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# Mathematics Council NEWSLETTER

The Alberta Teachers' Association

APR 29 1992

Volume 10

Number 4

April 1992

## From the Editor

If you have not already done so, I encourage you to read Curriculum and Evaluation Standards for School Mathematics, published by NCTM.

The following article, taken from the January 1992 issue of The National Council of Supervisors of Mathematics Newsletter, challenges all mathematics teachers. What it says is as true for students in Alberta as it is for students in the United States. Mathematics is much more than learning basic facts. A comprehensive knowledge of mathematics can have a positive effect on nearly every aspect of our lives.

### Math Power

#### *"Shopkeeper Math" Not Enough* New Teaching Standards Released

To help students acquire math power--a key to success in an increasingly complex society--the National Council of Teachers of Mathematics (NCTM) has developed a new broad-reaching set of teaching standards.

"The nation's teachers of mathematics are gatekeepers to the future because proficiency in mathematics is the ticket to the future," says Iris Carl, president of the 85,000-member council. "Young people must learn more than yesterday's shopkeeper arithmetic if they're going to survive in today's world."

"The national goal of making American students first in the world of mathematics and science by the end of the century is commonly agreed to be a most difficult goal to achieve because American students currently rank so low in international comparisons," says Rep. William D. Ford, D-Mich., chair of the U.S. House Education and Labor Committee. "Thousands of teachers worked on this document for years, and it truly represents the profession's best views on upgrading the teaching of mathematics."

#### Math Power Is...

Math power, as defined in the Council's Professional Standards for Teaching Mathematics, should help students

- enjoy a range of career choices. More than 75 percent of all jobs require proficiency in simple algebra and geometry as a prerequisite for training or licensure;

- earn higher salaries;
- improve basic living standards by providing the ability to compare loans, calculate risks and understand rates of inflation and taxation;
- develop self-confidence; and
- maintain access to advanced study. Students who progress through a series of mathematics courses enjoy greater success than those who drop math study.

Two years ago, the NCTM introduced the precedent-setting Curriculum and Evaluation Standards for School Mathematics, which advocated bringing such important topics as data analysis, probability and statistics into the classroom; using technology as a learning tool; and shifting the focus of mathematics away from computation and toward problem solving.

Now the Council is promoting the implementation of 24 teaching standards that outline the support, training and evaluation required for good teaching. They include

- learning in cooperative groups, instead of only as individuals;
- using logic and mathematical evidence to verify results, instead of looking to the teacher as the sole authority for right answers;
- developing mathematical reasoning, instead of memorizing formulas;
- conjecturing, inventing and problem solving, instead of mechanistic answer-finding;
- connecting mathematics and its applications, instead of seeing mathematics as a body of isolated concepts and procedures.

The document is based on the premise that all students can develop the confidence, knowledge and techniques needed to use mathematics effectively. The Professional Standards also assumes that teachers are the key to changing the way mathematics is taught and learned, and that teachers must have long-term support and adequate resources. For more information, contact the National Council of Teachers of Mathematics, Dept. NU, 1906 Association Dr., Reston, VA 22091; phone (703) 620-9840.

## Mark Your Calendar!

- What** Math Fare  
1992 Math Conference
- Where** Medicine Hat--the greatest little city in the southeast
- When** November 5 to 7, 1992
- Why** To participate in super sessions, look over great displays, enjoy good food and exciting entertainment, and meet friends. Where else can you attend a Medieval Dinner Theatre for \$15?
- How** Fly, drive, hitchhike, walk or ride a mule. Just get there.

The conference committee members are working hard to put together a memorable conference, and they need you to make it a success. Mark November 5 to 7 on your calendar now! Watch for more details in future newsletters.

# From the President's Pen

Bob Hart

Positive changes have occurred in the mathematics curriculum recently, but many teachers and administrators are concerned with the speed of their implementation. To deal with these concerns, Donna Chansyk, Ken May, Jim Frew and I participated in a press conference at Barnett House in Edmonton on January 29. Thank-you to Fran Savage, Vicki Lyall and Gordon Thomas for their assistance. All Math Council members who teach high school math have since been notified to express their concerns in writing to Minister of Education Jim Dinning. I would appreciate receiving copies of your letters.

In January, 239 teachers and administrators attended a Resource Fair at the Viscount Bennett Centre in Calgary. Mini-conferences will be held in Edson on April 25 and in Calgary in May. Watch for registration information in your area. If you need help with inservice sessions, contact the executive.

Plan now to attend the annual conference in Medicine Hat on November 5 to 7, 1992. The planning committee is working hard to provide sessions for all divisions. The Friday afternoon program will focus on manipulative materials, and the sessions on Saturday will cover a vast array of topics and helpful classroom hints.

The publications editors are again requesting submissions of articles. If you or your colleagues have an excellent and unique classroom activity to share, write the ideas down and send them to the editors.

We must reach more mathematics teachers. Promote MCATA. Pass this newsletter around. Tell others of the exciting changes that are happening and how they also can benefit from being members in a specialist council, especially MCATA.

## The Best in You

Give to the world each day you live,  
One treasure only you can give,  
In anything you say or do,  
Give to the world the best of you.  
The greatest treasure that you owe,  
Is valueless to you alone,  
Yet... freely given... you will find,  
That it enriches all mankind.  
Scatter... each day you live... the  
Seeds of love and service that the world needs  
And in the measure that you sow  
In just that measure you will grow.  
There is no greater gift you can  
Bestow upon your fellow man than this.  
In all you say or do  
You give to him the best in you.

*Unknown*

# Conferences

In addition to the annual conference, the MCATA executive is planning several mini-conferences over the next several years. The mini-conferences for 1991-92 and 1992-93 will focus on communications.

## Spring 1992

### Edson

April 25, all grades

Contact Alvin Johnston at 723-5020 (bus.), 723-7242 (res.).

### Calgary

May 7, Divisions III and IV

Communications--The Student as Participant

May 14, Division I

Communications--Effective Learning

May 21, Division II

Communications--How Straight Are the Rows?

Contact Myra Hood at 294-6307.

### Grande Prairie

May 23, all grades

Contact Florence Glanfield at 427-2948.

## 1992-93

September 1992 - Fort McMurray

November 1992 - Medicine Hat

March 1993 - Red Deer

May 1993 - East Drumheller

## Future Themes

1993-94: Reflection--Congruent Beliefs and Practice

1994-95: Connections--The Whole Is Greater Than the Sum of Its Part

1995-96: Mathematics--A Meaningful Journey

Mini-conferences will be organized wherever the need and interest exist. To hold a mini-conference in your area, contact Myra Hood, 16 Hawkeswood Place NW, Calgary T3G 1X6; phone 294-6307 (bus.), 239-3012 (res.).

## Annual Conferences

1992 - Medicine Hat

1993 - Calgary

1994 - Edmonton, NCTM Regional

1995 - Lethbridge

# The Right Angle

## What Would Socrates Say?

Nola Aitken, Student Evaluation Branch

Socrates, in dialogue with Glaucon from "The Republic," Book III, Great Dialogues of Plato, pp. 213-14, said:

"We must examine who are the best guardians of their resolution that they must do whatever they think from time to time to be best for the city. They must be watched from childhood up; we must set them tests in which a man would be most likely to forget such a resolution or to be deceived, and we must choose the one who remembers well and is not easily deceived, and reject the rest. Do you agree?"

"Yes."

"Hard labor again, and suffering, and contests--in all these we must watch them in the same way." [performance-based assessment?]

"Quite right," he said.

"Now take the third kind of competitive test, bewitchment--here too we must try them and see what happens. You know how they bring colts among noises and tumults and see if they are timid; in the same way while the men are young we must bring them into situations of terror, and again change the scene to pleasures, and test them even more than gold in the fire."

Performance-based assessment is not new. It has been around in some form or another for at least a couple millennia. The Student Evaluation Branch has not overlooked the value of performance-based assessment, which has stood the test of time. Consequently, this June, the Student Evaluation Branch will be administering Grade 9 Mathematics Performance-Based Assessment activities to a provincial sample of students.

These activities were developed, field-tested and validated by teachers throughout Alberta in 1991. The purpose of the activities is to broaden the assessment from the paper-pencil test to a "hands-on assessment," an assessment that allows students to demonstrate their ability to use problem-solving skills in novel and real-world situations. Students will be given a choice of manipulatives to use on these open-ended activities, which allow for a variety of strategies and responses. In addition, the assessment will allow students to demonstrate their ability to communicate their knowledge and understanding in mathematics through writing, in the form of short and extended responses. Finally, a self-assessment response sheet will be included with each student activity booklet. The response sheet addresses the attitude component in the Alberta Junior High Teacher Resource Manual and the Program of Studies, and Standard 10, Mathematical Dispositions in the NCTM Curriculum and Evaluation Standards for School Mathematics.

A holistic scoring guide has been developed to evaluate student responses. A marking session will take place this July. Before the marking session, teachers will confirm the assessment criteria described in the scoring guide and will select exemplars of students' levels of performance. This information will allow us to report the number of students performing at each level.

Unlike the examinees' responses that most likely occurred in Socrates's time, today's students have responded positively to this form of assessment in our field tests. They have found performance-based assessment interesting and challenging, and commented that it was better to have their hands on the materials to solve problems rather than having to use their imagination. More than one student said, "You really learn something when you're tested this way."

The field tests have shown that performance-based assessment captures what students know and can do in a broader way, by assessing understanding and higher-level thinking in a hands-on problem-solving situation. In addition to current research and our findings, teachers and students also support this new direction. For more information, contact Nola Aitken at 427-0010 or Fax 422-4200.

### Reference

Warmington, E.H., and P.G. Rouse. Great Dialogues of Plato. Toronto: New English Library, 1956.

## History of MCATA

In 1993, the executive committee plans to publish a special issue of delta-K, commemorating MCATA's 32nd anniversary, in conjunction with the ATA's 75th anniversary celebration. If you have an interesting article, an anecdote, pictures and so on for this issue, please contact Art Jorgensen, newsletter editor. Also, encourage colleagues to contribute as well. We are going to need a lot of help to make this a memorable issue.

## Did You Know?

- \* Mathematics at Work in Alberta, a resource book for senior high school mathematics teachers, has been developed cooperatively by Alberta Education, TransAlta Utilities and numerous engineers. The book demonstrates, through the use of issues that occur in the workplace, applications of mathematics that span the senior high mathematics program. This document has been distributed to all Alberta high schools.
- \* The Statistics Teacher Network, a newsletter published three times a year by the American Statistical Association and the NCTM Joint Committee on the Curriculum in Statistics and Probability, contains information relevant to our high school program. To be put on the mailing list, contact Jahon Kinney, Editor, Statistics Teacher Network, Rose-Hulman Institute of Technology, 5500 Wabash Avenue, Terre Haute, IN 47803.
- \* NCTM's Curriculum and Evaluation Standards for School Mathematics and Professional Teaching Standards, available through the Learning Resources Distributing Centre (LRDC), are authorized resources for teachers in Alberta. Consult the LRDC catalog for ordering information.

If you have any questions, contact Florence Glanfield at 427-2948 or Fax 422-4200.

# What's New?

- \* The American Tapestry: Educating a Nation, a report released by the National Association of State Boards of Education (NASBE), suggests that school boards need to adopt policies that infuse multiculturalism into every aspect of school. Many states address the multicultural issue by addition and adjustment to the social studies curriculum only. To order, send \$7 to NASBE, 1012 Cameron St., Alexandria, VA 22314; ph. (703) 684-4000.
- \* What Work Requires of Schools, A SCANS Report for America 2000, published by the U.S. Department of Labor, concerns that part of education involving how schools prepare students for work. It identifies five competencies, which, in conjunction with a three-part foundation of skills and personal qualities, are important in job performance. For a free copy, contact the U.S. Department of Labor, Secretary's Commission of Achieving Necessary Skills, 200 Constitution Ave. NW, Washington, DC 20210; ph. (800) 788-SKILL.
- \* Perspectives on Early Childhood Education has been released by the National Education Association. The NCTM and other mathematics and education associations each contributed a chapter to this project, giving its perspective on early childhood education. To order, send \$19.95 to the NEA Professional Library, Box 509, West Haven, CT 06516; ph. (202) 822-7249.
- \* Help Your Child Learn Math, released by the Consumer Information Centre, U.S. Department of Education, Office of Educational Research and Improvement, is a leaflet that focuses on counting, estimating and measuring. It also gives guidance on how to correct mistakes, including dos and don'ts for building knowledge and confidence. The publication is designed for use with students in Grades 1 to 3. To order, send 50¢ payable to Superintendent of Documents, to R. Woods, Consumer Information Centre, Pueblo, CO 81009; Request 452X.
- \* A series of books has been published as the result of the Calculators and Mathematics Project, Los Angeles. Divided by grade level, the books contain lessons and assessment items that make use of calculators. The cost for books 1 to 3, which cover Grades K-6, is \$14.55 each. Book 4, which covers Grades 7-8, is \$21.95. For more details, write David Pagni, Department of Mathematics, CSU Fullerton, Fullerton, CA 92634; ph. (714) 773-2671.
- \* The National Association of Elementary School Principals (NAESP) and World Book Educational Products have released a videotape and booklet to show parents how to help their children succeed in school. "The Little Things Make a Big Difference" defines recommendations and gives commonsense suggestions. Cost: videotape, \$19.95; booklet, \$6.25. Special prices are available for NAESP members and National PTA members. Write NAESP Educational Products, 1615 Duke St., Alexandria, VA 22314; ph. (703) 684-3345, Fax (703) 548-6021.
- \* "Visions of Excellence," an 18-minute videotape, has been released by the National Board for Professional Teaching Standards. In the video, the board discusses its goals, involvement and vision of what national board-certified teachers will mean to the teaching profession and to American education. Cost: \$20. Special rates for bulk orders are available. To order, contact the National Board for Professional Teaching Standards, 300 River Pl., Suite 3600-V, Detroit, MI 482207; ph. (313) 259-0830, Fax (313) 259-0973.

# Outstanding Teachers!

It is time once again to nominate a fellow educator for the Outstanding Mathematics Educator Award. You likely know someone who is doing a superior job. A nomination form, along with the criteria, is attached to this newsletter.

## NCTM Helps with the Addenda Series

Shortly after the release of its Curriculum and Evaluation Standards for School Mathematics (CESSM), the NCTM began the Addenda Project. Its purpose is to create a series of books, the Addenda series, to aid in interpreting and implementing the CESSM. Although each book is designed to deal with a particular grade or topic, the four major CESSM themes of problem solving, reasoning, communication and connections are woven into each volume. In addition, "each volume stresses the implementation of technology as a tool and assessment as a means of guiding instruction."

"Central to the Addenda Project was the formation of three writing teams . . . to prepare a series of publications targeted at mathematics education in Grades K-6, 5-8 and 9-12." Consequently, a plan was set into action that includes 11 books for Grades K-6, 6 books for the middle grades, and 5 books for the secondary level.

Recently, four more books of this series have been published. The newest additions to the K-6 strand are the Fourth-Grade Book and the Fifth-Grade Book. Geometry in the Middle Grades falls into the Grades 5-8 strand, and A Core Curriculum: Making Mathematics Count for Everyone is geared to Grades 9-12.

The preface of the Fourth-Grade Book states that "you will find classic fourth-grade activities that have been infused with an investigative flavor." They include exploring angles with manipulatives and with the computer, investigating lines of symmetry using Logo, developing estimation strategies, and conducting experiments that involve collecting, organizing and interpreting data. Margin notes with supporting statements from the CESSM give additional information on the activities, and connections are made to other subject areas. Specific topics within the notes include self-confidence, evaluation and grouping.

The Fifth-Grade Book has a similar format but different content. Included in this volume are the investigation of tessellations and similarity with manipulatives and with the computer, interpretation of data, study of the concept of randomness, foundation for algebra, patterns, and measurement and estimation. Also found in this book are connections to history and the study of other cultures through the use of patterns, as well as a variety of problems and questions to explore.

Geometry in the Middle Grades provides teachers with ideas and materials to support the implementation of the CESSM. Integration of the four central themes of the Standards is stressed in the ideas, examples, illustrations and activities throughout this book, as is the use of computer technology. In some activities students are encouraged to speak, hear, read and write mathematics.



Moreover, they are taught to formulate, reason through and solve their own math problems. Many of the activities focus on the van Hiele model of thinking. Other activities encourage students to observe the connections among branches of mathematics.

The purpose of A Core Curriculum: Making Mathematics Count for Everyone "is to provide ideas and materials that will support the implementation of a core curriculum in local settings. It addresses in a very practical way the content, pedagogy and pupil assessment dimensions of reshaping school mathematics to this end." This 152-page volume offers several models for organizing mathematics content as recommended by the CESSM. The "Teaching Matters" feature of A Core Curriculum: Making Mathematics Count for Everyone gives teachers good ideas on how to make mathematics an activity and process rather than a product, and it shows them how to become catalysts and facilitators rather than the traditional authority figures and dispensers of information. Another feature is "Assessment Matters," which provides suggestions for assessment techniques focusing on students' problem solving, reasoning and disposition toward mathematics as well as on their understanding of content.

Currently available are Kindergarten Book, First-Grade Book, Third-Grade Book, Fourth-Grade Book, Fifth-Grade Book, Dealing with Data and Chance, Developing Number Sense in the Middle Grades, Geometry in the Middle Grades, Patterns and Functions, Connecting Mathematics, A Core Curriculum: Making Mathematics Count for Everyone and Geometry from Multiple Perspectives. Watch for other Addenda books in the future. Prices range from \$9 to \$17 each, and when complete, the series will consist of 22 volumes. Remember, change is a process, not an event, and the Addenda series is available to help you along the way.

## Assessment Book Arrives!

The NCTM dealt with the assessment issue in the Curriculum and Evaluation Standards for School Mathematics (1989). Assessment is a process by which educators evaluate their students' understanding. Using the results, teachers may reevaluate their teaching methods.

The long-awaited NCTM publication Assessment: Myths, Models, Good Questions, and Practical Suggestions expounds on the issues addressed in the 14 evaluation standards and eliminates much of the uncertainty involved in adopting new assessment techniques. Beginning by stating current practices and some needed changes in mathematics education, an alternative assessment plan is suggested. The second chapter discusses performance assessment, including criteria for performance tasks, development of an assessment task, projects and investigation, open-ended questions and more.

Also included is a chapter documenting observations, interviews, conferences and questions from the classroom. Another chapter is devoted to mathematics portfolios and provides information concerning implementation of models of assessment such as grading, homework, student participation and student self-assessment. The book costs \$8.50 and can be purchased through the NCTM. Call toll free 1-800-235-7566, orders only.

# 100,000 or Bust!

NCTM currently has a membership of over 95,000 and is striving to reach 100,000 by the end of 1992. To help reach this goal, we encourage you to become a member.

- \* Members receive at least one excellent mathematics journal a year, as well as reduced rates to numerous superior mathematics publications.
- \* NCTM helps organize regional conferences in Alberta. The next one will be held in Edmonton in 1994.
- \* The annual NCTM conference is likely the largest mathematics conference in the world. The 1993 conference will be held in Seattle, which is quite close to home.

To join NCTM, complete the membership form below and mail to the National Council of Teachers of Mathematics, 1906 Association Drive, Reston, VA 22091.

Yes, I'd like to join the National Council of Teachers of Mathematics. I understand that annual dues include all membership services, and the journal(s) I have checked below:

- ARITHMETIC TEACHER (AT) — \$40
- MATHEMATICS TEACHER (MT) — \$40
- JOURNAL FOR RESEARCH IN MATHEMATICS EDUCATION (JRME) — \$45

#### Periodical Combinations

(Individuals only; select one option)

- AT & MT: \$55       AT & JRME: \$60
- MT & JRME: \$60       AT, MT & JRME: \$75

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; add \$1.50 for JRME. Canadians enter "U.S." after the amount on your personal checks. Dues support the development, coordination and delivery of Council services for one year, including \$15 for each subscription to the AT and MT, \$20 for the JRME, and \$3 for an NCTM NEWS BULLETIN subscription, which includes STUDENT MATH NOTES.

#### SPECIAL PUBLICATIONS

**1992 YEARBOOK: THE IMPACT OF CALCULATORS ON SCHOOL MATHEMATICS** (Spring '92 delivery)

- Individual Members \$14.40;  Others \$18.00
- CURRICULUM AND EVALUATION STANDARDS FOR SCHOOL MATHEMATICS
- PROFESSIONAL STANDARDS FOR TEACHING MATHEMATICS

Individual Members  \$20.00 each;  \$34.00 both  
Others  \$25.00 each;  \$42.50 both

#### Payments to NCTM in

U.S. funds enclosed \$ \_\_\_\_\_

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**MAGNIFY YOUR SUCCESS**

## Catch on to Math 31

**CATCH**  
THIRTY ONE

**CATCH 31**, a 16-part ACCESS NETWORK series, can help Math 31 students grasp the more difficult concepts within the curriculum. Distance learners and students requiring additional insight into the key concepts of Math 31 will find this series a

valuable complement to their course/work.

**CATCH 31** will be rebroadcast this season Mondays at 3:00 p.m. February 10 to May 25 on ACCESS NETWORK.

Order numbers and program titles are as follows:

**BPN 3105-**

- 01 Introducing: Calculus and Vectors
- 02 The Derivative by First Principles and the Power Rule
- 03 The Chain Rule
- 04 The Product and Quotient Rule
- 05 Problems and Graph Sketching
- 06 Maxima and Minima
- 07 Motion: Distance, Velocity and Acceleration

- 08 Derivatives and Relations
- 09 Related Rates
- 10 Integration
- 11 Areas Under or Between Curves
- 12 Vectors
- 13 Geometric Vectors
- 14 Algebraic Vectors
- 15 Dot Product and Projections
- 16 Resolution of Vectors

To order **Catch 31**, contact the Dub Centre/MRC Order Desk in Calgary. **Catch 31** is closed-captioned. Teachers' Guide available. Package price: \$153.00.

**CATCH 30: Mathematics** is designed to help both classroom and distance-learning students understand the difficult concepts

**CATCH 30**  
MATHEMATICS

of Math 30. A variety of styles and approaches to mathematical problem-solving are used to enhance student learning. The series uses the instructional strategies of simple to complex and concrete to abstract. The concepts are presented in a conventional classroom style and reinforced through the use of sophisticated video graphics. The programs also present real-life applications and problems to illustrate and utilize mathematical concepts. Each lesson is then reviewed to reinforce the skills and concepts covered.

Each half-hour program targets a specific aspect of the curriculum and functions independently from other programs in the series.

**BPN 3262-**

- 01 Polynomial Functions
- 02 Exponential and Logarithmic Functions
- 03 Arithmetic Sequences and Series
- 04 Geometric Sequences and Series
- 05 Permutations and Combinations
- 06 Statistics

**CATCH 30** will be broadcast on ACCESS NETWORK television Wednesdays at 11:30 a.m., March 25 to April 29.

Contact the Dub Centre/MRC Order Desk in Calgary for information about **CATCH 30**. The series comes with a Teachers' Guide, is closed-captioned, and will be available in French within the next year. Package price: \$59.50.

The 14-part ACCESS NETWORK series **Math Sense** is now complete. This series of educational mathematics video programs has been designed as an aid to instruction for Grades 10, 11 and 12. Content is primarily structured around

## Math Sense Adds New Programs

the Alberta Math 20/33 curriculum. These programs focus on the more difficult concepts being taught in mathematics, to assist in developing the student's conceptual understanding.

Programs one through six deal with the concepts of relations, functions, and the transformations of functions, as they may be applied to everyday life.

**BPN 3023**

- 01 Introduction to Relations
- 02 Introduction to Functions
- 03 Vertical Translation of Functions
- 04 Horizontal Translation of Functions
- 05 Dilatations and Reflection of Functions
- 06 Transformation of Functions: Changing All Parameters

Programs seven through ten examine quadratic functions and their characteristics.

**BPN 3023**

- 07 Quadratic Functions: Characteristics of Quadratic Functions
- 08 Quadratic Functions: The Quadratic Formula
- 09 Quadratics: Graphing Quadratic Functions Using Transformations
- 10 Quadratic Functions: Applications to Problems

The four newly completed programs focus on Geometry, specifically the Circle.

**BPN 3023**

- 11 Geometry: An Introduction
- 12 Geometry: The Circle
- 13 Geometry: Chords on Circles
- 14 Geometry: Tangents to Circles

To order **Math Sense** contact the Dub Centre/MRC Order Desk in Calgary. **Math Sense** is soon to be closed-captioned.

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

Nominations of candidates for the following offices for the 1992-93 school year are now being accepted:

President	Secretary
Vice-President	Treasurer

If you wish to nominate a candidate, please complete the form below and mail it, by May 9, 1992, to Marie Hauk, 315 Dechene Road, Edmonton T6M 1W3.

If an election is necessary, it will be conducted by mail. Ballots will be sent to all members on or about May 25, 1992.

Ensure an active council by nominating people who will take an active part in making the Mathematics Council a benefit to all mathematics teachers.

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**Nomination Form**

We, the undersigned members of the MCATA, nominate \_\_\_\_\_  
(name)

of \_\_\_\_\_  
(address)

as a candidate for the office of \_\_\_\_\_ in the MCATA for the year 1992-93.

Signature and address of two nominators:

Name \_\_\_\_\_ Address \_\_\_\_\_

Name \_\_\_\_\_ Address \_\_\_\_\_

(Please include a brief resume of the nominee's qualifications for the position on the reverse side of this form.)

I accept this nomination. \_\_\_\_\_  
(signature of nominee)

Mathematics Council  
of The Alberta Teachers' Association

# Outstanding Mathematics Educator Award

## Nomination Form

**Part 1:**    **Nominee:** \_\_\_\_\_  
Name: \_\_\_\_\_  
Home Address: \_\_\_\_\_  
City/Town: \_\_\_\_\_      Postal Code: \_\_\_\_\_  
Home Phone Number: \_\_\_\_\_  
Business Address: \_\_\_\_\_  
City/Town: \_\_\_\_\_      Postal Code: \_\_\_\_\_

**Part 2:**    **Nominator:** \_\_\_\_\_  
Name: \_\_\_\_\_  
Home Address: \_\_\_\_\_  
City/Town: \_\_\_\_\_      Postal Code: \_\_\_\_\_  
Home Phone Number: \_\_\_\_\_  
Business Address: \_\_\_\_\_  
City/Town: \_\_\_\_\_      Postal Code: \_\_\_\_\_  
Business Phone Number: \_\_\_\_\_

**Part 3:**    Letter of support written by nominator.

**Part 4:**    Letter of support written by a MCATA member.

**Part 5:**    Signature of nominator: \_\_\_\_\_

Date: \_\_\_\_\_

(Please see reverse side for criteria, eligibility and nomination procedure.)

Please forward the above information to:    Marie Hauk, Chair  
Outstanding Mathematics Educator Selection Committee  
315 Dechene Road  
Edmonton, Alberta, T6M 1W3  
Phone: 487-8841

Deadline for application:      **June 30, 1992**

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.

## Criteria for Selection

The nominee should:

- have demonstrated commitment to improving student learning
- have contributed to the professional development of teachers of mathematics
- be creative and innovative
- 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 by an individual member or group of members of MCATA.

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:  
One written by the nominator  
One written by a MCATA member
- Signature of nominator and date of application.

For more information, please contact:

Marie Hauk, Chair  
Outstanding Mathematics Educator Selection Committee  
315 Dechene Road  
Edmonton, Alberta, T6M 1W3  
Phone: 487-8841