



# ANNUAL REPORT 2011-2012

MATHEMATICAL ASSOCIATION



supporting mathematics in education

## President's Report

It has been an honour and a joy to serve as the MA President for 2011/2012, proving to be an immeasurably rewarding year, filled with some memorable events. When Jane Imrie, President at the time, telephoned to ask if I would be willing to accept Council's invitation, one of the things I asked, once the shock had passed, was 'what does being President entail?' Her reply surprised me. She commented that there is no generic model as each President brings a unique set of skills and propensities for contribution. Since then, having seen other Presidents at work and spoken to many others, I have come to see what she meant.

I was born in Birmingham, but have never lived there. I spent my first six years, apart from a brief spell when my father was seconded to Barnard Castle, in suburban Middlesex. It was here I first went to school and I remember lying in bed one evening triumphant that I understood the number system sufficiently well to know that I could count, were I so minded, for ever. My father then got a new job and we all moved to a Leicestershire market town famous for its pork pies, Stilton cheese and a large pet food manufactory.

I think I had an unremarkable childhood. My brothers and I all went to our local schools. Our primary school was the other side of town but, mindful of their children's growing economic imperatives, our parents agreed that we could keep our bus money if we walked. So we did. When I was about seven, shortly after starting junior school, my class was asked if anyone wanted to learn the violin. For reasons I don't fully understand, not least because there was no musical tradition in my family, I said yes and started lessons. I can still remember the painful sound of a poorly prepared bow scraping across not quite tuned open strings. Fortunately for my family a second message quickly followed inviting boys to football practice. The two activities, violin and football, were on the same evening and football won. I have been an avid watcher and, until my mid-thirties when my knees finally gave way, player ever since. What did I learn from these experiences? I know I would never have made the grade as a professional footballer although I did, once, play for the county. Would I ever have been a good violinist? I don't know, confirming my belief that achievement, in whatever field, is a function of both opportunity and commitment.

So, I went through school, playing football whenever I could, watching Leicester City just as soon as I was old enough to make the fifteen mile train journey on my own, and making sure I did just enough to stay out of trouble. My secondary schools – I went to two as part of the much



lauded Leicestershire plan – were both comprehensive and, with the exception of Latin, which only one person in my class of twenty passed, facilitated my achieving sufficient O-levels to get me a job in a tax office on the top floor of an office block adjacent to Leicester bus station. Apart from being the duller, most pointless thing I have ever done, it proved a serious threat to my health. The room was so filled with cigarette smoke that one couldn't see one end of the office from the other, while diesel fumes from the buses below threatened to complete what the cigarettes had started. Within weeks I returned to school pleading to be allowed back. It was during this period that I met the first teacher of mathematics, John Gregory, to inspire me. For the first time mathematics was made exciting, and I loved it. After two years of serious commitment to my studies I left school with the best A-levels in the cohort of almost 200 students, reiterating the significance of opportunity and commitment in the construction of success. Importantly, I learnt that it is possible to redeem one's failures and succeed, even when others do not expect it.

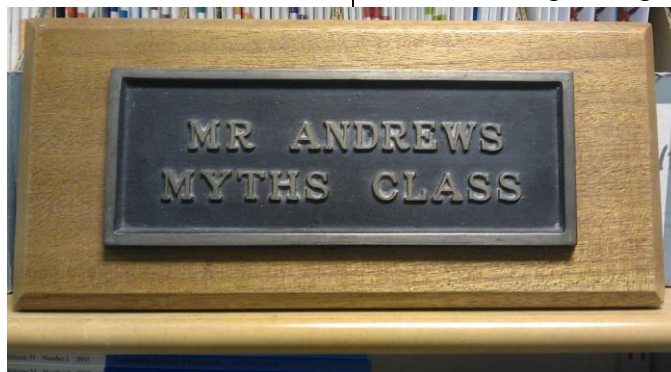
I went to Nottingham University to do mathematics. I achieved a decent degree and set about teaching as a career, not least because I wanted to inspire others in the way that John Gregory had me. I completed a PGCE, also

at Nottingham, under the guidance of Keith Selkirk, who, incidentally, prompted me to join the MA.

Deriving from a politically active family, I committed to working in challenging schools and got my first job in Telford, which was, at that time, still a new town. Naively, I thought I could change the world and taught in ways that privileged the intrinsic rather than the extrinsic properties of mathematics. I tried to create opportunities for classes to work on challenging problems and learn to accept that mathematics is difficult but, when undertaken collectively, rewarding. Despite my naivety, I must have done something right because when I left my first school, the father of one of my students, with whom I had developed a long-standing joke over the difficulties he had experienced with mathematics as a child, presented me with a plaque that he had cast and mounted on a wooden base. It was his way of saying thank you for helping his daughter come to love a subject he never understood but whose value he tacitly knew. And the joke; he always asserted that maths should be spelled myths. For more than thirty years I have been humbled by his gesture and immeasurably proud of my trophy.

Later, having spent several years as second in department in a second Telford school and head of department in a third Telford school, I was seconded for six months to work, three days a week, on supporting the professional development of colleagues in other schools. This, alongside my having recently completed a part time Masters in education, led me to apply to work in teacher education at the Manchester Metropolitan University.

At Manchester, while working on various teacher preparation courses, I completed a part time PhD, confirming again, that opportunity and commitment are the essential prerequisites of success. During this time, the mid-1990s, the late Gill Hatch and I became involved in an EU-funded collaboration with mathematics teacher education colleagues at the Eötvös Loránd Tudományegyetem or ELTE, in Budapest. This led to our observing lessons of such mathematical sophistication and pedagogical elegance that our Cockcroftian perspectives on mathematics teaching and learning were so completely transformed that we would never be the same again. If John Gregory inspired me at school, these experiences have inspired my professional life for nearly twenty years. In 1999, after nearly ten years in Manchester, I moved to Cambridge and have been there ever since. I now work solely with graduate students and have, since 2005, been responsible for the Faculty of Education's Masters programme. This has entailed much research methods teaching and substantial curriculum development. However, my interest in comparative mathematics education has continued and my most recent funded project was a video study of mathematics teaching in England, Finland, Flanders, Hungary and Spain. The data yielded by this project have facilitated important critiques



of Finnish mathematics teaching in ways that confound international interest in that country's success on successive iterations of the Programme of International Student Assessment (PISA), highlighted again the excellence of the Hungarian tradition and pointed towards Flanders as a source of further research interest.

So, how does the above link to the MA and my Presidential year? One thing I have gleaned from the events at which I have represented the MA, and the various committee and Council meetings I have attended, is that the MA reflects a perspective on mathematics and its teaching more commensurate with the Hungarian tradition than the impoverished diet most English children experience. Members of the MA are excited by mathematics and the surprises embedded in its wonderful web of relationships. They are excited by mathematical problems, problem solving and the beauty of an elegant solution. This is not the English mathematics education tradition; fortunately, however, many MA members have worked hard during the current curriculum review to encourage ministers to look beyond the utilitarian aspects of the subject and offer something of integrity and worth. Let us hope...

A second thing I have gleaned is that the MA comprises an eclectic but extraordinarily inclusive set of people. Nowhere is this more evident than at the annual conference. It was a privilege and a joy to work with Bill Richardson on putting the 2012 conference together and I am indebted to all participating colleagues, particularly the plenary speakers David Bedford and Bob Burn and, at short notice, Rob Eastaway for his after dinner speech. But we all know that the MA in general and its conference in particular are successful because of the hard work of those behind the scenes. Colleagues across the country, members of Council - some of whom were strangers when I began but are now friends - and the administrative staff at HQ in Leicester have not only helped to make my year go as well as it could but, in accordance with its motto, continue to ensure that the MA supports mathematics in education.

I end as I began by writing that it has been a privilege and an extraordinary honour to serve as the 100<sup>th</sup> President of the Mathematical Association. I hope very much that the MA will grow and continue to influence for the good the mathematics experienced by our children.

*Paul Andrews (President 2011-2012)*

#### **Chair's Report from Council**

Council meets quarterly on Saturdays at MA Headquarters. The normal pattern for a Council meeting is to start at 10.30 and finish at 15.30 with a lunch break of roughly 30 minutes. Five hours is about the limit for intense discussion as thereafter fatigue sets in. During that time a huge amount of business has to be transacted. Major items come at the top of the agenda. Later on in

the meeting, some reports from committees might be accepted without debate when there are no major issues. In between each Council meeting there is a meeting of Standing Committee which again typically lasts for about five hours. Each such meeting reviews the outcome of the previous Council meeting and prepares the ground for the next. The emphasis tends to be on matters of strategy rather than on the fine detail of reports from committees. Standing Committee has the power to act on Council's behalf if an issue arises which has to be handled quickly but it has to report to the next Council meeting on the action it has taken.

Members are the lifeblood of the Association and there has been continuing concern over the drop in the total membership. We want to make membership as attractive as possible so that we can retain existing members and gain new recruits, notably classroom teachers. To meet this challenge it would be helpful to find out what activities would encourage people to join the MA as a subject association. A questionnaire was prepared to try to elicit such information from existing members. Unfortunately the number of respondents was disappointing. Notwithstanding, as mentioned in last year's report, small groups were set up in March 2011 to conduct a detailed examination of each of Membership; Journals; Professional Development; Primary Mathematics Challenge; Website; Conferences. Each group was charged with producing a report, with recommendations where appropriate, which was to be presented at a two-day meeting in June 2011. This meeting took the form of a "Retreat" held at Burleigh Court, Loughborough University. In the sessions on the Saturday, which constituted a symposium rather than a formal meeting, Council duly received and discussed the reports from the six groups. On the Sunday morning, there was a formal Council meeting at which recommendations emanating from the previous day's discussions were ratified and other normal business was transacted.

This was the first two-day meeting in recent times and the format is one that might be repeated on some future occasions. With almost everyone staying over on the Saturday night, there was a chance to socialise with colleagues in a way that is not possible at our normal one-day Council meetings, when people have to dash off quickly at the end. The pleasant surroundings at Burleigh Court were much appreciated. The weekend was extremely intense (and at times also tense as colleagues took the chance to speak frankly). It is to be hoped that this will be to the long-term benefit of the Association and will justify any extra expense incurred.

Standing Committee met in July to review the outcome of the June meeting. There was plenty food for thought. The Treasurer, Paul Harris, produced the first draft of a detailed and very revealing paper on subscriptions. For the various categories of membership, including institutional, there was an analysis of what members were paying for their journals. The paper also provided *prima facie* evidence that there could be very considerable savings if journals went totally electronic. Of course, there are other considerations beyond the financial before such a drastic step could be taken. In the other direction,

Standing Committee looked at ways of reducing expenditure. The outcome was a package of measures, which, if successful, could return the Association to profitability by the end of 2012. These proposals were circulated in August to allow Council members to consider them in detail and submit comments in advance of the September meeting. The proposals were duly approved by Council in September. During the examination of expenditure in general and staffing costs in particular, one post at MA Headquarters had been identified as surplus to requirements. Council approved the instigation of appropriate redundancy procedures, with professional advice being obtained throughout. The process was duly completed and the outcome reported to the December meeting of Council. This will lead to a significant recurrent saving from 2012 onwards. Also in December, the Treasurer presented a balanced budget for 2012 which was approved by Council. This budget and all the other proposals mentioned above have a number of caveats. However, there is cause for cautious optimism that the financial situation of the MA should improve greatly over the next 12 months. In this connection, the Annual General Meeting in April 2012 was pleased to hear that the trading deficit for 2011 was much smaller than for 2010.

The reports received in June have generated lots of other ideas, too numerous to deal with all at once. However, given the importance of membership, the Publicity and Membership Committee has embarked on an examination of the existing membership categories and the associated subscription structure. It has been suggested that some categories could be abolished or merged and/or new categories introduced. However, care is needed to make sure that any changes do not introduce unintended anomalies.

The various committees form a major part of MA business. Reports on their activities can be found later in this Annual Report and so I shall not duplicate details. Mention has already been made of the Publicity and Membership Committee. I should like to mention a couple more. Teaching Committee carries by far the heaviest load of all committees. There has been a deluge of consultations, some with short deadlines. We are lucky to have a group of people who are able to mould a wide range of opinions into coherent and cogent responses and position papers. Although it might seem invidious to mention individuals, I should like to acknowledge the major contributions from Chris Pritchard, Sue Forrest, David Miles, Peter Thomas and Jennie Golding. Many of the fruits of their labours can be found on the *We Say* section of the website.

At December Council, one of the main items was a discussion of Branches, which have formed a part of the MA scene for many years. A detailed paper from the new Chair of Branches Committee, Dave Pountney, raised some pertinent questions, even to the extent of asking whether Branches had a future at all. Council felt that we should make an effort to keep Branches alive, involving closer liaison with other Committees, notably Professional Development. Through an article in a recent *MA News*,

members have been encouraged to contact the Chair of Branches with suggestions and offers of help.

One of our aims is to have a website which is attractive to members (and potential members) in terms of its content and navigation. Council has received regular updates on the development of the website. It would be fair to say that this has not been without its problems. The intention is to have a "one-stop shop" for members, with facilities such as online registration for the Annual Conference, discounts on MA products and access to high quality teaching resources. It is a source of considerable frustration that this is not yet operational and efforts are continuing.

In 2010 the MA received a very large donation. The donor, who wishes to remain anonymous, indicated that the money should be used to promote membership activities rather than for administrative costs. For example, those attending the 2011 and 2012 Annual Conferences were able to apply for a "bursary" to subsidise their outlay and it is intended that such a scheme will continue in the future. Other activities in accord with the spirit of the donation include one-day conferences, branches and the recruitment of new members. Members are invited to submit applications in respect of projects, funded from the donation, which will benefit the MA.

In 2010, the MA received a legacy of £1729. The number was chosen because of the fame bestowed upon it by the celebrated tale of Hardy's Taxi. This gave rise to the notion of *The 1729 Group*. Membership is open to anyone giving a donation of a sum which is mathematically significant. *The 1729 Group* was formally launched at the Annual General Meeting during the 2011 Annual Conference when David Acheson, then President, publicly handed over a cheque for £1089. Since then, there have been several more contributions, all of which are gratefully acknowledged.

The year covered by this report ended with the Annual Conference. We returned to Keele University, a pleasant venue with all the rooms for sessions in the one building which was a short walk from the hall of residence. The number of delegates could have been greater but those present were treated to a wide range of interesting presentations. The success of the event was due in no small measure to a lot of hard work by Paul Andrews and Bill Richardson, with the backing of Marcia Murray and her team at MA Headquarters.

The Annual General Meeting always takes place during the conference. At each AGM, various members of Council come to the end of their terms of office. Those stepping down in April 2012 included two Members without Office, Rob Eastaway and James Grime; Paul Harris (treasurer); Paul Metcalf (Editor-in-Chief); Bill Richardson (Conferences). The last three will stay on Council as they are taking on new roles. David Acheson completed his year as Immediate Past President, during which he devoted a great deal of time to producing excellent videos of the 2011 Annual Conference, which are now available on the website. Of course, there is always one other person standing down at each AGM, namely the retiring President. Paul Andrews has taken a lively interest in MA affairs during his presidential year and we are grateful for

his many and varied contributions. He is succeeded as President by Marcus du Sautoy and we look forward to reaping benefit from his high public profile.

In conclusion, I should like to thank all members of Council as well as members of all the committees and sub-committees who give up a great deal of their own time preparing for, travelling to and attending meetings and generally furthering the aims of the Association. The membership at large owes them a huge debt of gratitude.

***Adam McBride (Chair of Council)***

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### **Branches Committee**

The Branches Committee met twice during the year, once in October at HQ and again immediately after the MA Conference at Keele in April.

At the October meeting, the morning was spent usual 'Branches business'. Individual Branch programmes of events for the academic year were presented; Branch finances confirmed; Committee officers were elected; reports from other MA committees were reported. The afternoon session was spent discussing a working paper written by the Branches Chair entitled 'What Future for MA Branches'. This paper tried to highlight the reasons behind declining numbers of Branches and Branch members over the years and tentatively suggest ideas for reversing this trend over the next few years. It became clear from the discussion that some even existing Branches are experiencing difficulties in maintaining levels of activity and that 'new blood with fresh ideas' would be welcome both locally and at Branches committee. Future plans must target this.

The April meeting reported on the year so far. It was noted that Branch events were similar in number to 2010-11 and audience figures quoted were encouraging. The meeting discussed how MA News should be a vehicle for publicising future Branch events and also as a feedback mechanism on the success of recent past events, so that members were fully aware of a thriving and successful local Branch. This applied similarly to the Branches pages of the MA website and further discussion was had relating to the features and functionality a re-designed website must have if it wants to attract more readers. Promotional features such as 'How to set up an MA Branch' are planned to aim at the younger professional teacher audience.

Pressures on Branch activity continue to mount. For example, some institutions are now charging for room use; some local Branch committees are struggling for members with the effect of an increasing workload on the few; teacher members appear to be under an ever increasing pressure of work. Despite this, 2011-12 has seen many examples of a good number of well-run events with many teachers and their students responding very positively about the benefits of such events. Local Branch officers remain enthusiastic about what they do. The Branches Committee will do everything it can to maintain and expand the activities of its Branches in the coming years.

***Dave Pountney (Chair of Branches)***

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## Annual Conference 2012

Once again, we went to Keele University and enjoyed our time there. Most delegates arrived on Tuesday 10th April and the event concluded on Thursday 12th. The campus is a delightful one with the excellent accommodation and the conference centre being separated by a gentle stroll. The conference centre provided all the seminar and lecture rooms as well as the main restaurant. The only variation in terms of location came on the Wednesday evening when the Annual Dinner was held in Keele Hall, also conveniently located on campus.

The Opening Lecture was provided by David Bedford who provided a splendid session based on the Monty Hall Problem, complete with extensions! Following this, were two sets of parallel sessions and then the Open Meeting of Teaching Committee. The evening saw the first deviation from the planned programme. Dinner was as per schedule but it was followed by the first of our After Dinner Speakers, Marcus du Sautoy. He had been expected to provide this on the following evening but outside commitments prevented him from doing so. He provided a splendid talk on a musical theme, before setting off back to London. Further entertainment was provided in the form of a 'President's Quiz', devised and hosted by Paul Andrews.



Wednesday was a busy and full day with plenty to occupy delegates. Alongside the sessions, it was the day when the Publishers put on their displays. The morning included three sets of parallel sessions followed by a finger buffet lunch in the Exhibition area. With lunch consumed, we assembled in the Westminster Theatre to hear the Presidential Address. Paul Andrews took as his theme: *Learning from others: Can PISA and TIMSS really inform curriculum developments in mathematics?* It contained much food for thought and has been written up for the November issue of the Mathematical Gazette. Two more sets of parallel sessions were fitted in before the Annual General Meeting. After this, delegates left to 'spruce up', before returning to Keele Hall for the Conference Dinner.



We all had an enjoyable drinks reception followed by an excellent dinner. The problem of the After Dinner Speaker was resolved by persuading Rob Eastaway to help out, which he did in absolutely splendid style. He deserved, and received, a great round of applause.

The final morning comprised two more sets of parallel sessions and Bob Burn's Closing Lecture during which he highlighted some remarkable mathematics embedded in the familiar Pascal's Triangle. This brought to a close another excellent conference. There were no complaints from those who were there although the number of delegates was a little short of target.

**Bill Richardson (Chair of Conferences)**

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## Professional Development Committee

The Professional Development Committee met three times during 2011-12 and the main function for the Committee continues to be concerned with the close monitoring of its professional development projects and events aimed at both members of the MA and for the wider teaching workforce in line with the principal objective for the Association which is "to promote and support the professional development of teachers".

During the year PDC made a successful resubmission for the award of the National Centre for Excellence in the Teaching of Mathematics (NCETM) CPD Standard. The Mathematical Association has an entry on the NCETM website at

<https://www.ncetm.org.uk/cpd/organisation/63540>

The Committee continues to promote the award of Chartered Mathematics Teacher status for those actively involved in mathematics teaching and four of its members, Lynne McClure, Jennie Golding, Liz Woodham and Alison Clark-Wilson represent The Mathematical Association on the Chartered Mathematics Teacher Registration Authority.

Full details of the designation and how to apply can be found on The Mathematical Association's website.

During 2011-12, the Mathematical Association purchased a licence for GoToTraining and GoToMeeting, which PDC is now using to support the planning of PD events and a number of free trial webinars for teachers are being planned in 2012-13. If you would like to suggest any topics of PD webinars or would like to be kept informed about future events, please mail the chair of PDC.

Over the past year the Committee oversaw a number of activities and events, which included the 6<sup>th</sup> Annual Scottish One-day Conference for Teachers of Secondary Mathematics at the University of Stirling on 17<sup>th</sup> September 2011. The day was enjoyed by over 150 delegates and it maintains its position as a regular event on Scottish mathematics teachers' annual calendars due to the careful stewardship of Bill Richardson, to whom the Committee is very grateful.

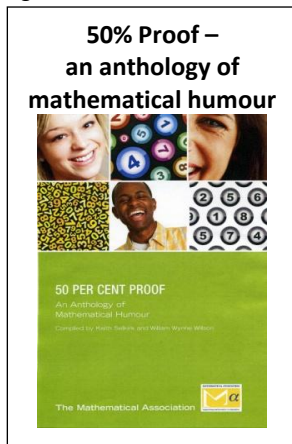
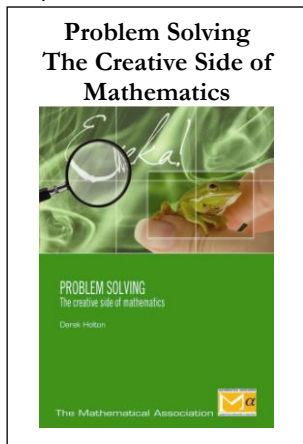
During the year, our Chair Liz Woodham, stepped aside as Chair to look after the needs of her new arrival Amie. The Committee looks forward to welcoming Liz back later in 2012!

**Alison Clark-Wilson  
(acting Chair of Professional Development)**

## Publications Committee

The task that the committee pursues is simply put:

- continue to publish authoritative, practical and innovative books and projects;
- seek new authors;
- boost marketing and sales across all titles by better promotion and more advertising.



The past year has been one in which we have successfully achieved in each of these critical strands of our activities. For example, we have successfully launched the following titles:



It is worth noting that the typesetting and design for these exciting projects were undertaken within the committee itself, boosting the overall margins.

As for new authors, we appealed for them in the MA News – and obtained an excellent response. You'll see the fruits of these in due course.

As ever, publishing good books is only part of the story – marketing them successfully is the way to ensure that we reach and influence the intended market. We pursue this through many channels – conference, mail shots, advertising, and bespoke initiatives. The next challenge is to better exploit e-opportunities, both via our own web site and through organisations such as Amazon. I hope that in my next report you will see significant progress there. We continue to benefit from digital printing. This means that we can tailor production to our forecasts. Again, it means better margins and less cash tied up in expensive stocks. A win – win situation.

Let me end by thanking the other members of the committee – Sue Waring, Bill Richardson, Paul Harris, Michael Fox, and Mary Ledwick - for all their collective help, dedication and contributions. Behind the scenes, Lisa O'Donnell manages our production with flair and dedication. The results are evident in the quality of the books we produce; it is also evident in the financial surplus that we achieve – some of which funds new projects, the balance available to the MA for its other activities.

**Have an idea for a book? – I look forward to hearing from you.**

**Barry Lewis (Chair of Publications)**

## Editorial Happenings

My thanks go to the following colleagues for their tireless work: -

### Editors

John Berry *Mathematics in School*  
 Ray Gibbons *Equals*  
 Gerry Leversha *Mathematical Gazette*  
 Lynne McClure *Primary Mathematics*  
 Martin Perkins *SymmetryPlus*  
 Chris Pritchard *Mathematics in School*  
 Wil Ransom *Mathematical Pie*  
 (and Erik Gooding for *Pie Notes*)  
 Sue Waring *MA News*

### Production Editors

Helen Morris *Mathematics in School*  
 Bill Richardson *Mathematical Gazette*  
 Tina Webb *Mathematics in School*

### Advertising

Janet Powell

....and, of course, my grateful thanks to the staff at HQ.

**Paul Metcalf (Editor-in-Chief)**

## Primary Mathematics Challenge

This year there was an increase in the numbers of schools taking the PMC challenge for the first time in 4 years.

In November 2011 more than 86500 pupils in 2432 schools took the PMC. Based on the recommendations of the Review Committee we made some administrative changes this year, mailing all the packs out on the same date, rather than sending them out well before the Challenge takes place. Generally this worked well, though postal delays did cause a few problems.

We received feedback from most of the schools which entered and, once again, the feedback about the administration was overwhelmingly positive. However, the on-line registration did cause a few problems and we are determined that these will be resolved in time for the next round of PMC. We know that teachers appreciate being able to register on line and provide their feedback and results on line when possible. Opinions were divided about whether the paper was harder or easier than last year's. We always aim to make the paper accessible to the majority of pupils, so that all can take part.

1026 pupils scored 22 or more in the November Challenge and these pupils were invited to take part in the Bonus Round on Wednesday 1<sup>st</sup> February. 25 of these pupils scored full marks in the November Challenge.

The mark distribution for the Bonus Round is shown below:

Marks	0-5	6-10	11-15	16-20	21-25
100%	0	6	24	46	23

Rudolf Loewenstein has decided to step down from his role as Problems Team Coordinator as he has suffered from ill-health this year and is not yet fully recovered. Peter Bailey has kindly agreed to take on the role for the time being. We have recruited two new team members; Sue Barber, a primary headteacher from Southwark and Joe Tazzyman, a primary school teacher from London.

The new PMC Problems book, 'Challenge Your Pupils 3' is progressing well. It will soon be available from MA Office.

**Lesley Jones (Chair of PMC Management Team)**

### Library Committee

#### **Wittgenstein Archive of Francis Skinner:**

The annual loan agreement with Trinity College has been renewed for 2012. Little apparent progress has been made by Professor Gibson towards a new publication based on the Archive. But Cambridge University Press will continue to report to the MA Librarian on any significant developments. A PowerPoint presentation on the Archive using photographs taken at Trinity in 2011 has been prepared by Mary Walmsley (MA Archivist).

#### **Donations and Disposal of Books and Archival Material:**

Donations of books have come from Roger Wheeler (over 250 books and over 40% new titles for the MA Library); Robert Carmichael (over 100 books and 70% new titles for the MA Library; and Audrey Fryer (6 new MA titles). Some missing numbers of Russian and Hungarian serials for gifted and talented pupils have been donated by Joe Watson. Sales of duplicate books at two events have proved profitable: £50 from a Saturday morning branch meeting in Leicester and £150 from a day at the Keele Conference. All proceeds go to the MA Library fund and ease pressure on MA finances. The major question of sale of more valuable material, including the John Hersee Room collection and the Wittgenstein Archive, has been raised by Council and will be considered in detail later in 2012.

#### **Manuscript Copy Books of John Hersee:**

The bulk of the 9 crates of manuscript books has been processed, catalogued and transferred to the Special Collections of the University of Leicester's David Wilson Library (DWL). Around 200 books are now accommodated in 39 conservation boxes in two sizes and stored in the Kirby and West Suite. A new DWL web page has been created and linked to the full catalogue record, the checked and edited hand list of John Hersee (searchable as a pdf file), and a YouTube video sequence of two outstanding books, including the oldest of 1704. Around 100 books remain uncatalogued in the John Hersee Room; the majority are of little value and over half are not mathematical. Insurance for the main collection is now covered by the DWL policy and is a saving for the MA. Following a particular interest of John Hersee, Mary Walmsley has been working on the theme of mathematical verse in the books for a possible future presentation or publication. In addition, Jackie Stedall, who helped with editing the hand list, has produced a new book published by Oxford University Press - *The History of Mathematics: A Very Short Introduction* - including a chapter featuring selected books from the Hersee collection and photographs of sample pages, taken by Mary Walmsley.

#### **Links with the David Wilson Library:**

The Service Level Agreement with the University of Leicester for the care and development of the MA Library has been renewed for another five years, 2012-2017. The principal staff link with the DWL - Evelyn Cornell, the Special Collections Librarian - has announced her retirement in May 2012. Her support and encouragement

for the MA Library has been much valued over many years.

**Mike Price (Librarian and Chair of Library Committee)**

### Teaching Committee



**TC Chair Chris Pritchard**

**[tc-chair@m-a.org.uk](mailto:tc-chair@m-a.org.uk)**

**TC Secretary Sue Forrest**

These are times of considerable change in education in general and in mathematics education in particular. However, it doesn't appear to be change unduly driven by dogma; the government has tended to say that it doesn't like what it has inherited and wants new models in place, and then moved to engage the profession as never before in all sorts of consultation. We have been inundated.

We can report with some confidence that The Mathematical Association has met the challenge with a professional and vigorous approach, and as final proposals for change come through we expect that at least some of the arguments that we have put will feature in the documents. Teaching Committee has been at the forefront of the MA's involvement.

We have produced responses to the following consultations:

- Training our next generation of outstanding teachers
- A world-class mathematics education for all our young people (Vorderman)
- Testing, accountability and assessment at KS2 (Bew)
- Administration of examinations for 15 to 19 year olds in England
- GCSE reform (Ofqual)
- Review of Funding formula for 16-19 year olds
- Study programmes for 16-19 year olds
- Revised Early Years Foundation Stage (EYFS)
- EYFS Early Learning Goals
- Bridging the mathematics gap (ACME)

Many of these documents can be found in an area of the MA website labelled WE SAY. Our evidence on the administration of examinations has been posted on the Parliament website at:

[www.publications.parliament.uk/pa/cm201012/cmselect/cmeduc/writev/1671/exb23.htm](http://www.publications.parliament.uk/pa/cm201012/cmselect/cmeduc/writev/1671/exb23.htm)

In addition, the secretary and treasurer of Teaching Committee, Sue Forrest and David Miles, went before the All Party Parliamentary Group on personal finance education to give oral evidence.

By its very nature this work never comes to a conclusion, and we are currently engaged in framing two position papers, one on subject expertise and the other on STEM education. We also expect to produce comments on the JMC's report on 'Digital technologies and mathematics education'.

Of course, we never quite know when another initiative will require our attention, but we believe that we have put in place what is needed to respond effectively and efficiently. We now have a Teaching Committee structure that allows for a focus on learning and teaching, but at the same time we have instituted an approach to developing position papers and responding to consultations that fully involves the membership of our parent body, the Council of The Mathematical Association, wherein lies such expertise and experience.

Our calendar of meetings over the past twelve months remained unaltered, with two meetings in London and one in York. But there have been changes to our membership. We are sad to lose the services of Fiona Hogg and Keith Porteous but delighted that Jenny Orton has taken over as chair of the Post-16 Subcommittee and that Viv Townsend (though not a member of Teaching Committee as such) has stepped into Liz Woodham's shoes temporarily as Chair of the joint MA/ATM Primary Group. We are joined by new members Fran Watson, Alison Parish and Caroline Clissold. If there are members wishing to be involved in the work of Teaching Committee or any of its subcommittees, we would be pleased to hear from you.

I would like to extend particular thanks to Sue Forrest and David Miles not only for their contributions to the smooth running of Teaching Committee over the year but also for drafting consultation responses. I also acknowledge with gratitude the work of Cherri Moseley and Peter Thomas whose efforts have had a significant impact. Finally, thanks to Adam McBride and Paul Harris for guaranteeing close liaison with Council and supporting our efforts at Teaching Committee.



Primary Subcommittee  
tc-121@m-a.org.uk  
Chair Vivien Townsend

Since the Easter conferences in 2011, the chair of the group, Liz Woodham, has left us to have a baby. Amy Victoria Ella was born on 4<sup>th</sup> November 2011 and mother and baby are both doing well. I am standing in as chair for 12 months while Liz deals with more important matters!

This year, the group submitted responses to the Bew consultation on testing, accountability and assessment at KS2 (September) and to the EYFS consultation on the Early Learning Goals (January). The content of our responses is available on the MA and ATM websites.

The proposed changes to the National Curriculum remain high on our agenda, and the group was represented at a meeting of teachers in February, coordinated by ACME, to gain responses to the National Curriculum Expert Panel Report. Looking ahead, we will be carefully considering how we support primary members in preparing for the new curriculum. Is it time for another primary conference?

We are currently working on two publications. Our books about cross-curricular opportunities ... *and Maths* are being delayed until the new curriculum is introduced. We are also working on activities to support the learning and teaching of multiplication tables. These publications form the basis of two sessions at both MA and ATM conferences in 2012.

The group is delighted that three of our members are newly-installed as joint editors of the MA's journal, *Primary Mathematics*. We are eagerly anticipating their friendly and persuasive pleas for content.

The group is made up of primary teachers, university lecturers, independent consultants, writers and employees of mathematical organisations. All are members of the MA or the ATM, or both. Between us we have representation on MA and ATM Councils, ACME, JMC and the Cambridge Primary Review. We meet termly at the Institute of Education in London and communicate by email in between. We would welcome new members – especially practising teachers – who are keen to get involved. If you'd like to join us, please get in touch.



11-16 Subcommittee  
Chair Rachael Horsman  
tc-132@m-a.org.uk

The 11-16 Subcommittee are pleased to say that we have grown in number considerably. We are delighted to welcome three new members, Alison Parish, Mick Blaylock and Rhys Jeremiah.

The subcommittee has continued to develop materials for publication. With the success of Mary Ledwick's revision cards, a Higher tier pack is well on the way! We have also submitted some ideas for KS3 problem-solving resources to the MA's Publications Committee – Problem Solving Cards and Padlock Challenges. We have produced some pull out pages for *Mathematics in School* and hope that these will continue for some time.

The subcommittee has been involved in a number of CPD events including the Annual Conference and September Stirling Conference. The subcommittee was greatly saddened that the South Hunsley day conference was cancelled due to the poor uptake, especially after all the hard work that Liz Russell put into preparations for the day.

With the government now confirming that modular exams are a thing of the past, the subcommittee is looking to develop support materials to help schools make the transition to linear syllabuses. These materials will include details on revision strategies currently used by Mary Tuson.

We look forward to another productive year!





Post-16 Subcommittee  
Chair Jenny Orton  
tc-129@m-a.org.uk

This report from the new Post-16 Subcommittee can only start with acknowledgement of the tremendous work done by the previous chair, Peter Thomas, over his many years as first a committee member and latterly Chair. We would like to thank him very much for all the work that he did for this group, as well as for all the work he continues to do for the MA and indeed Post-16 mathematics education.

During 2010/11, a productive collaboration with NANAMIC resulted in two professional development events in the spring and summer of 2011; Engaging Level 3 Learners (Loughborough in March), Teaching the New GCSE Mathematics (Birmingham in June). The MA/NANAMIC group also produced a termly newsletter. This collaboration is in abeyance.

In the Autumn Term of 2011, the MA Post-16 Subcommittee was reformed, with me as (somewhat surprised) chair. Six of us met in London to decide on our priorities for the coming months. We do represent a good range of Post-16 environments, but would welcome interest from prospective new members - contact the chair for details. We intend to meet termly.

One of our main priorities for this year is to produce some resources for teachers to use to stimulate interest in various topics across Pure Mathematics, Decision Mathematics, Mechanics and Statistics. Our aim to produce '100 Hooks' still seems a way off, but we look forward to presenting the first batch of Hooks at this year's Conference, and hopefully recruiting a few more contributors to the cause. The session will be entitled 'Meet the Hookers', and several of the new committee will be in attendance. The Hooks are single visual images — photos, diagrams, equations — which are designed to encourage discussion and exploration leading into a particular aspect of the curriculum.

Alongside this, we are continuing to maintain and update the long standing 'Have you read any good (maths) books lately' list, and respond through Teaching Committee to any government initiatives relevant to Post-16 mathematics education. At our last meeting we began to discuss the plethora of mathematics qualifications available to Post-16 students, and are considering how we can help to inform heads of department and subject leaders of suitable courses.

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### United Kingdom Mathematics Trust (UKMT)

The numbers of students entered for the Mathematics Challenges this year were as follows: Junior 280,870; Intermediate 237,480; Senior 97,570. There were a record number of entries to the Senior Challenge, although the total number of entries to the Challenges was slightly down compared to the previous year. 1,512 teams entered the Team Mathematics Challenge, and 1,025 teams entered the Senior Team Mathematics Challenge, both these numbers up on the previous year. In addition,

six teacher meetings are due to take place in the early summer 2012, in Edinburgh, Belfast, Greenwich, Bristol, Manchester and Cambridge, and students continue to benefit from the mentoring scheme. There is an increasing list of mathematical books published by UKMT.

In July 2011, the International Mathematical Olympiad was held in The Netherlands, and the UK team came back with 2 Gold, 1 Silver and 2 Bronze medals, plus 1 Honourable Mention, and came joint 17th out of 101 participating countries. The 53rd IMO will be held in Argentina, in July 2012. The first European Girls' Mathematical Olympiad, organised by UKMT, was held at Murray Edwards College Cambridge in April 2012. The UK team was awarded 2 bronze medals, and came 12th out of 19 participating countries. Full details can be found on the EGMO 2012 website at [www.egmo2012.org.uk](http://www.egmo2012.org.uk). EGMO 2013 will be held in Luxembourg. During 2011-12, UK teams were also sent to compete in the Romanian Master of Mathematics and the Balkans Mathematical Olympiad. The UKMT organised new activities this year. The Senior Kangaroo was introduced as a new follow on round to the Senior Challenge and was taken by 1100 students. There were 20 questions and the format was new to UKMT, whereby the non-multiple choice answers were marked by machine. Two Mathematical Circles were run, in Glasgow and Gloucestershire. These were two and three day non-residential events filled with mathematics for around 80 students aged 14-15. The Primary Team Mathematics Resources were launched. This set of materials was produced with the aim of providing secondary schools with materials to run mathematical events for their feeder primary schools. The teacher notes accompanying these resources refers teachers to further relevant materials including the Primary Mathematics Challenge and link to the MA website.

The dates for the challenges in 2012-13 are: Junior Challenge (ages 11-13): Thursday 25 April 2013; Intermediate Challenge (ages 13-16): Thursday 7 February 2013; Senior Challenge (ages 16-18): Tuesday 6 November 2012. In addition to these three challenges, students who do well are invited to take part in the follow-on rounds, the Junior, Intermediate and British Mathematical Olympiads and the European Kangaroo.

UKMT is always looking for more helpers, whether to submit questions or to help at events. There is a volunteers form at: <http://www.getting-involved.ukmt.org.uk/>

*John Silvester (MA representative)*

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### The British Mathematical Olympiad Committee

The Netherlands hosted the International Mathematical Olympiad in July 2011 in Amsterdam, where the UK team came 17th out of 101 participating countries, winning 2 Gold, 1 Silver, 2 Bronze medals and an Honourable mention (for a complete solution to a question by a non-medal winner). At the Royal Society celebration of their performance in September, the lecture was given by Jozsef Pelikan, who has for many years been involved with the IMO. Earlier, in May 2011, at the Balkan Mathematical Olympiad in Romania, the UK team of 5 came away with 1 Gold, 1 Silver and 3 Bronze medals, James Aaronson producing the best individual score in the competition.

After our usual two rounds of the BMO, the Romanian Master of Mathematics competition in February 2012 saw a UK team win 1 Silver, 1 Bronze medal and 3 Honourable mentions.

In a new venture, designed to boost the profile of mathematics for female students, teams from 19 countries descended on Cambridge for the inaugural European Girls Mathematical Olympiad in April this year; by all accounts it was a great success. The Summer Schools for Years 10 and 11 and the Mentoring scheme continue to give training to a wider clientele. The training camps in Oxford, Hungary, Cambridge and Oundle give more specific preparation for potential Olympiad team members.

***Philip Coggins (M.A. Representative)***

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### **Headquarters**

#### **At April 2011, the Headquarters Team was:-**

Senior Administrator - Marcia Murray  
Finance Officer - Linda Medhurst  
Membership Officer - Charnjit Seehra  
Administrative Assistant - Lisa O'Donnell  
Clerical Assistant - Anne-Marie Brown (left 31/09/11)  
Clerical Assistant - Emma de Riso

***Marcia Murray (Senior Administrator)***

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### **Association Regulations**

Regulations can be viewed at:  
<http://www.m-a.org.uk/jsp/index.jsp?lnk=850>

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### **The Council from April 2011**

President	Dr Paul Andrews
Immediate Past President	Dr David Acheson
President Elect	Professor Marcus du Sautoy
Chair of Council	Professor Adam McBride
Secretary	Dr Catherine Ogden
Treasurer	Dr Paul Harris

#### Chairs of Committees

Branches	Mr Keith Cadman
Conferences	Mr Bill Richardson
Editor-in-Chief	Mr Paul Metcalf
Professional Development	Mrs Liz Woodham
Publications	Mr Barry Lewis
Publicity and Membership	Dr Geoff Tennant
Teaching Committee	Dr Chris Pritchard

#### Members-without-Office

Ms Fiona Allan	Dr Tony Gardiner
Dr Alison Clark-Wilson	Dr James Grime
Dr David Crawford	Mrs Lynne McClure
Mr Rob Eastaway	Ms Rachael Horsman (nee Read)

#### Note:

Ms Cherri Moseley was co-opted as a Member without Office.

The Company Secretary is Mr Bill Richardson.

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**THE MATHEMATICAL ASSOCIATION**  
(A company limited by guarantee)  
**STATEMENT OF FINANCIAL ACTIVITIES**  
(Incorporating an income and expenditure account)  
**YEAR ENDED 31 DECEMBER 2011**

		<b>Total</b>	
	<b>Notes</b>	<b>2011</b>	<b>2010</b>
		<b>Unrestricted</b>	<b>£</b>
		<b>£</b>	<b>£</b>
<b>INCOMING RESOURCES</b>			
<b>Incoming resources from generated funds</b>			
Rent receivable		5,247	5,553
<b>Voluntary income</b>			
Donations		12,462	255,881
<b>Activities for generating funds</b>			
<b>Investment income</b>			
Bank interest		6,046	482
<b>Incoming resources from charitable activities</b>			
Members' subscriptions		248,330	268,964
Editorial board		33,367	48,032
Publications		24,890	34,333
Conferences		42,812	24,269
Primary mathematics challenges		78,597	75,898
Professional development income		19,793	20,478
Branch income		2,615	878
Library income		18	-
<b>Other operating resources</b>			
Miscellaneous income		-	653
<b>TOTAL INCOMING RESOURCES</b>		<u><u>474,177</u></u>	<u><u>735,421</u></u>
<b>RESOURCES EXPENDED</b>			
<b>Costs of generating funds</b>			
Publicity expenses		9,929	26,882
<b>Charitable activities</b>	2	473,739	489,427
<b>Governance costs</b>			
Audit and accountancy		9,950	7,134
<b>TOTAL RESOURCES EXPENDED</b>		<u><u>493,618</u></u>	<u><u>523,443</u></u>
<b>NET (OUTGOING)/INCOMING RESOURCES BEFORE TRANSFERS</b>			
Revaluation of fixed assets		(19,441)	211,978
		(29,000)	-
<b>NET MOVEMENTS IN FUNDS</b>		<u><u>(48,441)</u></u>	<u><u>211,978</u></u>
<b>RECONCILIATION OF FUNDS</b>			
Total funds brought forward		615,532	403,554
Total funds carried forward	10	<u><u>567,091</u></u>	<u><u>615,532</u></u>

# THE MATHEMATICAL ASSOCIATION

(A company limited by guarantee)

## NOTES TO THE FINANCIAL STATEMENTS

YEAR ENDED 31 DECEMBER 2011

### 2 CHARITABLE EXPENDITURE

	2011 £	2010 £
Editorial board	130,348	148,986
Publications	21,246	27,936
Headquarters administration (see note 3)	58,704	55,245
Annual conference	47,579	497
Branches expenses	4,551	2,860
Teaching committee	3,719	3,628
Staff costs	130,555	145,123
PMC expenses	38,704	53,649
Professional development	12,871	27,192
Council and other committees	12,809	10,302
Library management fund	93	426
Website expenses	12,560	13,583
	<u>473,739</u>	<u>489,427</u>

### 3 HEADQUARTERS ADMINISTRATION

	2011 £	2010 £
Advertising and recruitment	-	1,551
Printing, postage and stationery	9,415	11,855
Repairs and renewals	19,586	20,514
Rates	1,741	1,621
Insurance	2,823	4,560
Telephone	4,125	3,513
Bank and credit card charges	3,412	3,055
Training costs	-	116
Legal and professional fees	-	430
Sundry expenditure	6,089	3,638
Heat and light	3,584	5,105
Depreciation	7,929	8,388
VAT - partial exemption adjustment	-	(9,101)
	<u>58,704</u>	<u>55,245</u>

### 4 NET INCOMING/(OUTGOING) RESOURCES FOR THE YEAR

Net incoming resources are stated after charging:

	2011 £	2010 £
Depreciation of tangible fixed assets: - owned by the charity	7,929	8,388
Auditor's remuneration	6,500	6,350
	<u>6,500</u>	<u>6,350</u>