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Mathematics Council NEWSLETTER

The Alberta Teachers' Association

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In Search of Excellence

It seems to me a "crime" that so much excellence among our fellow educators and among the students whom we teach goes unrecognized and unheralded. If we take time to stop and look about, I am sure that each of us recognizes educators and students who are making outstanding contributions to mathematics education, and who are achieving outstanding grades.

In such other areas of education as English, there seems to have been in place, for a long time, methods by which those who do outstanding work can get some of the recognition they deserve. There are many good-speaking and good-writing competitions enabling those displaying special talents to gain recognition.

Unfortunately, in the area of mathematics these opportunities are not so readily available. It is my considered opinion that, as teachers, we should do more to encourage the development of projects or tests in which our students can compete.

The Mathematics Council of The Alberta Teachers' Association has made one significant step toward recognizing outstanding mathematics educators in the province by instituting the "Outstanding Mathematics Educator Award." This award has been given out for the past two years. Hopefully, the availability of this award will encourage all of us to nominate fellow educators whom we consider deserving.

The criteria for the special award, along with a nomination form, are enclosed.

Governments should also be encouraged to recognize outstanding educators and students in the area of mathematics. In the U.S., for example, recognition is given even at the presidential level. Why can't something similar be done in Canada?

MCATA Conference Report

October 24 - 26, 1985

The 1985 MCATA Annual Conference differed somewhat from previous conferences. For example, this was the first conference to be held for two evenings and two full days and to have two keynote speakers. There were other differences, too, which may become apparent as you read my report.

The Conference, held at the beautiful Lethbridge Lodge Hotel, was given a tremendous blast-off on Thursday evening by Chuck Allen from the Los Angeles Centre for Enriched Studies. Following this, participants enjoyed a social evening with a complimentary wine and cheese.

Friday turned out to be a busy but fantastic day. Those attending were able to take in five, one-hour sessions followed by a busy evening. After the banquet, the Mathematics Educator of the Year Award was presented to Dr. Joan Worth of the University of Alberta. Congratulations, Joan!

After some short but entertaining comedy, a casino using "Lethbridge Loot" was enjoyed by all. Prizes were issued to people winning the most "Lethbridge Loot."

The second keynote address took place on Saturday morning. Ralph Hims1, superintendent of Lethbridge Separate Schools, gave our second day a resounding start. This was followed by three, one-hour sessions ending at 2:30 p.m.

In all, participants had a total of 64 sessions from which to choose throughout the two days. Hopefully, those who were fortunate enough to attend will share the ideas with those teachers back at their home schools.

There were a total of 229 paid registrations in addition to the 51 presenters and planning committee members. I have heard from a large number of attendees that this was one of the best, if not the best, MCATA Conferences yet. A special thanks to all who participated, especially the presenters, the presiders, and the Lethbridge Planning Committee.

--Respectfully submitted,
Gary R. Hill, Program Director

Thanks to Hank Boer and Committee

On behalf of the MCATA executive, I would like to thank Hank and his committee for organizing a super conference in Lethbridge. I am sure those attending found it a most enjoyable and educationally stimulating experience.

--Art Jorgensen

A Request from Editor John Percevault

1. Do you have any comments about this season's first issue of delta-K? Some feedback would be appreciated.
2. I know there is a lot of talent out there. How about using some of that talent to prepare an article for the next issue of The Canadian Mathematics Teacher, to be published next spring? Manuscripts must be received by March 1, 1986.
3. Have you found a good problem, or two, lately? How about sending them to John for publication in forthcoming issues of delta-K?

Submissions should be sent to: John Percevault
2510 - 22 Avenue South
Lethbridge, Alberta
T1K 1J5

Joan Worth Needs Your Help!

Just in case you've forgotten, MCATA is hosting the NCTM "Name of Site" Conference in Edmonton on October 16 through 18, 1986. Joan is serving as conference director.

Do you have ideas for sessions? Would you be prepared to give a session? Would you be prepared to act as a presider?

If you can answer "yes" to any or all of these questions, please contact Joan at:

Suite 1405
10045 - 118 Street
Edmonton, Alberta T5K 2K2

Phone: (Bus.) 432-4153
(Res.) 482-4532



Just a Thought...

Happiness is crazy arithmetic.
It multiplies when you divide it.

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—Outstanding Mathematics Educator Named—

The Mathematics Council of The Alberta Teachers' Association (MCATA) presented Dr. Joan Worth with the Outstanding Mathematics Educator of the Year at its annual convention banquet held in Lethbridge on October 25, 1985. Each year, the Council selects one educator from within the province who has contributed to the improvement of mathematics instruction over a significant number of years.

During the presentation, Dr. Worth was referred to as the "mother of math education" in Alberta. She has been active at all levels of education in this province. Dr. Worth has taught elementary and junior high, has been a consultant, and has been at the University of Alberta since 1969. She was one of the founding members of MCATA and has carried out various roles within the Council since 1963. Currently, she is coordinating the 1986 national conference to be held in Edmonton. She has been active both within the province and internationally, in various jobs with the National Council of Teachers of Mathematics.

Dr. Worth is internationally known for her contributions to elementary mathematics education. She has promoted the use of problem solving in mathematics throughout the province in workshops and articles. Above all, she has been able to encourage and support her colleagues to improve mathematics education for children in classrooms as only a good mother can.

Computation

HIGH QUOTIENT (two or three players)

Object: To obtain the highest quotient when a four-digit number is divided by a two-digit number

Materials:

1. A set of forty cards, four each of the digits 0-9
2. Blank sheets of paper and pencils

Directions:

1. Each player draws a "blank" division problem of the following form:



2. Cards are shuffled and placed upside down in a drawing stack.
3. Play begins with the first player turning over one of the cards from the top of the drawing stack. This player writes the numeral from the turned-over card someplace in the blanks. The second player turns over a card from the stack and places the corresponding numeral in his or her blanks. This procedure is continued until each player has filled in the blanks.
4. The players do the divisions, and the player with the highest quotient is the winner.

Variation/extension: As each number is turned over, all players write the number somewhere in their blanks. This procedure speeds up the game, but it can also result in more tie games.

From the file of Ruth A. Meyer and James E. Riley, Western Michigan University, Kalamazoo, MI 49008

—Readers are encouraged to send in two copies of their classroom-tested ideas for "From the File" to the managing editor for review.—

New Publications for Secondary School Math Teachers Just Like You

Teachers just like you make up the National Council of Teachers of Mathematics (NCTM), a professional organization dedicated to the improvement of mathematics education. And teachers just like you actively participate in the extensive review process each publication undergoes. This ensures practical materials with a meaningful application in the classroom. Here are NCTM's most up-to-date publications—our best to help you give *your* best.

Calendars for the Calculating. A set of nine thought-provoking calendars, one for each month of the school year, for junior and senior high school "calculators." Besides commemorating certain mathematically significant dates (birthdays of noteworthy mathematicians, for example), the calendars are full of problems to intrigue active minds. Since these calendars are arranged not in weeks but only by date, they are reusable from year to year. Answers to problems are on the back of each calendar. 9 calendars, #344S2, \$5.00.

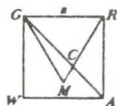
7

1707 b. **Georges Louis Leclerc, Comte de Buffon**, introduced calculus into probability theory.



8

If $GRAW$ is a square of side a and $\triangle GMR$ is equilateral, what is the area of $\triangle RCA$?



Detail from "Calendars for the Calculating," November

Computers in Mathematics Education (1984 Year-book), edited by *Viggo P. Hansen*. Contains excellent input from mathematics teachers on how computers can be used as a powerful teaching device in the mathematics classroom. Valuable reference for all mathematics education personnel—for mathematics teachers, curriculum planners, and mathematics supervisors. Discusses the issues concerning the use of computers in teaching mathematics—the impact, the challenge, and the possibilities—and shows how computers can be used to diagnose student weaknesses and errors. Includes annotated bibliography. 244 pp., #328S2, \$14.50.

Other Professionals

may be interested. Please share this flyer with your department chairman, supervisor, principal, school librarian, or other teachers interested in the improvement of mathematics instruction.

Computing and Mathematics: The Impact of Secondary School Curricula, edited by *James T. Fey*. Reports on a conference sponsored by the NSF where a group of well-known mathematics educators made a concentrated effort to rethink traditional curricula in light of electronic technology. Deals with the effect of computing technology on school mathematics, the prospects for change, and its specific impact on such disciplines as algebra, geometry, and calculus. 100 pp., #337S2, \$7.50.

Guidelines for Evaluating Computerized Instructional Materials (2d ed.), by *William P. Heck, Jerry Johnson, Robert J. Kansky, and Dick Dennis*. New and revised! An up-to-date revision of the popular guidelines that have given hundreds of teachers and administrators concise, practical help for slicing through the maze of materials in the software jungle. Without computer expertise, learn to distinguish among the mounds of available software and choose wisely. Usefulness not confined to mathematics: valuable for evaluating software in any discipline. Contains reproducible evaluation instruments and outlines for using them. 32 pp., #122S2, \$3.00.

"Minorities and Mathematics," the March 1984 issue of the *Journal for Research in Mathematics Education*, is a compilation of papers that examine and attempt to synthesize the available research on minorities and mathematics in the United States today. The authors represent a rainbow coalition of researchers with a history of involvement and interest in that area. Several of them have pioneered in conducting research on racial differences in mathematics performance. 93 pp., #304S2, \$4.00.

Multicultural Mathematics Posters and Activities. A set of 18 attractive posters (each 28 cm \times 43 cm and printed on parchmentlike paper) plus a three-hole punched, 64-page activity book for the teacher. Use this set to prove to your students that mathematics spans centuries and cultures and is useful and fun. The materials emphasize problem solving, focus on interdisciplinary applications of mathematics, and encourage minority students to pursue mathematics beyond minimum requirements. Includes interesting topics such as the Tower of Brahma, Japanese optical and geometric art, Egyptian rope stretchers, and many more. 18 posters + 64 pp., #330S2, \$7.00.

NCTM ORDER FORM

Educational Materials	• Stock #	• Quantity	• Unit Price	• Total Price
_____	_____	_____	\$ _____	\$ _____
_____	_____	_____	\$ _____	\$ _____
_____	_____	_____	\$ _____	\$ _____

20% Discount: Individual members, bookstores, or quantity orders for 10 or more copies of a single title shipped to one address. Prices subject to change without notice. Virginia residents add 4% sales tax. Billed orders will include shipping and handling charges.

SUBTOTAL \$ _____
Less 20% \$ _____

MEMBERSHIP dues support the development, coordination and delivery of NCTM services, including \$13 for each ARITHMETIC TEACHER and MATHEMATICS TEACHER subscription and \$2 for five issues of the NCTM News Bulletin.

- Arithmetic Teacher (AT)** • 9 issues, September-May, for elementary school teachers, parents, and teacher educators. Individuals \$35; Institutions \$40.*
* Additional AT copies for institutions mailed to the same address \$13/ORDER/YEAR. \$ _____
- Mathematics Teacher (MT)** • 9 issues, September-May, for secondary school and two-year college mathematics teachers, and teacher educators. Individuals \$35; Institutions \$40. \$ _____
- Both **Arithmetic Teacher** and **Mathematics Teacher** for individuals only \$48. \$ _____

Full-time student dues are 1/2 regular membership dues. For mailing outside the U.S., add \$5 for the first AT or MT per membership and \$2.50 for each additional AT or MT.

TOTAL \$ _____

Member # _____ Payment to NCTM in U.S. funds enclosed.

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Mathematics Educator of the Year Award: Guidelines and Criteria

A. Award

- (1) This award may be given annually and is to be presented at the annual conference of the Mathematics Council.
- (2) The award shall be a plaque, inscribed with the title, year and name of recipient.
- (3) The recipient shall also receive an honorary life membership in MCATA and a lapel pin.

B. Qualifications for Candidates

- (1) The candidate shall have contributed distinguished, meritorious service in the field of mathematics education. The criteria may include curriculum development, in-service, outstanding classroom teaching and exemplary leadership.
- (2) Executive officers of the Mathematics Council may not be eligible during their term of office.

C. Nominations

- (1) The Award Selection Committee shall secure nominations by advertising in the Newsletter and Delta-k.
- (2) Nominations to be received by the committee six weeks before the Conference.
- (3) Nominations received after the advertised deadline shall not be considered for that year.

D. Award Selection Committee

- (1) The past president shall act as chairman of the Award Selection Committee.
- (2) The Award Selection Committee shall be the Table Officers of the Mathematics Council.
- (3) After nomination forms are received, additional information may be requested from nominators.
- (4) Members of the committee shall receive copies of all nomination forms and supporting information.

E. Additional Considerations

- (1) The Mathematics Council shall assume all expenses for recipients, and banquet expenses for spouses of recipients.
- (2) Extensive coverage of the award should be given through the press.
- (3) An article describing the recipient's contribution should appear in Delta-k.

Mathematics Educator of the Year Nomination Form

Nominee's Name: _____ Phone: _____

Home Address: _____

School Address: _____

Present Position: _____

Professional Involvements and Significant Contributions (attach resume)

Nominated by: _____ Phone: _____

Address: _____

Date: _____

Award to be presented at the Annual Conference of MCATA.

Mail before: September 12, 1986 to: Ron Cammaert
Chairman, Award Selection Committee
Alberta Education
200 - 5 Avenue S.
LETHBRIDGE, Alberta T1J 4C7