is a good shot, so he has a probability of two-thirds that he will hit the target. White hits the target every time and so has a probability of 1. After playing for the day they all have the same score; and in the last few minutes of the game burst into a clearing together. They face each other. Being mathematicians, they know each other's probability of hitting the target. Being mathematics teachers steeped in the philosophy of active learning, they discuss the problem. Being fair-minded mathematics teachers they decide that Black should aim first as he is the worst shot. What should he do so that he has the best chance of winning the game?

Notes from our Immediate Past Chair David Martin

Starting points for recent national developments in mathematics and numeracy

- This summer 2007 will see the setting up of a Single Council for Subject Associations (CfSA)

News! The Department for Education and Skills divides in two

1. **Department for Children, Schools and Families (DCSF)** – Ed Balls
   16-19 funding from LSC to Local Authority

What are the implications for Learning and Skills Councils?

2. **Department of Innovation, Universities and Skills (DIUS)** – John Denham

What are the implications for Skills?

Some mathematics associations relevant to mathematics and numeracy teachers:

- Mathematical Association (MA, www.m-a.org.uk)
- Association of Teachers of Mathematics (ATM, www.atm.org.uk)
- National Association for Numeracy and Mathematics in Colleges (NANAMIC, www.nanamic.org.uk)
- Association of Mathematics Education Teachers (AMET, www.amet.ac.uk)
- National Association for Mathematics Advisors (NAMA, www.nama.org.uk)
- Institute of Mathematics and its Applications (IMA, www.ima.org.uk)
- British Society for the History of Mathematics (BSHM, http://www.dcs.warwick.ac.uk/bshm/index.html)
- Adults Learning Mathematics : An international research forum bringing together researchers and practitioners in adult mathematics/numeracy teaching and learning in order to promote the learning of mathematics by adults (ALM, www.alm-online.org)
- Joint Mathematical Council of the UK (JMC www.jmcuk.org.uk)
- Advisory Committee on Mathematics Education (ACME, http://www.acme-uk.org/)

Organisations to register with

- National Centre for Excellence in the Teaching of Mathematics: The NCETM is a major initiative funded by the Department for Children, Schools and Families (formerly the DfES) to enhance professional development for mathematics teachers, established in response to the recommendations of ACME (www.ncetm.org.uk)
- Institute for Learning (IfL, http://www.ifl.ac.uk) For existing teachers there will be a requirement to register with the Institute for Learning between the 1st September 2007 and the 31st March 2008

Her Majesty's Chief Inspector's (HMCI) Report, inspections and Mathematics Reports

- 2005-06: focus on the '*Every Child Matters*' outcomes
- 2006-07: likely to use themes such as 'living in the 21st century'

- 2006-07 programme of 90 mathematics inspections have a special focus on pupils' enjoyment and understanding
- Mathematics 'long report' – based on evidence from the last three years of mathematics inspection evidence – likely to be published in December 2007
- Evaluating mathematics provision for 14-19 year olds**,** Ofsted, May-2006 (www.ofsted.gov.uk/publications/index.cfm?fuseaction=pubs.summary&id=4207)
- Mathematics in Further Education colleges, ACME, July 2006 (http://www.royalsoc.ac.uk/acme/FE_Report.htm)

Public bodies sponsored or licensed by the Department for Education and Skills

- **Qualifications and Curriculum Authority** (QCA, www.qca.org.uk) QCA maintains and develops the national curriculum and associated assessments, tests and examinations; and accredits and monitors qualifications in colleges and at work.
- **The Training and Development Agency for Schools** (TDA, www.tda.gov.uk) The TDA secures an effective school workforce and sets standards for teachers in schools
- **Lifelong Learning UK** (LLUK, www.lifelonglearninguk.org) This Sector Skills Council is responsible for the professional development of all those working in community learning and development; further education; higher education; libraries, archives and information services; and work-based learning. The LLUK sets standards for teachers in Colleges.

Quality Improvement Agency Skills for Life Review of Adult Literacy & Numeracy Core Curriculum and the Pre-entry Curriculum Framework

- **Level 4 Adult Numeracy Subject Specialist** New qualification Level 5 Additional Diploma in Teaching Mathematics (Numeracy) in the Lifelong Learning Sector
- **A-level**
  2011 – First teaching of new GCE specifications
- **GCSE**
  - 2007 – First teaching of two-tier GCSE mathematics without coursework
  - June 2007 Draft GCSE subject criteria for statistics *Consultation version* QCA/07/3164
  - 2009 – First teaching of revised GCSE statistics
  - 2010 – First teaching of revised GCSE mathematics qualifications for awards in 2012
  - 2012 – First award of new GCSE Mathematics and GCSE *Additional* Mathematics (working title).
  - 2011 - Functional skills will be stand alone qualifications. A level 2 pass will be required to achieve grade C or above in GCSE mathematics, English and ICT from 2012.
  - The specifications for two tier GCSE without coursework are now available from awarding body websites. Awarding Bodies are concerned that teachers may not have taken on board the extent to which papers are likely to change to give greater emphasis to Using and Applying Mathematics and the Data Handling Cycle.
- **Diplomas**
  - 2008 – First teaching of Creative and media / Information technology / Health and social care / Construction and the built environment / Engineering.

- 2009 – First teaching of Land-based and environmental/Manufacturing/Hair and beauty/Business administration and finance/ Hospitality and catering.
- 2010 – First teaching of Public services/Sport & leisure/Retail/Travel and tourism.
- In addition Humanities and Science
- 2011 - General Diploma recognising achievement in the equivalent of five A*-C grades at GCSE level, including English and mathematics.
- 2013 – Universal entitlement to study the diplomas

National Projects

- **Maths4Life:** The resource, **'Thinking Through Mathematics'** (http://www.ncetm.org.uk/Default.aspx?page=13&module=res&mode=100&resid=5845), produced as part of the Maths4Life project builds on the approaches of the QIA (Standards Unit) 'Improving learning in Mathematics' and has developed materials for teachers of adult numeracy. The NCETM is also supporting the dissemination and embedding of this work through regional networks.

  Hard copies of 'Improving Learning in Mathematics' can be ordered via NCETM. You will have to login to the site to access the order form. http://www.ncetm.org.uk/Default.aspx?page=13&module=res&mode=100&resid=1442 Electronic versions of 'Improving Learning in Mathematics' and resources for other subject areas involved in the National Teaching and Learning Change Programme can be downloaded from the QIA at http://teachingandlearning.qia.org.uk/#
  The resources, the Professional Training Programme for Subject Learning Coaches and the regional network meetings work together to support teaching and learning.

- **QIA Phase 4 Mathematics for Non-specialists:** Development of teaching and CPD resources to support Phase 4 of the Quality Improvement Agency's (QIA) National Teaching and Learning Change Programme for Mathematics

- **Chartered Mathematics Teacher Designation** (CMathTeach) Available in a year or so through individual membership of ATM, IMA, MA or NANAMIC. Degree 50% mathematics – Masters in pedagogy – Responsibility in mathematics - or Equivalence

- **MoreMathsGrads** (www.moremathsgrads.org.uk) Higher Education Funding Council for England (HEFCE) £3.3million funded Widening Participation Project Launched 23 April 2007 to increase the number of mathematical science graduates. Initial pilot in three regions East London, West Midlands, Yorkshire and Humberside. Focus on underrepresented looking at developing careers advice and experience of students at School, College and University.

Reports

- Evaluating mathematics provision for 14-19 year olds**,** Ofsted, May-2006 www.ofsted.gov.uk/publications/index.cfm?fuseaction=pubs.summary&id=4207
  Mathematics in Further Education colleges, ACME, July 2006 http://www.royalsoc.ac.uk/acme/FE_Report.htm

Meetings earlier this year attended on behalf of NANAMIC by committee members

Nuffield Curriculum Centre

Two members of the NANAMIC committee attended the meeting at the Nuffield Curriculum Centre to discuss how the proposed changes to GCSE Mathematics could be made to work for the benefit of learners. It was an excellent day with lots of frank discussion about the state of classroom mathematics today. The proceedings were written up by Roger Porkess (see http://www.mei.org.uk/News/nuffield.shtml)

More Maths Grads National Launch — April 2007

The launch of this £3.3M HEFCE funded project that pilots in three regions - East London, West Midlands and Yorkshire & Humberside. It focuses on the development of careers advice, the degree curriculum and the experience of School and College students to increase the number of Mathematical Science graduates.

NCETM 'What constitutes the effective learning of mathematics?' May 2007

Addressed by Malcolm Swan this gathered together under one roof a mix of people able to input into this question. Continued work on this question through the year will shape a resulting paper that attempts to answer this question.

Chartered Mathematics Teacher planning meeting — May 2007

This meeting at the IMA with ATM and NANAMIC (Barry Lewis for the MA was unable to attend this meeting) looked further at sample profiles of potential applicants to ensure that the designation is fit for purpose. A preliminary approach has been made to the Privy Council. The whole process will take about a year from the formal submission to the Council

Meeting with Director Curriculum QCA — June 2007

This meeting provided an opportunity to informally discuss various issues. Approved minutes will be available in due course. QCA will set up a meeting for Subject Associations and other Stakeholders for 8 October 2007 - giving information and inviting ideas about future developments. Invitations will be for a member of Council/Executive to bring along e.g. three of their members.

NCETM Annual Conference — June 2007

This was a meeting at the Royal Opera House that celebrated the first year of National Centre for Excellence in Teaching Mathematics and introduced the latest members of the team. Amongst the keynote addresses was one that featured its new Director Professor Celia Hoyles. Full details of the conference can be viewed at http://www.ncetm.org.uk/Default.aspx?page=13&module=annual_conference_homepage
The small group sessions outlined the on-going research into what makes for effective Continuing Professional Development in Mathematics. The event provided an excellent opportunity to network.

Practically Perfect in every way

Talking of perfect numbers, some are almost perfect. For example, 16 has the divisors 1, 2, 4, 8, which add up to 15. Nearly perfect! You might like to check that 32 is also nearly perfect. These two examples fail to be perfect because the sum of their divisors is one below the target. How many nearly perfect numbers can you find that are one above the target?

Assignments for Level 5

David Martin is eager to engage in discussion about possible assignments for Level 5 Diploma in Teaching Mathematics (Numeracy CPD) in the lifelong learning sector.
Any ideas are welcome, please use the NANAMIC area of the NCETM web site, http://www.ncetm.org.uk or e-mail committee@nanamic.org.uk.

News:

ACME Advisory Committee on Mathematics Education

Our past Vice Chair Fiona Allan is now a member of ACME (http://www.acme-uk.org/)

Watch out for information about future training events and the 2008 NANAMIC AGM and Summer Conference at *www.nanamic.org.uk*

Find out how you or your organisation can join NANAMIC by emailing the NANAMIC Administrator Lesley Way
(ways2teach@ntlworld.com)