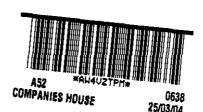
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UNITED KINGDOM MATHEMATICS TRUST

REPORT AND FINANCIAL STATEMENTS

FOR THE YEAR ENDED

31 JULY 2003

REPORT AND FINANCIAL STATEMENTS

For the year ended 31 July 2003

Company registration number:

3271283

Registered Charity number:

1059125

Registered office:

21 Albemarle Street

London W1S 4BS

Trustees:

Dr R W Bray

Professor J Brindley Mr H Groves Mr T J Heard Miss S G Jameson Dr A K Jobbings Mrs P M King Mr N J Lord

Professor A C McBride
Dr P M Neumann
Mr W P Richardson
Professor J C Robson
Dr A B Slomson
Dr W B Stewart
Dr G C Smith

Secretary:

Dr R W Bray

Bankers:

Lloyds TSB Bank plc

4 West Street Havant Hampshire PO9 1PE

Lloyds TSB Bank plc

6/7 Park Row Leeds LS1 1NX

Auditors:

Grant Thornton Registered Auditors Chartered Accountants I Westminster Way

Oxford OX2 0PZ

REPORT AND FINANCIAL STATEMENTS

For the year ended 31 July 2003

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REPORT OF THE TRUSTEES

For the year ended 31 July 2003

CONSTITUTION OF THE TRUST

The Trust was incorporated on 30 October 1996. It is a company limited by guarantee, registration number 3271283, and is registered with the Charity Commission as Charity Number 1059125. It was founded under the patronage of The Royal Institution of Great Britain and its registered address is that of The Royal Institution, 21 Albemarle Street, London W1S 4BS. The governing document is the Memorandum and Articles of Association.

The Directors of the Trust are also the Directors of the Charity for Companies Act purposes.

The governing body of the Trust is its Council, and its Trustees are precisely the members of the Council.

Under Article 1.1 of the constitution, The Royal Institution of Great Britain and The Mathematical Association are Participating Bodies, and the Association of Teachers of Mathematics, the Edinburgh Mathematical Society, The Institute of Mathematics and Its Applications, the London Mathematical Society and The Royal Society are Supporting Bodies. The Royal Institution is also the Patron of the Trust.

MAIN OBJECTS

The Trust is established to advance the education of children and young people in mathematics, in particular by organising and running mathematics competitions.

MEMBERSHIP

The Trustees during the period covered by this Report were:

Dr P M Neumann (Chairman)
Dr R W Bray (Secretary)
Dr W B Stewart (Treasurer)
Professor J Brindley
Mr H Groves
Mr T J Heard

Miss S G Jameson

Dr A K Jobbings (Vice-Chairman)

Mrs P M King (nee Smart)

Mr N J Lord

Professor A C McBride (Vice-Chairman until resignation in August 2002)

Mr W P Richardson

Professor J C Robson

Dr A B Slomson (Vice-Chairman from appointment in October 2002)

Dr G C Smith

The members of the Trust comprise present and former Trustees, namely those listed above plus Mrs M T Fyfe, Dr A D Gardiner, Dr I B Leader, Mr D J Orton, Mr R C Smart and Mr P A J Thomas, together with The Royal Institution, The Mathematical Association and Ms H J Macklin. In October 2002 Council extended membership of the Trust to current members of subtrusts, as a result of which the following became members during the year: Mr D F Archer, Mr R M Atkins, Ms C Chisholm, Dr D J Collins, Mr C Dixon, Mrs J Lewis, Mr M L Perkins, Miss J S Ramsden, Mr A L Voice and Dr B J Wilson.

REPORT OF THE TRUSTEES

For the year ended 31 July 2003

MEETINGS

The 19th to the 22nd meetings of the Council were held at the Royal Institution on 28 August and 31 October 2002, and 17 February and 16 April 2003. Under the provision of Article 56 one resolution, dated March 2003, was agreed by Council outside a meeting.

The sixth Annual General Meeting of the Trust was held at The Royal Institution on 16 April 2003.

STRUCTURE OF THE UKMT

The Trust has five 'subtrusts' (termed 'Branches' or 'Represented Branches' in the Articles). Each of these subtrusts is in charge of one of the spheres of UKMT activity; each has its own membership and its own financial arrangements subordinate to those of the main Trust. These subtrusts are as follows:

- The Junior and Intermediate Challenges Subtrust (IICS), whose major responsibility is the running of the mass entry mathematics challenges for school pupils aged between 12 and 16 approximately;
- The Junior Olympiad Subtrust (JOS) which runs the more advanced, more specialised competitions for school pupils aged between 12 and 16 approximately;
- The Senior Challenge Subtrust (SCS) which runs the mass entry challenge aimed mainly at school pupils aged 16 or over;
- The British Mathematical Olympiad Subtrust (BMOS) which runs the selective olympiad activities for school pupils aged 16 or over, and selective training for pupils aged 12 or over;
- The Team Maths Challenge Subtrust (TMCS), which runs the mass entry team mathematics challenge for school pupils aged between 12 and 14 approximately.

The TMCS was established as a Branch of the Trust by Council on 17 February 2003. The other subtrusts are of much longer standing and are Represented Branches.

STAFF

The Trust had one employee through the year, Ms A Gould, its Executive Director. The bulk of the administrative support for the work of the Trust is provided by the Maths Challenges Office, based in the University of Leeds. The Office had two administrators, Ms R Airey and Ms J Foggin, who were able to call on a team of part-time employees for assistance. Ms Foggin resigned from her post in March 2003.

REPORT OF THE TRUSTEES

For the year ended 31 July 2003

JUNIOR AND INTERMEDIATE CHALLENGES SUBTRUST (JICS)

The membership of the JICS was:

Professor J Brindley (University of Leeds, *Chair*);
Dr A B Slomson (University of Leeds, *Secretary and Treasurer*);
Mr H Groves (Royal Grammar School, Worcester) (co-opted);
Dr A K Jobbings (Bradford Grammar School);
Professor J C Robson (University of Leeds).

After two years of great expansion, the year 2002-3 was one of consolidation as far as the Intermediate and Junior Challengers were concerned, but saw considerable developments in the other work of the Maths Challenges Office.

The Intermediate Mathematical Challenge was held on Thursday, 6 February 2003. The number of entries rose by 3.6% to 207,110 from 2,727 participating schools compared with 2,681 schools last year. The average score at 43.2 was 5 marks lower than last year. As a result the certificate thresholds were somewhat lower than in 2002 at 74, 58 and 46 for Gold, Silver and Bronze respectively.

The Junior Mathematical Challenge was held on Tuesday, 29 April 2003. The number of entries rose by 3.7% to 248,020 from 3,287 participating schools, compared with 3,247 schools last year. The average score was 41.1, only marginally lower than the previous year, and the certificate thresholds at 75, 57 and 44 for Gold, Silver and Bronze respectively were similar to those in 2002.

Because of the greater complexity in the follow-up competitions to the IMC it was decided to post results to schools separately from the certificates and the materials for the follow-up competitions. This meant that all results were posted only eighteen days after the IMC, and so schools received their results much sooner than in previous years. This was widely appreciated by schools and the same plan was therefore also adopted for the JMC, results being posted to schools within four weeks of the JMC date.

Maths Challenges Office

Developments recorded elsewhere in this report led to increased activity for the Maths Challenge Office. These include the replacement of the IIIMC by IMOK, greater involvement with the BMO and the administration of the Mentoring Scheme which proved to be a complicated and time consuming task. We are fortunate that the Maths Challenges Office staff responded well to the increased burden and continued to provide an excellent service for all the Trust activities for which they provide the administrative support.

We were pleased to acquire at last a new and larger Packing Room. This is situated in the Department of Physics and Astronomy, conveniently close to the University's Mail Room, and is three times the size of the old one. It was officially open by the Vice-Chancellor of the University of Leeds in May.

The year saw several staff changes. Roger Boyes, our longest serving member of the Packing Room staff, left when he moved away from Leeds. Because of the increased workload, we recruited three new members. The team, all of whom contribute to the high quality of the service provided, now consists of Grahame Barker, David Coxon, John Dales, Claire Hall, Gwyneth Hartley and Mary Roberts.

In February, Jenny Foggin resigned her administrative position on being promoted to a post in the central University Administration. Jenny served the Trust extremely well for four years and we were very sorry to lose her. Subsequently Jenny took maternity leave and we congratulate her on the birth of her first child Alice Rose.

REPORT OF THE TRUSTEES

For the year ended 31 July 2003

We were extremely pleased to welcome back, in Jenny's place, Heather Macklin who originally set up the Maths Challenges Office in 1996, and subsequently took a few years out during which her children Daniel and Elizabeth were born.

During this period of change, Rachel remained the mainstay of the Maths Challenges Office. We congratulate her on her marriage in July, as a result of which she is now Rachel Greenhalgh.

JUNIOR OLYMPIAD SUBTRUST (JOS)

The membership of the JOS was:

Professor J C Robson (University of Leeds, Chair)
Ms C Chisholm (Hutchesons' Grammar School, Glasgow) (co-opted)
Mr H Groves (Royal Grammar School, Worcester) (co-opted)
Dr A K Jobbings (Bradford Grammar School)
Miss J S Ramsden (Amersham, Secretary)
Mr W P Richardson (Mathematical Association)
Mr A L Voice (St Christopher's School, Hove, Treasurer)

This was a year of development for the subtrust. As reported last year, the IIIMC, which had been used as a follow-up competition to the Intermediate Challenge, had ceased to be available. After detailed discussions and planning, it was agreed to instigate an entirely new suite of competitions and, simultaneously, to extend the provision of Kangaroo papers. Combined, these are now termed the Intermediate Mathematical Olympiad and Kangaroo (IMOK). Details of the organisation of these papers appears in individual reports below.

Individual responsibilities have necessarily been affected. Bill Richardson continued to organise the JMO; Katy Chisholm and Alex Voice shared responsibility for the Kangaroo papers; and Andrew Jobbings, with help from Jenny Ramsden, ran the Olympiad papers. Howard Groves and his problems group provided the JMO paper and Andrew Jobbings and a new problems group provided the Olympiad papers. The Leeds office coped completely successfully with this year's extra burdens and JOS is grateful to Rachel Airey and Jenny Foggin for their considerable commitment and friendly help. Thanks are due to all of these individuals both for continuing existing commitments and for undertaking additional tasks. However, it is right this year to single out Andrew Jobbings for his considerable efforts and skill in piloting the new IMOK suite of competitions and in organising the new problems group – JOS and the UKMT is in his debt.

JMO

Some 1,200 pupils qualified for the event, which went smoothly. There were few requests for the paper to be taken on a different date; any requests were refused. There was no evidence of clashes with examinations. The marking weekend went well, with a good supply of markers. Overall, the paper was found to be a little easier than that of 2002 (although scores on Section A were still disappointing). A few more medals were awarded: 15 Gold, 36 Silver and 70 Bronze. The book Mathematical Puzzling was sent to about 50 candidates.

REPORT OF THE TRUSTEES

For the year ended 31 July 2003

IMOK 2003

Overall this year's IMOK competitions went very well. The aims were to provide challenging, interesting but appropriate problems and to give an opportunity for more pupils from more schools to participate in a follow-on round to the IMC. Both these aims were achieved.

Following our (forced) decision to replace the IIIMC with our own papers, other changes introduced this year included the new IMOK structure, the expansion of Olympiad papers to include Year 9, expansion of the Kangaroo to all three year groups, common certificates, a common exam date, and a combined solutions booklet. That so many changes were successfully introduced was the result of the work of a large team of people. Some of these people are named below; many others go unmentioned but are equally deserving of thanks.

The Kangaroo and the Olympiad were combined under the umbrella title of the Intermediate Mathematical Olympiad and Kangaroo (IMOK) in order to give more coherence and unity to the proposed suite of IMC follow-on papers. This appears to have been a successful move, despite early concerns that schools would find the new structure confusing.

All papers were taken on the date fixed for the European Kangaroo, which was earlier than the IIIMC previously. This date seemed to suit schools, which appear to have coped well with all competitions on the same day. The uptake (entries as % of invitations) for the Olympiads was roughly 10% greater than previously for the IIIMC.

The Challenge Office implemented a new scheme for getting the IMC results, and hence follow-on invitations, to schools more quickly. This was very effective. The IMOK competitions would not have been possible without the support provided by the Maths Challenge Office and thanks are due to Rachel Airey and Jenny Foggin for all their work and advice, which helped all aspects to run so smoothly.

EUROPEAN KANGAROO

As part of the restructuring of the Intermediate Challenge follow-up round, the European Kangaroo has now been extended to involve around 1,000 pupils from each of the year groups Y9 and below, Y10 and Y11 (in England and their equivalents elsewhere). Y9 and below continue to sit the same level of paper as in previous years, whilst Y10 and Y11 pupils sit a more challenging paper. This extension has generally proved to be a success and has given more pupils the opportunity to progress beyond the original multiple choice paper.

Internationally, the Kangourou competitions continue to expand both in terms of the number of countries involved and in terms of the number of pupils taking part. There are a growing number of Kangourou related activities around Europe. Two of our members, Andrew Jobbings and Alex Voice, attended a Kangourou meeting in Rimini, Italy during October 2002.

REPORT OF THE TRUSTEES

For the year ended 31 July 2003

OLYMPIAD PAPERS

The administration, problem setting and script marking of the Olympiad papers all went smoothly.

After much discussion, it was decided to invite 400 in each year group to take an Olympiad paper. There is evidence that some pupils who might do well on this type of paper were not invited. Equally, some of those invited did not perform very well.

This is the first time that the UKMT has set problems of this type at this level and the quality of the work of the problems group was remarkably good given the short notice involved. Special thanks are due to them, for without their skill nothing else would have gone so well. The problems group will clearly gain in expertise and there are some points to learn from this year's outcomes.

The atmosphere at the marking weekend was very good and thanks are due to the team leaders, Gerry Leversha, Patricia King and Tony Gardiner, for all their hard work in coordinating the approach to marking, preparing mark schemes, leading their team and preparing markers' comments.

Following normal practice, the top 50 candidates received prizes and the top 25% received Distinctions. This adequately matched performance on other measures such as number of good answers or starred questions. By contrast, awarding of Merits proved problematical. Excellent new certificates were designed by Bill Richardson.

Results were returned promptly to schools. In addition a feedback form was included, so that teachers could easily comment on their perception of the IMOK.

Compared to the IIIMC booklet, the IMOK solutions booklet is now quite a substantial volume and should prove to be an interesting read for the recipients and a useful resource for teachers. Thanks are due to Steve Mulligan, Howard Groves and Alan Slomson for their contributions to the Olympiad section of the booklet, and also to Adam McBride, Chris Robson and Peter Neumann for their careful and thorough proof-reading. However, the greatest thanks go to Bill Richardson, who put in a lot of time and care to ensure the quality of the finished product.

The results from the Olympiad were sufficient for selecting students to be invited to the summer school, though there were few to choose from in Year 11 once those who had been before were eliminated.

SENIOR CHALLENGE SUBTRUST (SCS)

The membership of the SCS was:

Mr W P Richardson (Mathematical Association, *Chair*)
Mrs P M King (Benenden School, Kent, *Secretary and Treasurer*)
Mr D F Archer (Bedales School, Petersfield)
Mr C Dixon
(One vacancy)

The Senior Mathematical Challenge was held on Tuesday, 12 November 2002 and went well. Once again, there was an increase in the entries and participation. There were 60,400 entries from 1,573 schools compared to 53,810 entries and 1,393 schools in 2001; and 40,872 (cf. 38,487) scripts were received from 1,440 (cf. 1,317) centres.

The Challenge was harder than in 2001 but still provided a worthwhile exercise. It is hoped that this standard will be maintained. Boundaries for Gold, Silver and Bronze certificates were adjusted to 70, 57, 47 (cf. 81, 67, 56) respectively.

REPORT OF THE TRUSTEES

For the year ended 31 July 2003

As in 2001, there were very few requests to hold the event other than on the stipulated day; these were all refused. Moving the event forward so that BMO1 could be held before Christmas caused a few problems as some schools were just returning from half term, but the few days gained by having the event in the second week of November did alleviate the situation.

The smooth running of the challenge is a tribute to the hard work of those involved – in particular to Howard Groves (Chair of the Problems Group) and to Rachel Airey and Jenny Foggin in the Maths Challenges Office.

BRITISH MATHEMATICAL OLYMPIAD SUBTRUST (BMOS)

The membership of the BMOS was:

Professor A C McBride (University of Strathclyde, Chair)
Mrs P M King (Benenden School, Kent, Secretary)
Dr A R Pears (formerly King's College, London, Treasurer to April 2003)
Dr D J Collins (Queen Mary, University of London, Treasurer from April 2003)
Dr G C Smith (University of Bath, Team Leader)
Mr R M Atkins (Oundle School, from February 2003, Deputy Team Leader)
Dr B J Wilson (Royal Holloway, University of London, to April 2003)

The 25th Annual International Mathematical Olympiad Lecture and Medal Ceremony was held at the Royal Society on 23 September 2002. Dr David Acheson lectured on "Mathematics, Magic and the Electric Guitar" and Bill Richardson presented the IMO medals to the UK Team. The event is attended by students and their teachers from many schools. It is the showpiece of the year's activities and is intended to be an inspiration to younger students as well as honouring the members of the IMO team. We are most grateful to the Royal Society for hosting this event.

Preparations for IMO 2003 began in September 2002 with a camp held at the University of Bath for some 15 students. Thereafter this squad tackled two mock IMO papers per month. Over the New Year the squad went to Hungary to train with their opposite numbers in Budapest. This joint camp is likely to become an annual event.

Round 1 of the British Mathematical Olympiad (BMO1) took place on 11 December 2002. The date was brought forward from January in order to avoid clashes with school exams. The event was organised again by Alan West. Around 650 scripts were received and these were marked by a team of volunteers over a weekend in January, organised by Brian Wilson and Christine Farmer. The paper proved to be rather hard but there were a number of high scores and many students made significant progress in at least one problem. The book 1089 and All That by David Acheson was given to 100 students.

BMO2 was held on 25 February 2003 and 86 students submitted scripts by invitation. The event was organised by Brian Wilson, assisted by Christine Farmer, and the scripts were marked by Geoff Smith, Richard Atkins, Christopher Bradley and Ceri Fiddes. Whilst on the hard side, the paper was of a suitable standard for selecting 20 students for the Trinity Training Weekend.

The papers for this year's BMO1 and BMO2 were set by Richard Atkins (Convenor), Thomas Barnet-Lamb, Tim Cross, Ben Green, Gerry Leversha and Adrian Sanders. David Loeffler produced the annual booklet containing the BMO problems with full solutions, copies of which were distributed to Leaders and Deputy Leaders from all over the world at the IMO.

REPORT OF THE TRUSTEES

For the year ended 31 July 2003

The Training Weekend was held at Trinity College, Cambridge from 3 to 6 April 2003. The organisers were Thomas Barnet-Lamb (domestic) and Geoff Smith (academic). Two innovations this year were the parallel sessions for newcomers and for those with more experience, in addition to the plenary sessions, and the introduction of a trainer from abroad, namely Sandor Dobos, the Deputy Leader of the Hungarian IMO team who had played a major part in setting up the joint Budapest camp.

The Trinity Weekend concluded with a 4½-hour paper of IMO standard, after which nine students were chosen to form the IMO squad. This final group then embarked on further correspondence work prior to a camp at Oundle School at the end of May. The following were then selected to form the 2003 UK IMO team:

Nathan Bowler

Knutsford High School

David Fidler

Martin Orr

Haberdashers' Aske's School

Jenny Gardner

Tiffin Girls' School

Paul Jefferys Gavin Johnstone Berkhamsted Collegiate School Dame Alice Owens School

Methodist College, Belfast

The non-travelling reserves were:

Bryn Garrod

King Edward VI School Camp Hill Boys

Alex Davies

Winchester College

Paul Smith

Aylesbury Grammar School

The 44th IMO was held in Tokyo, Japan during the period 7-19 July 2003. The team stopped first in Cairns, Australia for more training whilst acclimatising and overcoming jet-lag. The UK performance at the IMO was excellent. All team members won a medal, for the first time since 1996. Paul Jefferys won the first Gold Medal since 1997, Jenny Gardner and Martin Orr won Silver, with the other three students winning Bronze Medals. The team finished 10th equal (appropriately enough with Hungary) out of 82 countries which took part. This represented a considerable improvement on recent years and produced the best team position since 1996. Great credit goes to the six students as well as to the three reserves and their trainers, particularly Geoff Smith and Richard Atkins.

The annual National Mathematics Summer School was held again in Queen's College, Birmingham, from 30 June to 4 July 2003. Mary Teresa Fyfe was the main organiser, with much valuable assistance from a team of nine staff. The 40 students, mainly from years 10 and 11, were selected on the basis of their performances in the IMOK organised by the JOS. The programme involved masterclasses, small group sessions, competitions and social events. In the absence of the IMO team, who were already in Japan, a "shadow IMO squad" of senior students was present and acted as team leaders in the competitions, as well as having sessions of their own on more advanced topics.

The year saw a considerable expansion in mentoring, under the direction of Richard Atkins. Three separate schemes were in operation at Advanced, Senior and Junior Levels. The Advanced Level, directed by Michael Ching, involved 8 mentors and 24 students, including all those in serious contention for a place on the IMO team. The Senior Scheme, mainly aimed at students in Years 10 to 12, was directed by Paul Russell and involved 106 students and 36 mentors. The Junior Scheme, directed by John Slater, is aimed at younger students; 85 students from 40 schools participated and were mentored by teachers and by some of the IMO team. These schemes are open to all who are likely to benefit from them. It is hoped that they will assist the subtrust in its aim to involve more girls and more students from state schools.

We are extremely grateful to the many volunteers who make it possible for the subtrust to run this wide-ranging programme of activities, and to the institutions who give it support.

REPORT OF THE TRUSTEES

For the year ended 31 July 2003

TEAM MATHS CHALLENGE SUBTRUST (TMCS)

The membership of the TMCS was:

Mr T J Heard (formerly City of London School, Chair)
Miss P Hunt (St Hilda's R C. High School, Burnley, Secretary)
Mrs J Lewis (St Julian's School, Carcavelos, Portugal, Competition Director)
Mr M L Perkins (formely St Olave's School, Treasurer)
Dr G C Smith (University of Bath)

The purpose of the subtrust is to organise and promote the new Team Maths Challenge (TMC), which is an interschool competition for students in Years 8 and 9. The TMC is a development of Enterprising Maths in the United Kingdom, the very successful schools team competition which formed the main part of the outreach programme for IMO 2002. The UKMT Council agreed in August 2002 that it wished this competition to continue and provided limited funding for this. It was hoped that the main organisation and sponsorship of the previous year's competition would carry on, but when this proved impossible the UKMT agreed to establish a subtrust to organise a new version of the competition, which was renamed Team Maths Challenge (TMC). Later in the year additional funding was secured from the Department for Education and Skills. A similar competition has been run in Scotland for many years and continues independently.

All schools in England, Wales and Northern Ireland with students in Years 8 and 9 were sent information in October 2002 and invited to register interest; 1380 schools did so. There were then three stages:

- i The in-school selection of a team of four (to include at most two Year 9 students, and at least two students from Year 8 or below). This took place early in the Spring term; materials were supplied which the school could use (or ignore) as it wished. Each participating school had to confirm by mid-February; 785 schools did so.
- Regional Finals were held from early March to late May at a widely spread set of centres. Schools chose the centre which was most convenient. Each regional final took a day, normally starting at 11 am and finishing by 3.30 pm. Twenty-six regional finals were held, with 680 teams actually turning up.
- Winners and high-scoring runners-up from the regional finals were invited to the National Final, held on 1 July 2003 in the Great Hall of King's College, London; 38 teams participated. The arrangements were similar to those for the regional finals, with the addition of a separate poster competition on a topic of which teams were given three weeks notice. The first three teams in the poster competition were
 - 1. Bristol Grammar School, 2. Comberton Village College, 3. Packwood Haugh School,

and the winners of the TMC were

1. Royal Grammar School, Worcester, 2. Aylesbury Grammar School, 3. St Olave's School.

Much of the success of TMC depends on the quality of the questions. Some of the in-school selection material used (with permission) past questions from a similar event in Australia; this helped to get things going in the rather uncertain initial period. Thereafter all the questions were set, moderated and formatted by members of the team of 15 regional coordinators (the Subtrust members plus Ann Ault, Keith Cadman, Karen Caulfield, Jackie Fox, Peter Hall, Michael Moon, Steve Mulligan, Paul Murray, James Welham and Rosie Wiltshire). A CD containing all the materials of the three rounds was distributed to all the schools who took part.

REPORT OF THE TRUSTEES

For the year ended 31 July 2003

Most of the regional final venues were halls or sports halls given by schools, colleges or universities without charge; this was an enormous help in enabling TMC to be offered free to schools. The regional finals were run by the regional coordinators, with at least two present at each final, plus local help. The teachers who accompanied the teams were kept busy too -- they had an essential part in the day's activities. The major task of making the necessary arrangements and seeing that all the materials were present when and where needed was handled with aplomb by Angela Gould with the invaluable assistance of Yvonne Schofield.

This first year of the Team Maths Challenge was demanding but exhilarating. This is the first UKMT mass entry activity which brings students and their teachers face to face with their peers from other schools of all types. This opportunity for making contacts and friendships was widely appreciated. So too was the chance to enjoy a day's mathematics which was both challenging and fun.

EXECUTIVE DIRECTOR'S REPORT

2002/03 was a busy year for UKMT, with growth and expansion in existing activities, and continued support from a team of dedicated volunteers and sponsors.

A direct marketing campaign was undertaken for the Maths Challenges, targeting teachers of mathematics and gifted and talented coordinators. Participation in the Maths Challenges grew again to give over 525,000 entries. This was a disappointing rate of increase compared to previous years, and led to a detailed analysis and evaluation of marketing materials and communications, entry levels and patterns.

As reported elsewhere the Team Maths Challenge, the successor to "Enterprising Maths in the UK", took place and was a huge success. Financial support from the Department for Education and Skills allowed us to offer this competition free to schools, and all schools that entered round one received a CD containing all three rounds of the competition. This event would not take place without the hard work and commitment of the regional coordinators and problem setters, and UKMT thanks them for their efforts.

The Teacher Meetings continued to flourish – six 'Enriching Mathematical Thinking' events took place in June, in Durham, Bath, Cardiff, Manchester, London and Nottingham, attended by over 600. Consultation with teachers enabled us to provide a series of programmes which were both timely and topical. The meetings are offered free to delegates, as the series is generously supported by Legal & General, and were all 'sell-outs', reaching maximum capacity within a matter of days. Each attendee received a pack of materials to take back to school, and almost 200 delegate packs were distributed to those teachers who were unable to attend. UKMT is extremely grateful to all the speakers and to the universities who allowed the use of their facilities free of charge.

We appreciate the continued support and interest of our sponsors, and would particularly like to thank Tamsin Rees and Pauline Simpson of the Institute and Faculty of Actuaries, Bill Parsons and Fiona Clark of ARM, Neville Watson and Nicola Marshall of Legal & General and Janet Dallas of the Department for Education and Skills.

We look forward to 2003/04: to growing participation in the Maths Challenges, to increasing the numbers of schools taking part in the Team Challenge, to expanding our series of Teacher Meetings and to further encouraging the education of young people in mathematics.

REPORT OF THE TRUSTEES

For the year ended 31 July 2003

CHAIRMAN'S REPORT

Our objectives for the year were threefold: to consolidate and re-settle after the unsettlement, distraction and great success of IMO2002; to continue to grow the UKMT competitions; to develop our new ventures.

On the first of these there is little to be said. Time and patience have helped us to re-focus on our core business. In the nature of things there have been new distractions (of which more below), but it is doubtful if a lively and growing organisation based on the charitable activity of large numbers of very able and committed volunteers can ever be free of those.

On the second, we have suffered some disappointment. Growth in the challenges has been only about 2.2% overall, whereas we had hoped and expected something over 20% as this year's contribution to progress towards our target of 1 million schoolchildren benefitting each year from the Trust's work. With over 515,000 entries this year we have passed a psychologically interesting number, but there is still a long way to go.

By way of contrast, the new ventures are showing healthy development. The UK Team Maths Challenge, the successor to IMO2002's Enterprising Maths competition has been warmly welcomed in schools. It is a pleasure for me to be able to use this platform to offer my personal thanks and congratulations to all who have contributed -- the members of the new subtrust (which reports for the first time above), the helpers who made it work, DfES for their support both moral and financial, but above all, Angela Gould and Jacqui Lewis who made it happen and who made it a success. Our second young venture is the Teacher Meetings. These have grown from two in 2001 and three in 2002 to eight in 2003. With some 640 teachers attending this year, the meetings are becoming a considerable force for spreading the word about exciting mathematics in a wide range of schools. Again, I offer my personal thanks and congratulations to all who have contributed, and especially to Legal & General for their generous moral and financial support, and to Angela Gould who has created and nurtured the series. A third new development is an enterprise of the Junior Olympiad Subtrust, announced last year. It is the foundation of the UKMT Intermediate Mathematical Olympiad, which replaces the former IIIMC and combines with the European Kangaroo to provide the follow-on competitions at intermediate level. The three papers, Cayley (for English Year 9 and equivalent), Hamilton (Year 10) and Maclaurin (Year 11) were created by a new problems group under the leadership of Andrew Jobbings. Although it was planned that there should be a considerable element of piloting in this first year, the competition succeeded very well and should need little in the way of tweaking for the future. It is a pleasure to thank and congratulate all who have contributed, and especially Andrew Jobbings, on their success.

As I wrote above, there have been new distractions this year. One of these was the circulation to several hundred schools of a dreadful document denigrating the Trust and criticising its approach in unfortunately vague and generalised terms. This was circulated -- I am sorry to report by a member of the Trust, though not of its Council -- in mid-November 2002. Although it was followed a few days later by a circular saying "This letter is to ask you to ignore (and preferably destroy to avoid any possible confusion) my recent communication", we cannot calculate the harm it is likely to have done.

What has seemed like another distraction to some of us, has been the need to develop the administrative structure of the Trust. This must of course not be seen as a distraction but as building for the future. Now that the UKMT has some experience of employing its own staff, it was felt to be time to change the arrangement with the University of Leeds so that management of the Maths Challenges Office became more directly the responsibility of the UKMT than it has been. Accordingly a joint-employment agreement has been signed whereby the Challenges Office continues to enjoy the patronage of the University and staff can continue to enjoy University benefits through joint appointments. A related consideration is that UKMT needs a new chairman. I have held that office since the foundation of UKMT in October 1996 and after nearly seven years it is time for me to hand over to a successor who can bring fresh ideas and fresh insights. As things have evolved, over the years I have acquired some management responsibilities which, in modern jargon, would rest better with a CEO than with the chairman of the board.

REPORT OF THE TRUSTEES

For the year ended 31 July 2003

Likewise, our Honorary Treasurer has had day-to-day responsibility for financial affairs — signing cheques, keeping the books — which he has done with remarkable patience and efficiency but which should ideally be part of the duties of officers supporting the work of the Trust. Therefore Council has decided not only to seek my successor as Chairman but also to seek a Director, part of whose remit will be supervision of all aspects of the work of the Trust below Council level. Perhaps unsurprisingly, we are not finding it easy to identify the right person for the post. But I hope and expect that my successor will be able to report positively next year.

As this is to be my last report I take it as an opportunity to look back and to look forwards. Over the seven years that the Trust has existed it has achieved a great deal. The benefits of its challenges are now enjoyed by nearly twice as many schoolchildren as in 1996/97; IIIMC has been replaced with a promising new Intermediate Olympiad; the Problems Groups continue to produce very high quality, interesting and entertaining material; new activities such as the Team Maths Challenge and the Teacher Meetings are becoming well-established and successful; the UK IMO in 2002 was a success; the Yearbook has become an established favourite. But as always, there is more that could be done. First, and most important, growth to an annual 1,000,000 Challenge entries remains, in my view a realistic and very important goal. Where does the figure come from? It is not merely the romance and roundness of 10⁶. Our Challenges Problems Groups have always aimed to set papers accessible to 35% of the ability range and this is a little over one million children. In Australia the participation rate is now over 40%. And many of us believe that the mathematical education of this number of children -- and thereby the intellectual health of the nation -- could benefit from the work of the Trust. Secondly, we must continue to strive for the highest quality in all our work. Quality control has been a very high priority right from the start, but there is no doubt that one can always seek to do more.

As in previous years it is my great privilege to use this opportunity to congratulate and thank some of the many contributors to the work of the Trust. First, we warmly congratulate Adam McBride on his pre-election as President of the Mathematical Association for 2004/05; also, we warmly congratulate the MA, one of our Supporting Bodies, on their excellent choice. We warmly congratulate the 2003 IMO team on their success in Japan, and we congratulate and thank Geoff Smith, Richard Atkins and all their colleagues who have helped the team members achieve that success. At Easter we said goodbye to Jenny Foggin, whose excellent work in the Maths Challenges Office has been much appreciated, and we welcome Heather Macklin back, who returns as her successor. We have had very welcome support from several sponsors, two of whom have already been mentioned above. The DfES has supported both the Team Maths Challenge and the IMO team, ARM supports the IMO team, Legal & General supports the Teacher Meetings, and the Institute of Actuaries supports the Senior Challenge and the BMO competitions. Without their generosity we could not afford to expand our activities in the way we have sought to do, and we thank them very warmly. They help us to pursue the object of the Trust as it is formulated in our Articles and rehearsed above, to advance the education of children and young people in mathematics. This is, as ever, our guiding principle and our inspiration.

REVIEW OF THE AUDITED FINANCIAL STATEMENTS FOR THE PERIOD

The Balance Sheet indicates that at 31 July 2003 the net assets of the Trust were £126,841(2002: £83,639).

The core business of the Trust, the running of the Challenges has continued to prosper. An increase in the level of the entry fee has allowed the trust to expand its charitable activities.

The direct charitable expenditure includes grants, the costs of running the Challenges, the training for the national Olympiad team, and outreach work.

The costs of fundraising are entirely part of the employment costs of the Executive Director, who has been active in seeking commercial sponsorship and Government support for the Trust's charitable work.

REPORT OF THE TRUSTEES

For the year ended 31 July 2003

The costs of administering and managing the charity (approximately £17,700) have grown, in part due to the costs of extra meetings to plan for the future organisation and management of the Trust; but remain very moderate for a volunteer-based and geographically scattered organisation, with several very active subgroups.

RESERVES POLICY

It remains the policy of the Trust to hold reserves in its unrestricted funds, some of which may be designated for particular purposes. Some are held to protect the operations of the trust from the unforeseen disruption of the Challenges business; some to allow future development of the Trust's work.

In this year of stabilisation in the wake of the 2002 Mathematical Olympiad, it has not proved possible to make any substantial addition to the reserve, which remains, however, adequate to protect the Trust in case of disruption.

RISKS

The Trust's exposure to risk has been substantially reduced in the year by: the negotiation of a new relationship with the University of Leeds in the day-to-day running of the Challenges business, and potentially to act as employer of other staff for the Trust; the provision by Kings College London of an office for the Executive Director; the implementation of a policy of seeking Enhanced Disclosure for directors and others working with children; an increase in prices.

The Trustees continue to monitor risks, but believe that the steps taken, together with the insurances and the Health and Safety policy already in place, have reduced risk to reasonable levels.

TRUSTEES' RESPONSIBILITIES

Company and charity law require the Trustees to prepare financial statements for each year which give a true and fair view of the state of affairs of the charitable company's financial activities during the year and of its financial position at the end of the year. In preparing those financial statements the Trustees are required to:

- select suitable accounting policies and then apply them consistently;
- make judgements and estimates that are reasonable and prudent;
- prepare the financial statements on the going-concern basis unless it is inappropriate to presume that the charity will continue in operation.

The Trustees are responsible for keeping proper accounting records which disclose with reasonable accuracy the financial position of the charitable company and which enable them to ascertain the financial position of the charitable company and to ensure that the financial statements comply with the Companies Act 1985 and relevant charities regulations. They are also responsible for safeguarding the assets of the charitable company and for taking reasonable steps for the prevention and detection of fraud and other irregularities.

REPORT OF THE TRUSTEES

For the year ended 31 July 2003

SMALL COMPANY EXEMPTION

Advantage has been taken of the exemption for smaller charities conferred by the Statement of Recommended Practice: Accounting by Charities (SORP 2000) to prepare this report in accordance with the special provisions of Part VII of the Companies Act 1985 relating to small companies.

Auditors

Grant Thornton offer themselves for reappointment as auditors in accordance with Section 385 of the Companies Act 1985.

BY ORDER OF THE BOARD

R.W. Druy SECRETARY 15 March 2004

REPORT OF THE AUDITORS TO THE MEMBERS OF



UNITED KINGDOM MATHEMATICS TRUST

We have audited the financial statements of United Kingdom Mathematics Trust for the year ended 31 July 2003 which comprise the principal accounting policies, the statement of financial activities, the balance sheet and notes 1 to 13. These financial statements have been prepared under the accounting policies set out therein.

This report is made solely to the company's members, as a body, in accordance with Section 235 of the Companies Act 1985. Our audit work has been undertaken so that we might state to the company's members those matters we are required to state to them in an auditors' report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the company and the company's members as a body, for our audit work, for this report, or for the opinions we have formed.

Respective responsibilities of directors and auditors

The directors also act as trustees for the charitable activities of United Kingdom Mathematics Trust for the purposes of company law. Their responsibilities for preparing the trustees' annual report and the financial statements in accordance with United Kingdom law and accounting standards are set out in the statement of trustees' responsibilities.

Our responsibility is to audit the financial statements in accordance with relevant legal and regulatory requirements and United Kingdom auditing standards.

We report to you our opinion as to whether the financial statements give a true and fair view and are properly prepared in accordance with the Companies Act 1985. We also report to you if, in our opinion, the trustees' report is not consistent with the financial statements, if the charity has not kept proper accounting records, if we have not received all the information and explanations we require for our audit, or if information specified by law regarding trustees' remuneration and transactions with the charity is not disclosed.

We read other information contained in the trustees' annual report, and consider whether it is consistent with the audited financial statements. We consider the implications for our report if we become aware of any apparent misstatements or material inconsistencies with the financial statements. Our responsibilities do not extend to any other information.

Basis of opinion

We conducted our audit in accordance with United Kingdom auditing standards issued by the Auditing Practices Board. An audit includes examination, on a test basis, of evidence relevant to the amounts and disclosures in the financial statements. It also includes an assessment of the significant estimates and judgements made by the trustees in the preparation of the financial statements, and of whether the accounting policies are appropriate to the charity's circumstances, consistently applied and adequately disclosed.

We planned and performed our audit so as to obtain all the information and explanations which we considered necessary in order to provide us with sufficient evidence to give reasonable assurance that the financial statements are free from material misstatement, whether caused by fraud or other irregularity or error. In forming our opinion we also evaluated the overall adequacy of the presentation of information in the financial statements.

REPORT OF THE AUDITORS TO THE MEMBERS OF

UNITED KINGDOM MATHEMATICS TRUST

Opinion

In our opinion the financial statements give a true and fair view of the state of the charity's affairs as at 31 July 2003 and of its incoming resources and application of resources, including its income and expenditure, for the year then ended and have been properly prepared in accordance with the Companies Act 1985.

GRANT THORNTON
REGISTERED AUDITORS
CHARTERED ACCOUNTANTS
Oxford

Date 16 Maah 2004

PRINCIPAL ACCOUNTING POLICIES

BASIS OF PREPARATION

The financial statements have been prepared under the historical cost convention and in accordance with the Financial Reporting Standard for Smaller Entities (effective June 2002), and follow the recommendations in the Statement of Recommended Practice: Accounting by Charities (the SORP) issued in October 2000.

The principal accounting policies of the company have remained unchanged from the previous year and are set out below.

INCOME

Examination fees are accounted for on receipt. Income from sales of papers is accounted for when the charity becomes legally entitled to the income.

GRANTS RECEIVABLE/SPONSORING INCOME

Grants are credited as incoming resources when they are receivable provided conditions for receipt have been complied with, unless they relate to a specific future period, in which case they are deferred.

EXPENDITURE

Expenditure, which is charged on an accruals basis, is allocated between

- expenditure incurred in generating funds
- expenditure incurred to the fulfilment of the charity's objectives (charitable); and
- expenditure incurred which is not directly attributable to either of the above (management and administration).

DEPRECIATION

Depreciation is calculated to write down the cost or valuation less estimated residual value of all tangible fixed assets by equal annual instalments over their expected useful lives. The periods generally applicable are:

Furniture, fixtures and equipment

3 years

All fixed asset purchases are used for direct charitable purposes.

STATEMENT OF FINANCIAL ACTIVITIES

For the year ended 31 July 2003

	Note	Restricted Funds £	2003 Unrestricted Funds £	Total £	2002 £
Income and expenditure					
Incoming resources Grants, donations and sponsorship Interest receivable Examination entry fees and related	2	28,552	54,780 2,993	83,332 2,993	45,520 4,222
income Summer school fees Sale of papers		- - -	388,023 3,120 2,267	388,023 3,120 2,267	295,892 2,960 16,689
IMO 2002 Total incoming resources	1 10	28,552	6,481 457,664	6,481 486,216	365,283
Resources expended Cost of generating funds Direct charitable expenditure Management and administration of the charity	3 4 5	28,552	9,373 387,355 17,734	9,373 415,907 17,734	6,393 454,000 9,885
Total resources expended		28,552	414,462	443,014	470,278
Net incoming/(outgoing) resources and net movement in funds for the year		-	43,202	43,202	(104,995)
Funds balances brought forward at 1 August 2002			83,639	83,639	188,634
Funds balances carried forward at 31 July 2003			126,841	126,841	83,639

All amounts relate to continuing activities.

All recognised gains and losses are included in the statement of financial activities.

There were no movements in funds other than the net incoming resources for the year.

The accompanying accounting policies and notes form an integral part of these financial statements.

BALANCE SHEET AS AT 31 JULY 2003

	Note		2003		2002
Fixed assets		£	£	£	£
Tangible assets	7		11,196		17,146
Current assets					
Debtors	8	48,949		20,941	
Cash at bank and in hand	_	113,161		70,126	
		162,110		91,067	
Creditors: amounts falling due within one year	9 _	46,465		24,574	
Net current assets			115,645		66,493
Total assets less current liabilities			126,841		83,639
Income funds					
Unrestricted funds			126,841		83,639
Restricted funds					
			126,841	:	83,639

These financial statements have been prepared in accordance with the special provisions of Part VII of the Companies Act 1985 relating to small companies.

Rw Bruy

The financial statements were approved by the Trustees on /

15 March 2004

Trustee

The accompanying accounting policies and notes form an integral part of these financial statements.

NOTES TO THE REPORT AND FINANCIAL STATEMENTS

For the year ended 31 July 2003

1 INCOMING RESOURCES

Examination entry fees

This income arises from the entry fees paid by schools for students participating in the challenges run by the Trust.

Sales of papers

This income arises from the sale of past papers and other materials (including the Year Book) in connection with the challenges run by the Trust.

2 INVESTMENT INCOME

Investment income comprises income from:

	2003	2002
	£	£
Bank deposits		4,222

3 COST OF GENERATING FUNDS

	Restricted Funds	Unrestricted Funds	2003 Total	2002 Total
	£	£	£	£
Executive Director's salary	-	8,431	8,431	5,159
Social security and pension	-	722	722	1,084
Other direct costs	-	220	220	150
	-	9,373	9,373	6,393

NOTES TO THE REPORT AND FINANCIAL STATEMENTS

For the year ended 31 July 2003

4 DIRECT CHARITABLE EXPENSES

		2003		
•	Restricted	Unrestricted		2002
	Funds	Funds	Total	Total
	£	£	£	£
Gross payable to institutions (see below)	-	1,000	1,000	1,700
IMO 2002	-	-	-	77,323
Team competition	-	14,373	14,373	_
Printing and stationery	-	87,109	87,109	92,611
Postage and telephone	-	52,092	52,092	53,519
Administrator's salary and assistants' fees	-	76,741	76,741	65,789
Executive Director's salary	-	40,085	40,085	44,950
Social security and pension	-	9,840	9,840	24,824
Markers' fees and prizes	-	7,777	7,777	6,861
Training weekends, IMO training and regional	-			
circles		24,515	24,515	1,317
Teacher meetings	-	7,868	7,868	-
Travel and accommodation	28,552	14,533	43,085	34,425
Summer school costs	-	10,125	10,125	9,455
Rent	-	20,789	20,789	6,883
Depreciation	-	5,950	5,950	6,698
Other direct costs		14,558	14,558_	27,645
	28,552	387,355	415,907	454,000

Grants paid in the year were £1,000 (2002: £700) to the World Federation of National Mathematics Contests and £Nil (2002: £1,000) to the Scottish Mathematical Council and £Nil (2002: £90,000) to the IMO 2002 Limited in support of the 43rd International Mathematical Olympiad held in Glasgow in 2002.

5 MANAGEMENT AND ADMINISTRATION OF THE CHARITY

	Restricted Funds £	2003 Unrestricted Funds £	Total £	2002 Total £
Legal	-	165	165	79
Audit costs	-	4,876	4,876	3,496
Accountancy fees	_	999	999	675
Cost of meetings		11,694	11,694	5,635
		17,734	17,734	9,885

NOTES TO THE REPORT AND FINANCIAL STATEMENTS

For the year ended 31 July 2003

6 STAFF COSTS

	2003 £	2002 £
Salaries	125,257	115,898
Social security costs	6,230	21,647
Pension contributions	4,332	4,261
	135,819	141,806

Administrators and clerical assistants of the Junior and Intermediate Challenges equate to approximately 3 full time employees (2002: 3) and are employed by the University of Leeds. Their costs are recharged to the Trust. The Trust does not operate its own pension fund.

The average number of employees during the year was one (2002:one).

W P Richardson received an honorarium of £1,980 in connection with the Trust's publications. No other director received any remuneration from the Trust.

Director's remuneration:	2003	2002
	£	£
Executive director's remuneration	48,516	50,109

No employees earned more that £50,000 during the year (2002: 1).

7 TANGIBLE FIXED ASSETS

	Fittings & Equipment £
Cost	£
At 1 August 2002	45,001
Additions	
At 31 July 2003	45,001
Depreciation At 1 August 2002	27,855
Provided in the year	5,950
At 31 July 2003	33,805
Net book amount at 31 July 2003	11,196
Net book amount at 1 August 2002	17,146

Fixtures

NOTES TO THE REPORT AND FINANCIAL STATEMENTS

For the year ended 31 July 2003

8 DEBTORS

9

	2003	2002
	£	£
Prepayments and accrued income	1,349	190
Grants and sponsorship receivable	47,600	20,751
	48,949	20,941
CREDITORS: AMOUNTS FALLING DUE WITHIN ONE YEAR		
	2003 £	2002 £
Accruals	46,465	24,574

10 RESTRICTED FUNDS

The terms of certain grants and donations receivable during the year restricted the way in which the income could be used. The amounts involved were given to be used for the following purposes:

	2003	2002
	£	£
Monies raised towards IMO 2002	625	8,900
Donations towards work of BMOC	4,927	9,195
IMO 2002 Limited towards BMOC	-	6,000
Grant towards team competitions	20,000	-
Grant towards IMO celebration	3,000	-
	28,552	24,095

All these funds have been used during the period in line with the restrictions imposed.

11 TAXATION

The charity is a registered charity and therefore entitled to exemptions from United Kingdom Income and Corporation Tax in accordance with section 505 Income and Corporation Tax Act 1988.

12 TRUSTEES' EXPENSES

During the year, fifteen trustees (2002: fifteen) were reimbursed from charity funds for expenses incurred by them for work performed on behalf of the charity.

The total amount reimbursed was £22,559 (2002: £14,124), and related to travel, printing, postage, telephone expenses and marking costs.

NOTES TO THE REPORT AND FINANCIAL STATEMENTS

For the year ended 31 July 2003

13 RIGHTS OF MEMBERS

The Trust is a company limited by guarantee. Each member undertakes to contribute such amounts as may be required (not exceeding £1) to the assets of the Trust if it is wound up while he is a member, or within one year after he ceases to be a member, for the payment of its debts and liabilities.

The income and property of the Trust must be used solely towards the promotion of its objects and no amount can be paid to any member by way of dividend or other share of profit. In the event of the Trust being wound up with a surplus, that surplus must be transferred to another charitable body with similar objects.

Because of the restrictions on the distribution of surpluses, there are no equity interests in the Trust's reserves.

14 CAPITAL COMMITMENTS AND CONTINGENT LIABILITIES

The charity did not have any capital commitments or contingent liabilities at 31 July 2003 or at 31 July 2002.