

Mathematics Council NEWSLETTER

The Alberta Teachers' Association

Volume 13

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February 1995

From the Editor



I was recently involved in the evaluation of the total mathematics program in a large rural jurisdiction. Many mathematics teachers felt that there was really no one in the school to whom they could turn for

professional help. In other words, there was no mathematics leader in the school.

In the following position paper, the National Council of Teachers of Mathematics (NCTM) makes a good case for having a mathematics leader in each school. I believe that school systems should seriously consider this idea.

Mathematics Leaders in Secondary Schools

Strong mathematics leadership in each school is a significant factor in the improvement of secondary mathematics instruction. Leaders in school mathematics are essential for improving the mathematical knowledge and pedagogical competence of the staff, for providing information about mathematics instruction within the school and between the school and its feeder schools, and for assuring the implementation of a comprehensive, high-quality program. Such leaders give assistance and support to teachers and administrators in promoting excellence in mathematics for all students.

For these reasons, the National Council of Teachers of Mathematics recommends that every secondary school identify a mathematics leader, often called the department head, to provide ongoing leadership and assistance in planning, implementing and evaluating a comprehensive mathematics program. The mathematics leader must have an in-depth understanding of mathematics and a thorough knowledge of, and competence in, effective teaching methodology, coupled with the ability to work well with others. Such a person would be available in the building to provide leadership in matters concerning curriculum, methodology and materials, student assessment, professional development and procedural duties.

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Specifically, the mathematics leader should provide leadership and assistance to teachers, principals, supervisors and other administrators in the following ways:

1. Curriculum

- a. Fostering the development, implementation, evaluation and updating of department goals and objectives
- b. Coordinating the implementation of an effective instructional scope and sequence for mathematics
- c. Contributing to the development of course offerings to meet diverse student needs
- d. Facilitating the review and revision of curricula to incorporate new developments in mathematics education
- e. Encouraging the integration of mathematics with other content areas
- f. Providing curriculum articulation between schools and among grade levels
- g. Assuring consistent standards among teachers and among courses

2. Methodology and Materials

- a. Acquainting teachers with successful and innovative strategies for classroom instruction through demonstration lessons and conferences
- b. Helping teachers select and implement activities that improve students' motivation and attitude toward mathematics
- c. Facilitating the review and selection to textbooks
- d. Making recommendations for the acquisition of teaching resources such as manipulative materials, calculators, computers, computer software and other instructional media

3. Student Assessment

- a. Participating in the review and selection of assessment techniques
- b. Assisting teachers in the design and implementation of all forms of assessment
- c. Helping teachers interpret and use assessment data

- d. Working with the guidance staff to facilitate appropriate student placement

4. Professional Development

- a. Encouraging teachers to pursue further study of the mathematical sciences
- b. Providing information about innovative materials and teaching strategies recommended by the mathematics education community
- c. Encouraging teachers to become participating members in professional mathematics organizations
- d. Facilitating the attendance of teachers at professional meetings and conferences
- e. Encouraging discussion of the professional literature in mathematics education and related fields

5. Procedural Duties

- a. Orienting new teachers
- b. Assisting substitute teachers and student teachers
- c. Conducting departmental meetings
- d. Participating in development of the master schedule
- e. Formulating the departmental budget
- f. Participating in the recruitment and selection of mathematics teachers
- g. Facilitating students' participation in competitions and special programs

For the mathematics leader to accomplish the expected tasks, it is recommended that school systems provide a monetary supplement, release time, sufficient support services and the opportunity to participate in professional activities in mathematics education at local, state/provincial, regional and national levels. The school mathematics leader is a critical component of an effective mathematics instructional program. The need for strong leadership at the school level is not merely desirable, it is essential. ▲

From the President's Pen



Happy New Year! I hope you all had an enjoyable holiday break. By the time you read this, the worst of the winter will (we hope) be over, and we'll all be looking for the first signs of spring!

I'd like to bring you up to date on what's happening with the Western Canada Protocol. As you know, the ministers of education for the four western provinces and the two territories have agreed that there will be collaboration in basic education. The initial thrust of the Protocol is to develop a common curriculum in mathematics, K-12. To this end, 36 teachers worked in Regina one August week to prepare a first draft of general and specific objectives and then met in November in Edmonton to work on illustrative examples.

In mid-January, Alberta Education called a joint meeting of the Elementary and Secondary Math Advisory Committees to examine the draft document. (These committees are composed not only of members of the Alberta Education math team and teachers from across the province but also of representatives from the ATA, postsecondary institutions, parent groups, APEGGA, business and industry, and the College of Alberta School Superintendents.) Committee members spent two days reviewing the document, making suggestions for modifications in content, format, articulation, placement of objectives and so on. Input was also received from teachers across the province who responded to a questionnaire after studying the draft.

Later in January, the revised draft was further examined by the committee of math team leaders from the Protocol, and further revisions were made. By the time you read this message, another draft of the document should be ready for perusal.

What does this mean to you as a classroom teacher? As I understand it, the most pressing concern in Alberta is to approve a new junior high curriculum. It is anticipated that the program of studies will be published this spring, to allow for development of resources by publishers for submission to Alberta Education for review and approval by spring 1996, for implementation in fall 1996, beginning with at least Grade 7. Elementary teachers have a new interim curriculum and resources, so it is less pressing that the Protocol be implemented. The Elementary Advisory Committee will be involved in developing possible implementation plans for K-6. Specific objectives for the high school portion of the document have yet to be written, so it will probably be the last section ready. Implementation of a revised high school program will occur after the Grade 9 program has been implemented.

We will continue to keep you apprised of Protocol developments. If you have any questions or would like to see a copy of the draft document, contact Hugh Sanders at Alberta Education.

The executive meets the last weekend in February, so if you have any questions or concerns, please contact me. ▲

—Wendy Richards

Math Symposium

Do you want to keep abreast of what is going on in mathematics in Alberta? Plan to attend the next Mathematics Symposium at the Calgary Winter Club on Friday, May 5, 1995. Provincial mathematics leaders will make a number of interesting presentations, and there is always time for discussion. More information will appear in the next issue, or you can contact symposium organizer Art Peddicord, Alberta Education, Curriculum Standards Branch, 11160 Jasper Avenue NW, Edmonton T5K 0L2; phone 427-2984. ▲

NCTM Supplies Via MCATA

These special-members products and publications are available through MCATA (see also the recent catalog of NCTM educational materials), and MCATA gets a rebate for all materials sold. Other materials can also be ordered. Prices do not include GST.

Special-Members Products

<i>Title</i>	<i>Price (Cdn)</i>
Power Bags	\$23.56
Painter Caps	3.38
Power T-shirts	16.81
Power Stickers	0.68
Stamps: I Love	4.73
Post Its	1.01
Pens: I Love	8.44
Buttons: Power	1.28
Notepads: Power	0.88
Pencils (10): I Love	3.38
Stickers: I Love	0.68
Pencils (10): Power	3.38
Pens: Power	5.06

Publications

Addenda Series

Kindergarten	\$12.83
Grade 1	12.83
Grade 2	12.83
Grade 3	14.85
Grade 4	14.85
Grade 5	14.85
Grade 6	15.53
Geometric Spatial Sense (K-6)	12.83
Patterns (K-6)	12.83
Making Sense of Data	12.83
Number Sense and Operations	12.83

Grades 5-8

Development of Number Sense	\$14.18
Dealing Data and Chance	20.25
Geometry and Middle Grades	20.25
Patterns and Functions	17.55

Grades 9-12

Connecting Math	\$12.83
Geometry from Multiple Perspectives	18.90
Data Analysis and Status	20.25
Core Curriculum	22.95
Fractals Text, Part 2	39.15
Fractals Workbook, Part 1	26.93
Fractals Workbook, Part 2	26.93
Spreadsheet Act—Middle School	30.38
Spatial Sense—At	6.75
Organizing Data 5-8	13.50
Number Sense—At—5-8	6.75
Manipulatives—At	6.75
Data Analysis—Mt—5-9	6.75
Assessment—At Focus	6.75
Implementing K-8 Curr. and Eval.	10.13
Alt. Assessment—Mt—Theme	6.75
Guidelines Calculator Use	10.13
Problem Solving with Calculator	6.75
Problem Solving Techniques	6.75
Choose and Create Good Problem	11.48
Polyhedron Models	15.53
Micros-Geometry	8.10
Algebra for Everyone	10.80
Paper Folding	7.43
Projects to Enrich, Level 1	19.58
Projects to Enrich, Level 3	14.85
Ideas from At 1-4	15.53
Ideas from At 6-8	15.53
Teacher Made Aids for Elem.	16.20
Problem Solving Tips At	11.48
How to Teach Using Calculator	10.80
How to Teach Per, Area, Volume	10.13
Assessment—Myths, Models	11.48

For more information, contact Richard Kopan, 72 Sunrise Crescent SE, Calgary T2X 2Z9; phone 254-9106 (res.), 777-7520 (bus.), 777-7529 (fax). ▲

NCTM Annual Meeting Highlights 75 Years of Achievement

*Plan now to attend what is likely to be the
math conference of the century.*

Come celebrate NCTM's 75 years of achieving excellence in mathematics education at NCTM's 73rd annual meeting in historic Boston. Slated for April 6–9, 1995, the conference promises to be a stimulating and educational event.

"The theme for this year's conference, 'Mathematics: Everybody's Heritage, Everybody's Future,' brings to the forefront the importance mathematics has played in our past as we move ahead confidently into the future," said NCTM president Jack Price. "NCTM's 75th anniversary celebrates our teachers and recognizes the value of high-quality teaching."

In addition to more than 1,060 sessions, numerous tours and various networking opportunities, NCTM has planned many social functions to crown this historic event.

Anniversary Banquet

Join the celebration as we honor executive director James D. Gates for his outstanding leadership in the education community. Great food and entertainment are just part of this evening's program. The banquet will take place Saturday, April 8, from 7 to 9 p.m. in the Marriott at Copley Place. The price is \$36, including tax and gratuity. Vegetarian and special dietary meals may be requested at the time of purchase (in advance or at the banquet ticket desk).

Boston Pops

Celebrate Boston's heritage with the music of the Boston Pops. The orchestra, which has

performed since 1885, will entertain Friday, April 7, from 8 to 10 p.m. in the Marriott Ballroom. Admission is \$45. Tickets are available on a first-come, first-served basis and may be purchased with your registration.

Anniversary Dance

Dance the night away to the music of Top Shelf, a popular 10-piece orchestra playing all your favorite dance tunes. The dance will be held in the Sheraton Hotel Grand Ballroom, Friday, April 7, from 9:30 p.m. to 1:00 a.m. Cost is \$10. Snacks and a cash bar will be available. Reservations and payment should be made with your advance registration; any remaining tickets will be available on-site.

Reception

Share your talent, experience and ideas with colleagues from around the world during this relaxing reception open to all attendees. This 75th anniversary reception is hosted by the Association of Teachers of Mathematics in New England and will take place Thursday, April 6, following the opening general session. Refreshments and a cash bar will be available.

Free Boston Harbor Cruise

Enjoy the view of the Boston Harbor aboard a cruise ship—for no charge. NCTM 73rd annual meeting participants who purchase a roundtrip air ticket from Carlson Wagonlit Travel, the official travel agency for the Boston meeting, will receive a gift certificate for a free 90-minute Boston Harbor sight-seeing cruise. The gift certificate is good for morning and afternoon tours scheduled Thursday through Saturday, April 6–8.

To order your airline tickets and get your gift certificate for a free Boston Harbor cruise, call Carlson Wagonlit Travel at 1-800-505-NCTM (1-800-505-6286). ▲

NCTM Canadian Regional in Pictures

An exciting time was had by all at the NCTM Regional Conference held in Edmonton, October 20–22, 1994. These pictures tell some of the story. ▲



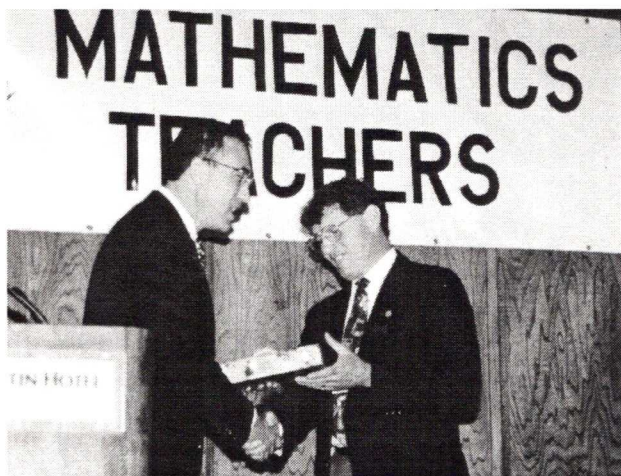
NCTM past president Mary Montgomery Lindquist brought international representation to the meeting.



MCTA president Wendy Richards brought greetings.



Alberta's minister of education, Halvar Jonson, brought greetings on behalf of the government.



MCTA past president Bob Hart presented the 1994 Math Educator of the Year Award to Bob Michie.



Teachers took plenty of time to browse through the displays (note the U of W Mathie on the left).

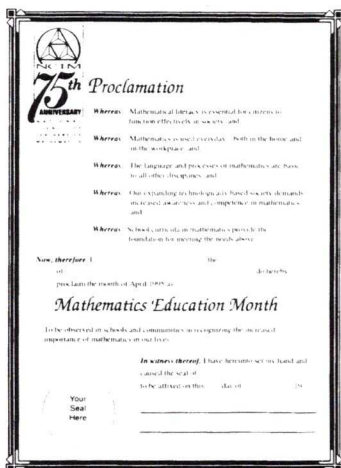
Do Something Special for MEM

In celebration of its 75th anniversary and Mathematics Education Month (MEM), NCTM is releasing a special "Mathematics: Everybody's Heritage, Everybody's Future" activities kit. The 1995 "Mathematics Heritage Kit" has innovative ideas and useful materials to help educators plan promotions and mathematics-related activities in their schools and communities.

NCTM's Mathematics Heritage Kit contains MEM proclamations (one signed by NCTM President Jack Price and another that may be completed by a local political or educational leader), colorful activities calendars, parental involvement materials and NCTM's Dividends and Numbers catalogs for selecting classroom materials and special 75th anniversary promotional items. Mathematics-related materials (from NASA and *USA Today*, for example) are also included.

Mathematics Education Month is proclaimed each April to promote mathematics awareness through cross-curricular activities connecting mathematics to real-world situations. In addition, MEM stimulates student, parent and community excitement and involvement to work toward the common goal of excellence in mathematics.

NCTM's MEM Mathematics Heritage Kits are available free to all mathematics educators. To receive a kit, write to NCTM, Dept. M, 1906 Association Drive, Reston, VA 22091-1593. ▲



Challenge Problems

The following challenging questions are taken from the Alberta High School Mathematics Competition, Part I, November 15, 1993.

- On an island, 99 percent of the population are natives. Some natives emigrate, so that only 98 percent of the population are natives. If the initial population of the island was 1,000, the number of natives who emigrated is
 - 10
 - 20
 - 100
 - 200
 - 500
- Samira runs the first 2 km of a 6-km race at 6 km/h, the second 2 km at 4 km/h and the final 2 km at 3 km/h. Her average speed (in km/h) over the whole race is
 - $13/4$
 - 4
 - $13/3$
 - 5
 - none of these

Answers

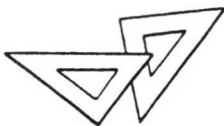
- e** Since the number of nonnatives does not change but the percentage of them doubles, the island's total population must have halved. Five hundred of the 990 natives had to emigrate to get the new total population of 500 ($490 + 10$).
- b** Samira covers 6 km in $\frac{1}{3} + \frac{1}{2} + \frac{2}{3} = \frac{3}{2}$ hours for an average speed of 4 km/h. ▲

Parent-Teacher Conference

All parents and teachers (especially those in the Edmonton area) are invited to a unique parent-teacher conference on March 18 at Holy Trinity High School. Conference details and a registration form are in the brochure enclosed with the *Newsletter*. ▲

The Right Angle

News from Student Evaluation



Achievement Testing Program

The Grades 3, 6 and 9 general information bulletin for the Provincial Student Assessment Program was mailed to all schools in December 1994. The bulletin followed the subject information bulletins mailed in November 1994. All bulletins provide information for administrators, teachers and students about the 1995 Grades 3, 6 and 9 Mathematics Achievement Tests. Changes have been made to the original plans for the 1995 achievement testing program, so make sure you read these bulletins. For instance, an excerpt from the general information bulletin (p. 3) about the reuse of tests follows:

In order to provide, without incurring large additional costs, an assessment program that will support good teaching and learning practices and yield high-quality information about how well students are learning, parts of the machine-scorable components of the achievement tests will be reused. All tests from 1992, 1993 and 1994 are being reviewed and parts of them will be reused in 1995. About $\frac{1}{3}$ of the machine-scorable parts of the test will be replaced each year and new questions added. The written-response questions will be new, beginning in 1995-96. These tests must be secured by schools. Therefore, questions from these tests and all future tests must not be used with students. Teachers will be advised each year as to which parts of the tests are no longer secure and may be used in class.

For more information or if you have questions about the 1995 Grades 3, 6 and 9 achievement tests, contact Kay Melville at 427-0010.

News from Curriculum Standards Branch

Mathematics 31

The Math 31 course of studies was approved and mailed to all high schools in December 1994. Schools had the option of implementing the course now (February 1995). Provincial implementation is September 1995. Assessment standards and a sample of assessment tasks are being sent to schools. A full range of student learning resources and authorized teaching resources is available through the LRDC. For further information or if you have any questions about Math 31, contact Jack Edwards at 427-2984, e-mail jedwards@edc.gov.ab.ca.

News about CAMP

Alberta Education has embarked on a new project: the Classroom Assessment Materials Project (CAMP). One goal in Alberta Education's Three-Year Business Plan is to set clear learning outcomes and high standards for each area of learning and to communicate these effectively.

Intended Use

The materials will be designed for end-of-grade, -course or -module expectations and not for ongoing classroom or diagnostic assessments. Teachers may use the classroom assessment materials whenever they need to find out about a student's performance in relation to provincial standards. They may work with other teachers in using these materials and may add to or modify the materials as necessary.

Project materials are intended solely for classroom teacher use in assessing learning. They are not to be used for evaluation of teachers or school programs or for any other purpose imposed by those external to the classroom.

Development

Classroom teachers will be involved in developing the materials. They will also be able to support the project by field testing and advising on the appropriateness of each package. Their involvement is essential for preparation of quality assessment packages.

Alberta Education's funding for developing the assessment materials is coming from a reallocation of existing department resources.

Project materials in mathematics are being developed by teachers through committees and work with the Alberta assessment consortium.

The Assessment Package

Each package will include the following:

- **Learning Outcomes:** the full range of broad learning outcomes from the program of studies, on which the assessments will be based

- **Assessment Criteria:** a statement of the criteria used for judging student achievement at the acceptable and excellent levels relative to expected learning outcomes
- **A Blueprint:** a map of assessment design indicating weightings and emphasis, and the relationships among knowledge, skills and attitudes to be assessed
- **Assessment Materials:** various assessment tools including tests, performance tasks and other assessment activities, together with scoring criteria, cut scores and samples of student work that illustrate provincial standards
- **Field Testing Information:** context for field testing the assessments and how well students in field-test classrooms did

Availability

Assessment packages will be available for teacher use according to schedules set for each learning area. Many assessment instruments will be field tested May–June 1995 and/or May–June 1996. Most packages will be available for teachers by spring 1997.

Plans for teacher inservice sessions on the use of the materials will be prepared soon. Cost and distribution of the materials have yet to be determined.

More Information

You can get further information about the mathematics CAMP by contacting Hugh Sanders, Curriculum Standards Branch, at 427-2984. ▲


—*Florence Glanfield*
Alberta Education Representative

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*20% discount to NCTM individual members

Addenda Sampler

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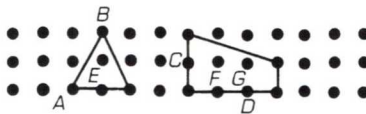
PATTERNS ON A GEOBOARD

1. On your geoboard, construct each of the following figures with one rubber band and record each result on dot paper:

- | | |
|----------------------------|---|
| a. an acute triangle | f. a rectangle with four congruent sides |
| b. a right triangle | g. a parallelogram with four right angles |
| c. a scalene triangle | h. a trapezoid with two congruent sides |
| d. an isosceles triangle | i. a pentagon |
| e. a scalene quadrilateral | j. a hexagon |

Check with your neighbors. Are different correct results possible? Explain.

2. In the diagrams below, points *A*, *B*, *C*, and *D* are called *boundary points* and points *E*, *F*, and *G* are called *interior points*.

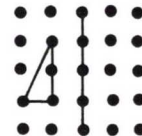


Construct the following figures on your geoboard and record each result on dot paper:

- a triangle with no interior points and four boundary points
- a triangle with one interior point and six boundary points
- a quadrilateral with one interior point and eight boundary points
- a square with four interior points (How many boundary points does it have?)
- a quadrilateral with two interior points and only two sides parallel

Check with your neighbors. Are different correct results possible? Explain.

- Construct a triangle on your geoboard. Do not show it to your neighbor but give her or him careful instructions on how to create your triangle on her or his geoboard. When finished, compare your triangle with your neighbor's. Are they congruent? If they are not congruent, explain why. Now reverse roles. Let your neighbor construct a quadrilateral on a geoboard (without showing it to you) and then give you instructions to construct the same quadrilateral on your geoboard. Compare results. Are they congruent? If they are not congruent, explain why.
- How many different-sized squares can you find on your geoboard? Record them on dot paper. (Hint: Be sure to turn your geoboard so that it looks like a diamond shape in order to find more different-sized squares.)
- Place one rubber band in a vertical position on your geoboard to divide it in half. On one side of the rubber band, construct a scalene right triangle. Think of the rubber band as a mirror, and ask your neighbor to construct a scalene right triangle on the geoboard on the other side of the rubber band so that the new triangle is a reflection of your triangle. Do you agree with your neighbor's construction? Record your triangle and its reflection on dot paper.
- Challenge: Can you construct an equilateral triangle on a geoboard that has its pegs arranged in a square grid pattern? Why or why not? (Check the length of the sides with a ruler.)



University-High School Liaison

Staff members of the Department of Mathematical Sciences at the University of Alberta will visit schools within easy driving distance of Edmonton to give talks about mathematics, our programs and related careers. We will also discuss first-year courses and bring along sample exams. If your school is farther away, contact us anyway to work out a mutually satisfactory arrangement.

Starting in September 1995, two new specialization programs leading to a B.Sc. will be offered by our department:

- Specialization in mathematics and finance
- Specialization in mathematics and statistics for actuarial science

The math/finance program has a quota of 15 students admitted annually and a total registration of 50. First-year entry is not allowed. Graduates will have the background to enter the financial industry and train as financial analysts.

The math/statistics program prepares students to write the seven compulsory exams and two of the elective exams leading to fulfillment of the requirement for associate Fellowship in the Society of Actuaries.

Courses in calculus, linear algebra, computing, statistics and economics form the core program. The Department also plans to introduce an internship where participating students would work for 16 months at a company after the successful completion of the first three years of their program.

For more information or if you would like to schedule a talk, contact Dr. H. H. Brungs, Department of Mathematical Sciences, University of Alberta, Edmonton T6G 2G1; phone 492-3974, fax 492-6826, e-mail mathdept@sirius.math.ualberta.ca. ▲

—H. H. Brungs

Request for Manuscripts

The Educational Materials Committee (EMC) is constantly seeking quality manuscripts to be considered for publication by the National Council of Teachers of Mathematics (NCTM). We know that many affiliate groups produce occasional works (for example, a monograph of ways to teach mathematics with calculators, a collection of assessment ideas) that might be appropriate for an audience outside one particular group.

Each manuscript submitted to NCTM for consideration is sent to about six reviewers for "blind review." The comments of those reviewers, along with copies of the manuscript, are then sent to the members of the EMC for examination. At each meeting (usually June and December), the EMC makes a collective decision on whether to accept (perhaps with revisions) each reviewed manuscript. The decision is then communicated to the person who submitted the manuscript. Once a manuscript has been accepted, the responsibility for production of the work is given to the NCTM staff in Reston.

The EMC sponsors a "mini-session" at each annual meeting to explain the details of publishing for NCTM. In April in Boston, the mini-session will be held Friday, April 7, from 3:00 to 4:30 p.m. (Session 626). We invite you to attend this session to listen to our presentation and to discuss how your group might publish its materials through NCTM. ▲

—George W. Bright
Chair, Educational Materials Committee

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Edmonton T6L 1K1 Fax 461-3994

Issues Director

Cindy Meagher Res. 539-1209
8018 103 Street Bus. 539-0950
Grande Prairie T8W 2A3

Mail Membership Application to:

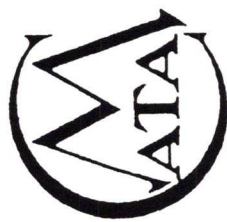
MATHEMATICS COUNCIL

The Alberta Teachers' Association

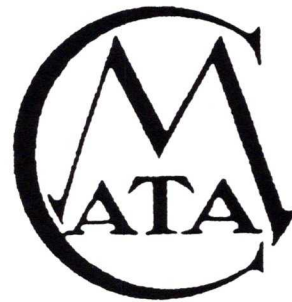
Barnett House

11010 - 142 Street

Edmonton, Alberta T5N 2R1



The
MATHEMATICS
COUNCIL



OF THE

ALBERTA TEACHERS'

ASSOCIATION

**The Mathematics
Council of
The Alberta Teachers'
Association**



offers you
these benefits:

Professional Activities


- Sponsors an annual conference
- Sponsors regional mini-conferences
- Publishes professional journals and newsletters
- Promotes in-services to improve mathematics education throughout the province
- Provides resource personnel and helps with program planning in cooperation with convention committees and other interest groups

Publications

- Delta-k** ... news articles and special features published five times a year. Provides an outlet for Alberta mathematics educators to exchange ideas.
- MCATA Monograph**... special edition of timely mathematical topics.

Membership

- REGULAR:** Members of the ATA as specified in ATA bylaws. All such members are entitled to full privilege of council membership including the rights to vote and hold office.
- STUDENT:** Student members of the ATA may join this council and are entitled to all benefits except the right to hold office.
- AFFILIATE:** Persons who are not ATA members as specified in ATA bylaws. Such members receive all benefits and services of council membership except the rights to vote and hold office.
- SUBSCRIPTION:** Institutions and businesses are eligible for subscription membership. Such members may receive all the benefits and services of council membership except the rights to vote and hold office.



MCATA is an affiliated group of the
National Council of Teachers of Mathematics
1906 Association Drive
Reston, Virginia, U.S.A. 22091

MEMBERSHIP APPLICATION
The Mathematics Council of The Alberta Teachers' Association

Name: _____

Address: _____ Postal Code: _____

Home Phone: _____ Business Phone: _____

School or Employer: _____

Grade level, Speciality: _____

Teaching Certificate Number: _____

Membership Fee Enclosed: Student \$5.00 Regular \$30.00 Affiliate \$35.00 Subscription \$40.00

Make cheque payable to: The Alberta Teachers' Association

Mathematics Council of The Alberta Teachers' Association

Outstanding Mathematics Educator Award

This award is conferred in recognition of outstanding contributions in the field of mathematics education and is presented to the recipient at the MCATA Annual Conference.

Selection Criteria

The nominee should

- have demonstrated commitment to improving student learning,
- have contributed to the professional development of teachers of mathematics,
- be creative and innovative, and
- have credibility within the mathematics education community.

Other areas that demonstrate excellence in mathematics education may be considered.

Eligibility

The nominee must be a member of MCATA.

Nomination Procedure

Nominations for the award may be forwarded to the selection committee. A complete nomination application includes

- information about nominee (see Part 1 on the reverse side),
- information about nominator (see Part 2 on the reverse side),
- two letters of support that reflect the above criteria.

For more information, contact Bob Hart, Chair
Outstanding Mathematics Educator Selection Committee
1503 Cavanaugh Place NW
Calgary, AB T2L 0M8
Phone 284-3729

Deadline for application: **June 30, 1995**

**Mathematics Council of
The Alberta Teachers' Association**

Outstanding Mathematics Educator Award

Nomination Form

Part 1

Nominee _____
Name _____
Home Address _____
City/Town _____ Postal Code _____
Phone Home _____ Business _____
Business address _____
City/Town _____ Postal Code _____
Signature of nominee _____ Date _____
MCATA membership number _____ Member since _____

Part 2

Nominator _____
Home address _____
City/Town _____ Postal Code _____
Phone Home _____ Business _____
Business address _____
City/Town _____ Postal Code _____
Signature of nominator _____ Date _____

Part 3

A minimum of two letters of support. (Please see reverse side for criteria, eligibility and nomination procedure.)

Please forward to Bob Hart, Chair
 Outstanding Mathematics Educator Selection Committee
 1503 Cavanaugh Place NW
 Calgary, AB T2L 0M8
 Phone 284-3729

Deadline for application: **June 30, 1995**

NCTM Membership Application

Type of Application (*Please select one*) New Membership Renewal (Membership # _____)

If you would like information on one of these membership options, please check:

Institution Retired Life

Personal Data/Information (*Please print and complete*)

Name (first/initial/last) _____

Home Address _____

City/Province/Postal Code _____

Work Phone () _____ Home Phone () _____

A. Type of Membership (*Please select one*)

Individual (\$45) Student (\$22.50)*

*Student membership is for anyone enrolled in an accredited college or university, who is a full-time student and has an interest in mathematics education.

B. Choice of Journal(s):

One subscription comes with NCTM membership; additional subscriptions are \$15 each for individuals, \$7.50 for students. (*Check one or more choices*)

- Teaching Children Mathematics*
(for pre-K and elementary grades; 9 issues)
- Mathematics Teaching in the Middle School*
(for middle grades; 4 issues)
- Mathematics Teacher*
(for secondary grades; 9 issues)
- Journal for Research in Mathematics*
(for all levels; 5 issues)

Method of Payment in U.S. Dollars

- Cheque/Money order
- MasterCard
- VISA

MC/VISA Account No. _____

Expires _____

Signature _____

Amount of Payment

A. Membership Dues \$ _____

B. Additional Journals \$ _____

Foreign Postage* \$ _____

Total in U.S. \$ _____

*For mailing outside the U.S.A., add \$8 for the first journal subscription and \$4 for each additional subscription. Canadians enter "U.S." after the amount on your personal cheques. Dues support the development, coordination and delivery of NCTM services.

Mail, call or fax your application to

NCTM
PO Box 25405
Richmond VA 23286-8161
Phone (703) 620-9840
Fax (703) 476-2970
Orders only (800) 235-7566

**PARENT-TEACHER
CONFERENCE**

About Mathematics Education

Saturday, March 18, 1995

Holy Trinity School
7007 - 28 Avenue
Edmonton

8:00 - 9:00 a.m.

Registration

(Pick up your nametag,
lunch ticket and program.)

8:00 a.m.-2:30 p.m.

Visit exhibits

9:00 a.m. - 2:30 p.m.

Continuous Sessions

11:00 a.m. - 1:00 p.m.

Staggered Lunches

Fee (includes morning coffee,
snacks, and lunch provided by the

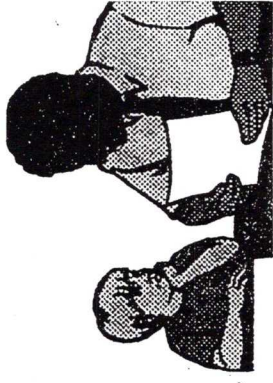
Olive Garden :

Mail-in by March 8, 1995:\$10.00

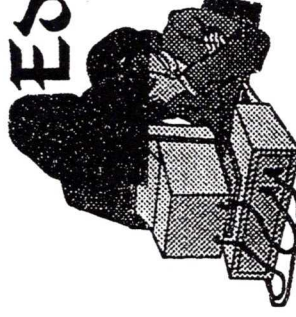
On-Site: \$15.00

**For more information, please call
489-0084.**

**PARENT -
TEACHER
CONFERENCE**



**About
Mathematics
Education**



Saturday March 18, 1995

Holy Trinity High School
7007 - 28 Avenue
Edmonton

For more information,
please call 489-0084.

Are these topics of interest to you?

- What's being taught in mathematics today?
- Can everyone learn mathematics?
- How important is homework in learning mathematics?
- How is mathematics being tested?
- How are calculators and computers used in mathematics?
- Are reading, writing and talking important in mathematics?
- How is mathematics related to other subject areas?
- Can mathematics be learned through games?
- What are some enrichment activities for mathematics?
- How can parents support their children and help them learn mathematics?
- What is hands-on learning?

Make a date to attend the

PARENT-TEACHER

CONFERENCE

About Mathematics Education

- Attend sessions presented by mathematics educators and parents.
- Participate in practical activities that focus on particular concepts or skills.
- Explore ways that parents, teachers and students can be partners in learning mathematics.
- Attend some sessions presented in French.
- Meet with parents and educators over coffee and share your concerns.
- Visit the exhibits of educational materials.
- Enjoy lunch provided by the **Olive Garden** (included with registration fee).

REGISTRATION FORM

Please complete this form and submit it with the \$10.00 fee no later than March 8, 1995. After March 8, register at the door (cost: \$15.00).

Name:

Address:

Please check one or more boxes:

- Parent
 Teacher
 Other _____

School Affiliation (if any):

Please make cheque payable to MCA T A (Mathematics Council of the Alberta Teachers' Association).

Please mail to: Florence Glanfield
8215 - 169 Street
Edmonton, AB
TSR 2W4