ROCKY MOUNTAIN SECTION NEWSLETTER

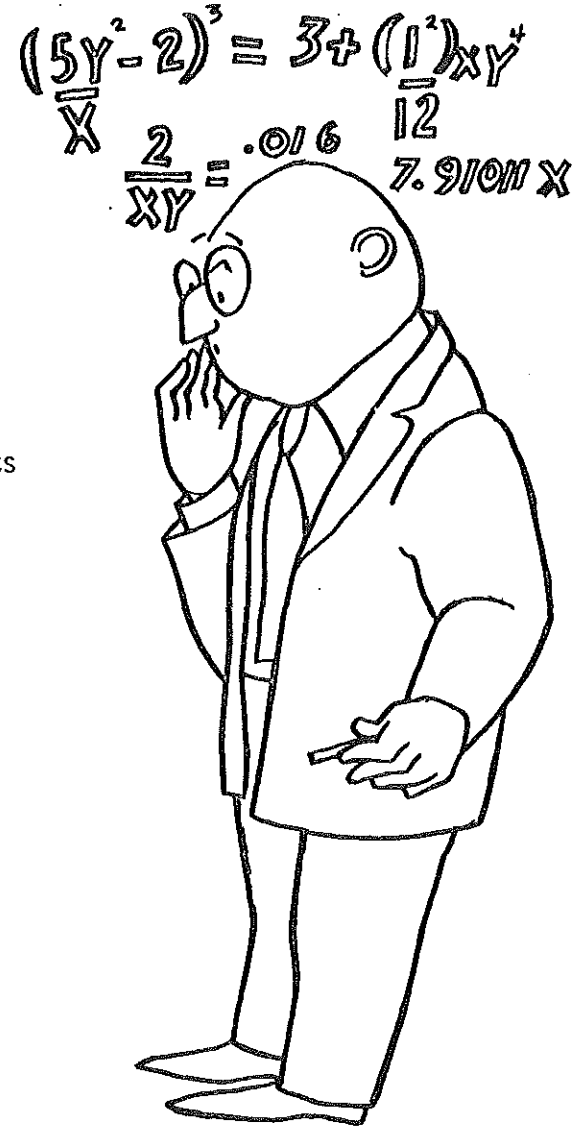
Edited by:
David Ballew
Nov. 5, 1983

SPRING MEETING:

The 1984 Annual Meeting of the Section will be held on April 27 and 28 on the campus of the United States Air Force Academy in Colorado Springs. Even though the first call for papers won't occur until January, you can start thinking of what you will present; it's even permissible to contact the Program Chairman, Major George Hughes, Department of Mathematics, USAFA and send your abstract. He won't mind at all.

STUDENT PAPERS:

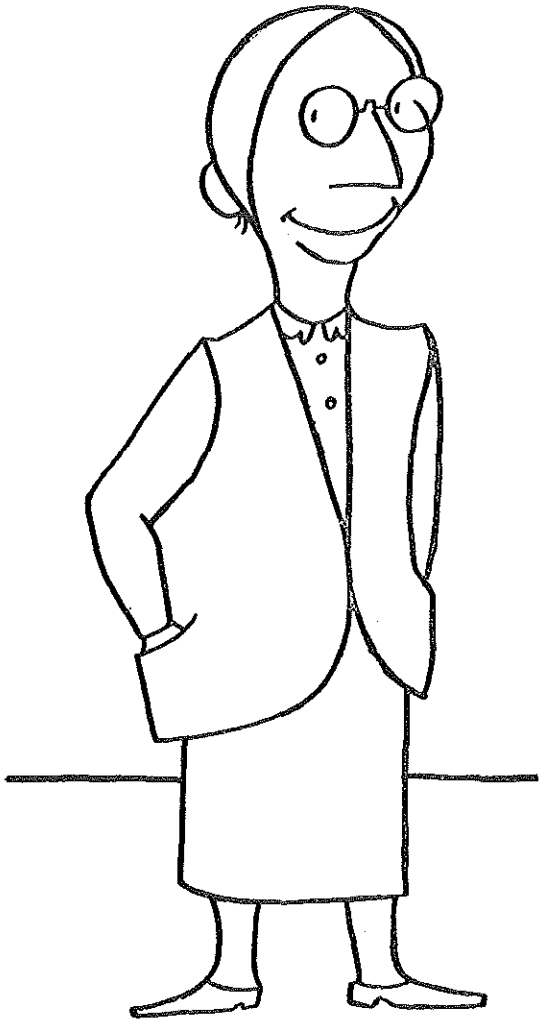
The Section will have sessions for student papers as we have had for the past few years. It is always a challenge to help students prepare for this. We are positive that there are many good student projects, papers and ideas that are worth presenting. This is your chance to help a student discover what mathematics is and how a Professional Mathematican presents material to other professionals. Encourage your students and support them in their initial effort at making a mathematical presentation.



OFFICERS FOR 1983-84:

The Rocky Mountain Section Officers for 1983-84 are:

Chairperson:	*Carl Kerns* *Mesa College*
Chairperson-elect	*Rebekka Struik* *Univ. of Colo.-Boulder*
Program-Chairperson	*Major George Hughes* *Air Force Academy*



SECTION OFFICERS CONT.

Chairperson for Two year Colleges	*Marie Ritten, National College*
Governor	*Jack Hodges, University of Colo-Boulder*
Secretary-Treasurer	*David Ballew, S.D. School of Mines*

Any suggestions and comments would be very welcome to any of the above officers. Feel free to contact them with any Section concerns.

NOMINATING COMMITTEE:

The Nominating Committee for 1983-84 consists of *Robert Blandford (USC), Vern Nelson (Metro State)* and *Ed Hawkins (Mesa College)* with *Vern* as Chair. They are looking for candidates for the following offices.

Governor (3 year term)
Sec-Treas (3 year term)
Chair-Elect (1 year term, but becomes Chairperson for 1 year term)
Program Chair (1 year term)
Chairperson for Two Year Colleges (2 year term)

If you are interested in one of these positions or if you wish to nominate someone, please contact one of the committee members.

FUTURE MEETINGS:

The Section meetings are scheduled as:

1984	U.S. Air Force Academy
1985	Casper College
1986	Mesa College
1987	University of Southern Colorado.

NEW MATHEMATICS EXAMINATION TO BE STARTED IN 1985:

The Board of Governors of the Mathematical Association of America (MAA) at its August meeting in Albany approved a mathematics contest at the junior high school level (grades 7 and 8) for purposes of:

a. Promoting the development of problem solving skills by providing opportunities for mathematical problem solving experiences beyond that currently provided in most junior high school mathematics classes.

b. Promoting the development of positive attitudes toward mathematics by providing challenging problem solving activities in which students can experience success.

c. Stimulating interest in continuing the study of mathematics beyond the minimum required for high school graduation.

NEW MATHEMATICS EXAM CONT.

d. Identifying students with mathematical problem solving ability.

e. Rewarding mathematical excellence by recognizing high achievement on a national examination.

c. Encouraging the improvement of junior high school mathematics curricula nationwide by increasing academic expectations beyond the level of basic skills and minimum competencies.

A subcommittee of the MAA Committee on High School Contests will assume the responsibilites associated with the conduct of the examination including the formulation of the examination and its implementation.

The new contest will be called the American Junior High School Mathematics Examination (AJHSME) and it will become an integral part of the current contest sequence which includes the American High School Mathematics Examination (AHSME), American Invitational Mathematics Examination (AIME) and U.S.A. Mathematical Olympiad (USAMO).

NEWS FROM THE CAMPUSES:

MESA COLLEGE --

Mesa had a rise in enrollment of approximately 6.7% this year which gives approximately 3,400 students. The Department of Mathematics, Computer Science and Engineering offers the following degree options:

1. Computer Science and Math (double major)
2. Computer Science
3. Applied Math
4. Math with Teaching (through Metro State College in Denver).

There are approximately 100 freshmen majors. The average salary for the graduates this year was $26,000. The Computer Science Department has hired Tom Mourey as an Associate Professor. They have been authorized to hire a engineering and math person if anyone is looking.

COLORADO SCHOOL OF MINES --

Charles Baer and Robert Fisk were promoted from Assistant Professor to Associate Professor. The Department has hired Jean Bell as an Assistant Professor. Jean completed her Ph. D. in Computer Science at the University of Colorado during the summer of 1983. She has considerable industrial experience as a computer specialist with a number of companies. Also, four Research Professors, Norman Bleistein, Jack Cohen, John DeSanto and Frank Hagin have been hired. All were formerly with Denver University. This group is probably the best in the country working on wave propagation, particularly on inverse scattering theory.

COLORADO SCHOOL OF MINES CONT. --

The Mathematics Department at Colorado School of Mines encompasses traditional applied mathematics, computer science, operations research and statistics. Emphasis is on application, particularly applications in the mineral and energy industries.

The primary objective of the undergraduate degree, Mineral Engineering Mathematics, is to provide graduates with a mathematics education supported by a strong engineering and science foundation, especially oriented toward industrial and governmental careers in the mineral and energy areas. Secondarily, the degree is intended to prepare students for graduate study, primarily in applied mathematics and disciplines extensively using applied mathematics.

Faculty research interests and the graduate program are oriented similarly to the undergraduate program.

UNIVERSITY OF COLORADO AT BOULDER --

On the occasion of Professor Burton Jones' 80th birthday a year ago, the Department announced the establishment, in his name, of an annual award to be made to a member of the faculty to recognize Excellence In Teaching of Mathematics. The first award will be made at the end of the current academic year. Around Nov. 1, the Jones moved to Wellesley, Mass. to be near a daughter, ending a stay in Boulder of 35 years. Professor Jones generously donated his mathematics library to the Department.

UNIVERSITY OF SOUTHERN COLORADO --

Gilbert Orr is now the Department Head (elected by popular acclaim on Aug. 26.) Leonard Orman retired last Spring, and Thomas Loucks and James Horembala have been hired to one year appointments. Dr. Wilbur Miller has returned from a one semester sabbatical where he used his time to author a text; the subject of the text is Linear Models for Use in Optimization Problems in the Cattle Industry.

The top mathematics student award for 1982-83 went to Thomas Griesan who earned both a mathematics and a computer science major. The Swanson Memorial Scholarship went to Michael Colalancia.

The Department of Mathematics currently offers three emphasis areas with the major, Applied Mathematics, Secondary Teaching and Computer Science. There are approximately 60 declared majors, some of whom carry double majors with physics, computer science and industrial engineering. There seems to be some thought in the Department to resurrect the traditional major. Any decision of this nature will influence and be influenced by our hiring. We hope to fill four positions this year.

As most Mathematics departments today, USC serves the broader university community. The demand is increasing alarmingly as various disciplines increase their mathematics involvement. Currently the Department has 1900 students enrolled in it's classes. By full time equivalency formulae, this computes to 454.5 Student FTE's and 19.2 Faculty FTEs; the Department has only 12 members on full time permanent contracts.

SOUTH DAKOTA SCHOOL OF MINES AND TECHNOLOGY --

The Computer Science program in the Department is experiencing very rapid growth and has over 300 majors (in a school of 2800 students); the Department is third largest in the school in terms of majors.

The Computer Science program has two options, one a hardware option which will eventually approach a Computer Engineering Degree, and the other option emphasising software. Both programs are highly structured requiring 8 mathematics courses and a minor in another science or engineering area. A Master's program has been started this year.

The mathematics program is small but proud. Some of its graduates are the best in the school.

The service load from the engineering departments plus the growth in the computer area cause the Department to echo the plight of Southern Colorado. There is a 31.1 to 1 student/faculty ratio and a generation of 22 FTE faculty by a staff of 13.

At its present rate of growth, the Department will graduate 2,134,782 majors in 1991.

Harold Carda has returned from a sabbatical where he studied microprocessors and their applications. Roger Opp is involved with Computer Graphics, Alan Egger is working in Digital Image Processing, Karen Whitehead has finished a book on Discrete Mathematics, and Ron Weger is involved in everything. Al Grimm is working on a book in Vector Analysis, Dale Rognlie is working in numerical solutions to partial differential equations and Sailes Sengupta is concerned with expert systems in banking. Bonnie Henrikson is creating an industrial statistics course and Ed Corwin is concerned with Computer Literacy.

GOVERNOR'S REPORT: BY JOHN HODGES.

For the information of the members of our Section of the MAA, I want to briefly mention some of the items discussed and/or action taken on by the MAA Board of Governors at its meetings in Denver in January and Albany in August.

1. NEW MAA SECRETARY.

Professor Kenneth A. Ross, University of Oregon, was elected as Secretary of the Association for the term extending through January, 1985. Prof. Ross will finish out the time remaining in the present term of David Roselle who resigned his position as Secretary because he has been promoted from Dean of the Graduate School to Provost at Virginia Tech. David Roselle has served as Secretary of the MAA for the past nine years. Prior to this, Henry Alder had been Secretary for fifteen years.

2. 1984 AWARD FOR DISTINGUISHED SERVICE

The committee appointed by the Executive and Finance Committees of the MAA to submit nominations for the 1984 Award for Distinguished Service to Mathematics presented

the motion:

That the 1984 Award for Distinguished Service to Mathematics be presented to all of those who have furthered the progress of mathematics by enhancing significantly the status of women in mathematics.

The Board held a spirited discussion about the pros and cons of presenting the Award to such a amophous set of persons rather than to an individual. Among the remarks made concerning this motion were:

a) The recognition of individuals and not issues is the intent of this award.
b) If this issue is to be so recognized, then it would be preferable to make the Award to the AWM or some other organization or some individual or specific group of individuals who have contributed to the advancement of women in mathematics.

The Board finally decided to refer the matter back to the Committees with instructions to consider the possibility of a special citation or resolution for persons who have significantly enhanced the status of women in mathematics and to nominate at most one individual as recipient of the Award to be presented in January.

3. CERTIFICATE OF MERITORIOUS SERVICE

In 1982, the Board established a program of Certificates of Meritorious Service to be presented to individuals for Service at the national level or for service to a section of the MAA. The first such awards are scheduled to be presented at the August, 1984 meeting. Sections are entitled and encouraged to nominate one person every five years for service essentially at the Sectional level. All twenty-nine sections have been assigned (by lot) initial years for making their nominations--the first year for the Rocky Mountain Section is 1987.

The sections are charged with arrangements for the selection of their nominees. The only restrictions are that selections committees should have not fewer than three members, previous winners of the Award for Distinguished Service to Mathematics are not eligible, and the Board of Governors must confirm the nominations (submitted to the Board at the Winter meetings with the presentations made at the Summer meetings.)

4. INFORMATION ON HIGH SCHOOL GRADUATION AND UNIVERSITY ADMISSION REQUIREMENTS.

B. E. Rhoades, Chair of the MAA/NCTM Committee on Articulation presented summaries of surveys that this Committee has conducted among state supervisors of mathematics, state university admission offices and state legislatures concerning:

a) graduation requirements stipulated by states and state university admission requirements in mathematics.
b) state legislative actions and/or proposals being considered that relate to various aspects of mathematics education and teaching.