THE MATHEMATICAL ASSOCIATION OF AMERICA
(Incorporated)

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September 29, 1967

MINUTES OF THE MEETING OF SECTION OFFICERS
at the University of Toronto, August 28, 1967

The annual meeting of officers of the Sections of the Mathematical Association of America was held on Monday, August 28, 1967, in Room 102 of the McLennan Laboratories of the University of Toronto. Professor L. E. Mehlenbacher, Chairman of the Committee on Sections, presided and called the meeting to order at 7:00 p.m. Fifty-four persons were present. Professor Mehlenbacher announced that the Board of Governors at its meeting the previous day had authorized the establishment of a Florida Section as of September 1, 1967.

1. Roll Call. Twenty-six of the twenty-seven Sections were officially represented:

Allegheny Mountain	H. L. Krall, Chairman
Illinois	R. D. Boswell, Jr., Chairman
Indiana	Kenneth Sidebottom, Chairman
Iowa	C. M. Lindsay, Chairman
Kansas	Sister Mary Paul Buser, Chairman
Kentucky	W. C. Royster, Chairman
Louisiana-Mississippi	N. A. Childress, Chairman
Maryland-DC-Virginia	S. L. Gulick, Secretary
Metropolitan New York	Meyer Jordan, Chairman
Michigan	Beauregard Stubblefield, Chairman
Minnesota	Dale Varberg
Missouri	Not represented
Nebraska	H. M. Cox, Secretary-Treasurer
New Jersey	Bernard Greenspan
Northeastern	Robin Robinson, Chairman
Northern California	C. A. Hayes, Chairman
Ohio	D. T. Finkbeiner, Chairman
Oklahoma-Arkansas	H. V. Monks, Chairman
Pacific Northwest	C. T. Long, Chairman
Philadelphia	Emil Amelotti, Chairman
Rocky Mountain	K. L. Noble, Chairman
Southeastern	R. E. Wheeler, Chairman
Southern California	F. A. Valentine, Chairman
Southwestern	S. T. Kao, Secretary-Treasurer
Texas	Dale Maness, Chairman
Upper New York State	D. W. Hall, Chairman
Wisconsin	E. F. Wilde, Chairman

Others present included:

Allegheny Mountain	F. E. Justis
	A. F. Strehler, Governor
Indiana	W. T. Fishback, Committee on Sections
Kansas	G. B. Price, MAA Finance Committee
Maryland-DC-Virginia	Mary A. Lee, Vice-Chairman
	Richard Balomenos, NSF
Metropolitan New York	Theresa J. Barz, Secretary
	W. F. Cassidy
	J. E. Houle, Vice-Chairman (Senior Colleges)
	C. T. Salkind, Committee on High School Contests
Michigan	J. H. McKay, Director Putnam Competition
	Lyle Mehlenbacher, Committee on Sections
Northeastern	E. E. Moise, President, MAA
	M. E. Munroe, Committee on Sections
Northern California	H. L. Alder, Secretary, MAA
	E. M. Beesley, Committee on Sections
	D. W. Blakeslee, Governor
	R. E. Gaskell, Committee on Visiting Lecturers
Oklahoma-Arkansas	R. B. Deal, Governor
	Harold Huneke, Secretary-Treasurer
Pacific Northwest	M. L. Faulkner
	Ronald Harrop, Vice-Chairman
	Joseph Hashisaki, Governor
Philadelphia	V. V. Latshaw, Secretary-Treasurer
Upper New York State	H. M. Gehman, Executive Director, MAA
	Raoul Hailpern, Associate Secretary, MAA
	F. D. Parker, Governor
	R. J. Walker, Second Vice-President, MAA

2. <u>Remarks by the President</u>. President Moise reported on the visits he has made to the Sections. He stated that since January he had visited as many Sections as he could. Of all the activities connected with the presidency, he considered his visits to the Sections the most pleasant. While we meet nationally--or internationally-- twice a year, the work of the Association is carried out in the Sections; for most of the members most of the year, the Sections are the Association. The work of CUPM, for example, could not be carried out successfully without the assistance of the Sections. He wished luck and success to the Sections in their future work.

3. Report of Special Awards for the Putnam Mathematics Competition Made by the Kansas Section. Sister Mary Paul Buser, Chairman of the Kansas Section, announced that this year (1966-67) the Kansas Section discontinued the annual state intercollegiate mathematics contest and instead presented awards to the students from Kansas colleges and universities who ranked highest in the Putnam Mathematical Competition. The Executive Committee voted that in addition to a one-year membership in the Mathematical Association of America, each of the top five students in the state would receive a monetary award which would be distributed from the remaining available funds according to the following scale:

> 1st place -- 40 per cent
> 2nd place -- 25 per cent
> 3rd place -- 15 per cent
> 4th place -- 10 per cent
> 5th place -- 10 per cent

Since our available funds this year amounted to $100--$50 of which was received from Bethel College in Newton, Kansas and the other $50 from the Committee on Sections-- the monetary awards presented were as follows:

> 1st place -- $28.00
> 2nd place -- $17.50
> 3rd place -- $10.50
> 4th place -- $ 7.00
> 5th place -- $ 7.00

The awards were made at the luncheon of the spring meeting of the Kansas Section.

4. Report on Efforts of the Pacific Northwest Section to Reach Junior College Personnel. Professor C. T. Long, Chairman of the Pacific Northwest Section, reported that during the past two years the Pacific Northwest Section has been studying ways to reach more effectively junior college teachers of mathematics. Discussions with junior college personnel revealed a felt need for special programing at Section meetings for teachers at this level as well as possible representation on the Executive Committee of the Section. Such programing, stressing the teaching of mathematics at the appropriate level was arranged for the 1966 and 1967 meetings. These sessions were well attended, and continued efforts along these lines are expected to receive support. At the 1967 Section meeting, the By-Laws of the Section were amended to create the position of Second Vice-Chairman who will represent the two-year college personnel on the Executive Committee, arrange the program for the two-year college sessions at the annual Section meetings, and preside at these sessions.

Professor Long noted that the Section has an MAA representative at almost all of the two-year colleges and that the Section was making an effort to attract members from those colleges.

5. An Evaluation Report on "A General Curriculum in Mathematics for Colleges". Professor Dale Maness gave the following report of the Texas Section on "A General Curriculum in Mathematics for Colleges":

In October 1965, a committee of the Texas Section of the MAA was appointed to study the CUPM report: "A General Curriculum of Mathematics for Colleges". Meeting in Dallas in December of that year, the committee made plans for carrying out its study and writing its report. In April of 1966, the committee made a panel presentation to the Texas Section on the features of the GCMC. Members of the Section were encouraged to communicate their suggestions to the committee by September, 1966. When no

comments had been received by November 1966, it was decided that a questionnaire should be sent to selected members of that Section. At least one professor from each college department was contacted so that he might give the thinking of his department. Approximately one-third of the questionnaires were returned. Using these results, the information gained from informal conversations, and its own discussions and studies, the committee formulated the following report.

General Impressions. Judging by the response to its requests for comments on GCMC, the committee concludes that there is little real excitement for the program. There was, however, fair response to a survey questionnaire. The results of the survey show that 64% feel that GCMC is "useful and significant". GCMC was called "interesting" by 31%, while about 5% feel that the program is "impractical." In 30% of the departments reporting, there are no curriculum changes due to GCMC. In 43%, there are only a few changes, while 37% report some more than a few changes due to GCMC. Almost 70% of the departments evaluate GCMC as being stronger than their existing curricula. Fewer than 30% rate their programs as being as strong as GCMC. Very few undergraduate programs are actually stronger than GCMC appears to be.

It is our opinion that few Texas schools will have an undergraduate program resembling GCMC. Many schools of the size likely to benefit from the flexibility and compactness of the GCMC will not have a faculty with the inclination to change substantially from existing programs. The programs of larger schools will include many features and topics of GCMC, but these may be obscured by the larger under-graduate course offerings.

Special Issues.

1. What is the right starting point for college mathematics? Texas colleges, accepting students with widely variable high school backgrounds, will provide for the student where he is. Almost every college will offer Math 0, or algebra and trig-onometry as an essential equivalent, well into the foreseeable future. Lower level remedial programs will continue to exist in many schools. The problem of which courses in a remedial - precalculus - calculus sequence receive college credit will be partially obviated by stating the total requirements in terms of courses above the completion of the calculus sequence.

2. What is to be expected from Math 1? Most departments agree with the arrange-ment of the calculus sequence. Probably only a few, however, will use Math 1 as a general course for nonscience as well as science majors.

3. Where will multivariable calculus appear? Texas departments seem indifferent to the advanced multivariable calculus course. Partial derivatives and multiple integrals will be used in the elementary calculus. The traditional treatment as in a course in vector analysis or advanced calculus will continue to predominate. Exterior differential forms probably will not be found in many undergraduate programs.

4. Is a separate course in differential equations desirable? Most Texas departments will continue to offer differential equations as a separate course. An applied mathematics course is desired by most departments. To many, however, it will be a course in advanced techniques instead of a course in model building.

5. Does the GCMC offer an adequate liberal arts sequence? Most colleges will not be able to offer calculus to all liberal arts students. Courses with weaker requirements will be used in most colleges.

Conclusions. The evaluation committee feels that GCMC is a valuable contribution from CUPM, even though its outline may not be specifically followed in many schools. It points out areas of the curriculum that will be of increasing importance. It includes topics of undergraduate mathematics not in programs formulated ten years ago. GCMC shows that with modest numbers of faculty and courses, it is possible to have a sound undergraduate program. This should be an encouragement for individual faculty members to continue their professional growth and an encouragement to departments and college administrations in their effort to build academic strength.

In answer to a question by Professor Blakeslee as to what disposition will be made of these reports by Sections on the GCMC report, Professor Alder stated that CUPM is planning to publish a representative compilation or synthesis of such reports when additional reports have been received from the Sections who have not as yet sent in their evaluations.

Professor D. T. Finkbeiner reported that the Ohio Section plans a special meeting this fall on collegiate mathematics and that they have had excellent support from CUPM and the officers of the Association in providing good speakers; this program has generated a considerable amount of enthusiasm in the Section.

6. Trends at the National Science Foundation. Dr. Richard Balomenos made remarks concerning three items of interest to the Sections.

A. The decision to discontinue the Visiting Scientist Program for Secondary Schools;
B. Construction of mathematical problems for use with secondary students;
C. The new Office of Computing Activities.

A. NSF was confronted with a relatively level budget for support of science and mathematics in the pre-college area. Faced with the problem of providing for the continuing support of programs designed to meet longstanding needs in science and mathematics education, the Foundation has recently failed to meet its responsibility for providing support for new ideas. As a result, a program entitled "Special Projects in Science Education" was established and additional support was given to the Cooperative College-School Science Program for teacher training activities in the context of the needs of school systems. To provide for part of the increased support of these programs, it was necessary to discontinue the Visiting Scientist Program. It is hoped that as a result of the encouragement from NSF such visits to the secondary school can continue with support from local sources.

B. NSF has received numerous requests for support of projects to construct sets of mathematical problems for use by groups involved in talent search or mathematical contest activities. NSF has supported some of these projects. However, funds and talent are not available to provide for all the local requests. Hence, the question by NSF, "Is there need for a national or regional project to construct problem sets and assist local groups?"

C. NSF has established an Office of Computing Activities under Dr. Milton Rose. One of the major aims of the office is to develop the potential of computers in the educational process at all levels. The comments and views from individual mathematicians or groups, such as the MAA, as well as specific proposals, will aid the office in establishing priorities for its activities.

In answer to a question concerning the Visiting Scientist Program for Secondary Schools, Dr. Balomenos replied that this program was discontinued because of the priority of new programs although everyone thought that the Visiting Scientist Program for Secondary Schools had been successful.

President Moise, in commenting on the Visiting Scientist Program for Secondary Schools, felt that one of its main values was the impact made on students' attitudes toward mathematics when they realize that there are such people as mathematicians. One of the problems is to present mathematics as a live field. A way of demonstrating this is to present an example of one of the human beings who is an active worker in this field. He felt that the program is so important that he would like to see it continued on a voluntary basis. The impact a mathematician makes when spending an afternoon visiting a school will be well worth the effort.

Dr. Balomenos emphasized that discontinuance of NSF support should not mean the end of the program. He reported that in some areas the program is being supported by industry and others.

Professor Alder suggested that the Cooperative College-School Science Program has the possibility of continuing the good features of the now discontinued Visiting Scientist Program for Secondary Schools and the communication of mathematical problems to secondary students, as is done currently in California: High ability secondary students from various high schools are brought together with their teachers at various university campuses, are given lectures by university professors who, at the end of their lectures, pass out problems on the material covered to be solved by these students. These problems are then discussed two weeks later with a local coordinator. The university professor returns four weeks after his original visit to pursue the subject further and pass out an additional set of problems to be solved by the students and discussed again two weeks later with the local coordinator. Under this program, high school students do get a live mathematician, are put into the position to solve challenging problems, and their teachers are exposed to the same experiences. The disadvantage of the program is that it reaches only a very select group of students and is consequently substantially less effective than the Visiting Scientist Program to Secondary Schools was in making an impact on substantial numbers of high school students.

7. The Calculus Film Project. In the absence of Professor H. M. MacNeille, Director of the Calculus Film Project, a letter was read from him announcing that the films produced by the Calculus Film Project are now available from Modern Learning Aids.

8. The Committee on High School Contests - Changes in the Contest. Professor C. T. Salkind, Chairman of the Committee on High School Contests, requested that the Section Officers be familiar with and make known through appropriate means, the following important changes in the Annual High School Mathematics Competition for 1968:

(1) Revision in the examination itself

(a) The number of questions is being reduced from forty to thirty-five with the maximum score remaining at 150.

(b) Problem subdivision into four parts is replacing the present three: Part I, consisting of ten "very easy problems", 3 credits each, Part II, with

ten "easy" problems, 4 credits each, Part III, with ten "medium" problems, 5 credits each, and Part IV, with five "hard" problems, 6 credits each.

He made the following comments concerning this revision:

      (a) This revision (or one very similar to it) will be tried for a period of two years. If it receives general acceptance and, nevertheless, maintains discriminatory power on various levels, it will be retained.

      (b) A study of the results of the past ten years, together with the views expressed by teachers and students in letters now constituting a fair-sized file, indicates a need for accommodating those with a fairly low "frustration index". Otherwise, our activity will take on the character of "arista" performance exclusively, a situation we seek diligently to avoid.

    (2) Revision in the deca-regional set-up

		Old	New
1.	Maritime Provinces	I	I
2.	New England States	I	I
3.	Quebec	II	I
4.	Upper New York	II	II
5.	Western Pennsylvania	IV	II
6.	West Virginia	IV	II
7.	New Jersey	III	III
8.	Metropolitan New York	III	III
9.	Eastern Pennsylvania	IV	III
10.	Delaware	IV	III
11.	Maryland, Virginia, DC	IV	IV
12.	Puerto Rico, North Carolina, South Carolina, Florida, Georgia, Alabama, Canal Zone, Virgin Islands	V	IV
13.	Tennessee, Kentucky	V	V
14.	Indiana, Ohio	VI	V
15.	Ontario	II	VI
16.	Illinois, Michigan, Wisconsin	VI	VI
17.	Manitoba, Saskatchewan, Iowa, Minnesota, North Dakota, South Dakota	VII	VII
18.	Kansas, Missouri, Nebraska	VII	VIII
19.	Arkansas, Oklahoma	VIII	VIII
20.	Louisiana, Mississippi	V	VIII
21.	Alberta, B. C.	IX	IX
22.	Alaska, Idaho, Montana, Oregon, Washington	IX	IX
23.	Colorado, Utah, Wyoming	VIII	IX
24.	American Samoa, Guam, Phillipine Islands	X	X
25.	Arizona, New Mexico, Texas	VIII	X
26.	California, Hawaii, Nevada	X	X

He made the following comments concerning this revision in the regional set-up:

(a) Over the years, with an uneven growth in participation, the degree of homogeneity originally intended by the old division has been markedly reduced.

(b) The revision will largely restore the original purpose of equalizing award opportunity based on maximal performance "in the small", as well as maximal performance globally.

3. The date of the 1968 examination is Tuesday, March 12, 1968.

In reply to a question by Professor H. L. Krall as to whether an announcement concerning the revisions in the regional set-up would be sent out to those in charge of the examination, Professor Salkind replied that this was the plan but suggested that those present inform the Contest Chairman of their Sections also.

9. Report of the Visiting Lecturers' Committee. Professor R. E. Gaskell, Chairman of the Committee on Visiting Lecturers, discussed briefly the history of this program from its initiation in 1954. He remarked that the number of day-visits is receding from a high in 1964-65, and the Committee seeks to extend the program to schools which have not previously been visited. The Committee proposes to contact Section Chairmen, asking for the names of schools in this category within the various Sections.

Professor W. C. Royster stated that the fact that many schools have not requested a visiting lecturer might mean that they are not interested in one; some of the schools may not want a visitor.

Professor Gaskell emphasized that the Committee does not want to twist arms; however, they felt that the brochures may not be reaching the proper persons at some colleges. Some schools may feel somewhat ashamed to have a visitor. The fact that they do not request lecturers may not mean that they are not interested.

Professor Maness stated that they had used the program for the last few years, but that they did not always like the selections they have found available in the brochure. Professor Gaskell replied that some of the lecturers may have specific qualifications in fields that may not interest certain schools. Professor Maness felt that some of the lecturers were coming from schools whose curriculum was actually weaker than their own.

Professor R. D. Boswell, Jr., a member of the Committee, reported on the efforts made by the Committee to find out which lecturers have been successful. They are usually asked to continue. This year, there will be 65 lecturers, of which approximately 25 will be new lecturers in the regions in which they will make their visits.

Professor G. B. Price wondered whether there might not be some reluctance on the parts of some colleges to request a visitor out of fear that they must make a contribution, when in fact, this is not required. Professor Gaskell noted in this connection that some colleges are in extremely bad financial condition.

Professor R. B. Deal observed that in some colleges, there are no separate departments of mathematics, so that there may be no way for the mathematicians to apply for visitors. Professor Gaskell replied that the Committee was aware

of this, and that notifications in these cases have been sent to the colleges involved.

10. <u>The Putnam Mathematical Competition.</u> Professor J. H. McKay, Director of the Putnam Mathematical Competition, reported that several Sections are now recognizing the top students from their Sections in the Putnam Competition. He encouraged those present to continue this activity if such a program has already been initiated and otherwise to start such a program. An appropriate prize for these students is free one-year memberships in the MAA (in some cases, this is supplemented with small cash awards). The support for these prizes should preferably come from the Section itself. However, if funds cannot be raised for this purpose locally, the Sections can ask for assistance from the Committee on Sections.

To help encourage Section prizes to top students in the Putnam Competition, the Board of Governors at its meeting at the University of Toronto has approved the following motion:

(a) The Board encourages the Sections to offer free one-year memberships in the MAA to participants in the Putnam Mathematical Competition who have achieved high scores, to be financed, wherever possible, from funds available to the Sections;

(b) The national office shall offer (in addition to the present prizes) five free one-year memberships in the MAA to the five students who scored individually highest in the Putnam Mathematical Competition, regardless of the success of their respective teams;

(c) Sections whose resources might be severely strained by offering two free one-year memberships in the Association might wish to apply for funds from the annual appropriation of $500 available to the Committee on Sections for worthwhile projects of the Sections.

11. <u>Report from the Committee on Sections.</u> Professor Mehlenbacher urged Sections to look over their By-Laws to make sure that they are up to date. Any revisions of these By-Laws must be submitted to the Board of Governors for its approval. He noted that the revision of Article V of the Association's By-Laws will be acted upon at the Business Meeting of the Association on Tuesday, August 29. (Note: This amendment has since been approved at this Business Meeting.) He then introduced the members of the Committee on Sections, all of whom were present with the exception of Professor Arnold Wendt.

12. <u>Time Release and Other Problems Concerning Section Officers.</u> In accordance with a suggestion made, this topic was briefly mentioned. Professor Alder felt that, if someone felt that he needed released time to serve as a Section Officer, chances are that he does not have the proper motivation to give service to the Section and consequently would not constitute a suitable candidate for election as a Section Officer.

13. <u>Activities of Mu Alpha Theta.</u> Professor H. V. Huneke, Secretary-Treasurer of Mu Alpha Theta, reported on the growth of Mu Alpha Theta and its search for better ways to tell Mu Alpha Theta members what mathematics is all about. He reported that the first national meeting of Mu Alpha Theta chapters would be held at Trinity College in San Antonio, Texas, on August 11-14, 1968.

Professor O. B. Price, the Association's representative on the Governing Council of Mu Alpha Theta, recalled that Mu Alpha Theta is participating in some of the activities of the Association: it is a co-sponsor of the Annual High School Mathematics Contest, it has bought 1500 copies of the GUIDEBOOK and distributed these to the chapters of Mu Alpha Theta, etc. He urged the Section Officers to make known to the Sections the existence of the GUIDEBOOK.

14. The History of the Association Project. A letter from Professor K. O. May, Chairman of the Committee on the Preparation of a Fifty-Year History of the Association, was read. He reported that many Sections had sent their Section histories to him and asked those Sections which have not already done so, to send these histories to him so that a 100% participation by the Sections can be obtained in the forthcoming book on the Fifty-Year History of the Association.

The meeting adjourned at 9:05 p.m.

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Lyle E. Mehlenbacher
Chairman, Committee on Sections
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