



Mathematics Council NEWSLETTER

The Alberta Teachers' Association

Providing leadership to encourage the continuing enhancement of teaching, learning and understanding mathematics.

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From the Editor

This is a year of evaluation and experimentation for the publication arm of MCATA. After you peruse this issue, please send us your comments. Suggestions for improvement are welcome. ♣

—Cynthia Ballheim

Past President's Address

It was a pleasure for me to serve as MCATA president. Our council continues to work for members through activities—an annual conference, four executive meetings annually, publications (newsletter, *delta-K*, monographs, website, position papers), the Mathematics Leader's Symposium, promotions and contests, NCTM affiliation, support of math camps and other special projects, attendance at ATA Summer Conference and ATA seminars and representation on Alberta Learning committees, recognition of teachers through the Outstanding Mathematics Educator of the Year Award, recognition of Friends of MCATA, and provision of grants to support teaching and learning projects.

The past years were rewarding ones. Successful Jasper and Red Deer conferences proved the effectiveness of our new conference planning model.

My thanks to executive members Sandra Unrau, Elaine Manzer, Graham Keogh, Lorraine Tayler, Klaus Puhlmann, Donna Chanasyk, Doug Weisbeck, Art Jorgensen, George Ditto, Dick Pawloff, Rick Johnson, Dale Burnett, Carol Hendersen, Norbert Sauer, Daryl Chichak and Dave Jeary. I enjoyed working with teachers so willing and so eager to provide mathematical leadership in our province.

MCATA's history is rich, its tradition long and its future leadership open. I am confident that under Sandra's leadership our growth will be exponential.

Thank you, MCATA, for two wonderful years. ♣

—Cynthia Ballheim

President's Message

Just before Christmas, high school teachers on the executive gathered to discuss the high school math courses. After listening to teachers, parents and students, executive members decided that MCATA would write to Minister of Learning Lyle Oberg. The text of the resulting letter appears on page 2 of this issue of the newsletter.

It is important that you continue to let the executive know your concerns and issues about mathematics in the province.

Don't let anyone tell you that standardized tests are not accurate measures. The truth of the matter is that they offer a remarkably precise method for gauging the size of the houses near the school where the test was administered.

—Alfie Kohn

The ATA held an invitational symposium on high stakes testing February 2–3 with keynote speaker Alfie Kohn. The public session Friday evening was well attended. Previous past president George Ditto was there and he was as enthusiastic as ever. Saturday, Alfie spoke to the ATA representatives, and we discussed the issues around the Alberta Learning testing program. We then proposed some possible action for the ATA to take regarding the issues. If you want more information about high stakes testing, check Alfie's website at www.alfiekohn.org.

NCTM's World's Largest Math Event (WLME) celebrates mathematics and mathematics teaching and is the highlight event of Mathematics Education Month (April). Begun in 1995 in celebration of NCTM's 75th anniversary, WLME has grown into an annual event with participation estimated at 1 million students. Visit the NCTM website at www.NCTM.org for more information. Once you're at the main site, go to conferences and events.

Make a difference! ♣

—Sandra Unrau

Conference Future!

"2001: A Math Odyssey," October 26–28, 2001
Fantasyland Hotel, West Edmonton Mall

Come out and join us for another great math conference. Bring along your family to enjoy the mall while you're networking with colleagues.

We have two great keynote speakers:

- ★ Jere Confrey, professor of mathematics education at the University of Texas and director of Systemic Research Centre for Education in Mathematics, Science and Technology, will speak about technology in math teaching in a keynote session and about multiplicative reasoning in a conference session.
- ★ David McKillop is a mathematics evaluation consultant with the Testing and Evaluation Branch of the Government of Nova Scotia. Those who heard him last summer in Halifax say we are in for a treat!

The conference kicks off with a wine-and-cheese reception Thursday evening, October 25. Friday, the display room will be open and 10 sessions will be held 9 a.m.–4 p.m. Lunch comes with a keynote speaker and the MCATA general meeting will take place 4:15–5 p.m. Saturday starts with a buffet breakfast and keynote address, continues with sessions and then closes with the final keynote presentation at 2 p.m. For information and speaker's forms, see our website at www.mathteachers.ab.ca ◀

Bursaries

Are you involved in postgraduate work or planning to take specific courses to improve your teaching skills? The ATA Educational Trust could provide a bursary. Application deadline is May 1, 2001. For more information, go to the ATA website at www.teachers.ab.ca, click on services, then grants and awards, then educational trust. ◀

MCATA Grants

Grants are available for mathematics education initiatives that support current learning and teaching practices and/or current priorities as outlined by or through Alberta Education, school districts, MCATA, NCTM, ATA or other reputable education associations. Deadlines are May 1 and December 1 annually. For full details, see our website at www.mathteachers.ab.ca. Send grant submissions to Graham Keogh at gjkeogh@telusplanet.net. ◀

December 9, 2000
Dr. Lyle Oberg
Minister of Learning
Legislature Building
Edmonton AB T5K 2B6

Dear Dr. Oberg

I am writing this letter on behalf of the members of the Mathematics Council of the Alberta Teachers' Association. It has come to the council's attention that there is a high level of confusion about the acceptance of the applied mathematics course by postsecondary institutions.

The applied math teachers who are currently teaching this course recognize this course as beneficial for these learners. They would like the postsecondary institutions to recognize the value of this course and allow it to stand as an accepted course, to give university entrance for these students.

Since the introduction of the senior high applied mathematics program, its postsecondary acceptance has been uncertain. Students who started out three years ago were told that this course would be an accepted course for university entrance in non-math-based areas. At the present time we can no longer say this is true. Yet it was designed, not as a replacement for Math 33, but as a course for postsecondary route students.

Very soon another semester will be done. Students will need to make course decisions to ensure university acceptance. For some this decision will be clear but for those students in the applied math route, the decision is not clear at all. With postsecondary institutions becoming less willing to accept applied math courses for admission across a range of programs, it is a frustrating and confusing situation for students and for the parents and teachers who advise them.

This issue needs to be addressed in a timely manner to ensure that postsecondary opportunities available to students are not further compromised. Students, teachers and parents are looking to Alberta Learning for leadership and action on this matter. The Mathematics Council hopes that you will be able to resolve this issue and provide some direction in a timely matter. Suitable solutions and/or answers are imperative for our students as they continue through our high schools and on to post secondary institutions.

Thank you in advance for your immediate attention to this matter.

Sincerely
Sandra Unrau
President
Mathematics Council of the Alberta Teachers' Association

Spinning Mathematics' Web

Requests for good Internet sites often come from parents. With thousands of sites related to mathematics, identifying good sites can be hard. Many math sites follow or promote antiquated ideas of mathematics that research has shown to be ineffective in promoting students' understanding of mathematical concepts. The sites highlighted in this article support the outcomes and philosophy of the Alberta Program of Studies for Mathematics.

Sites for Students

- Cynthia Lanius (Rice University, Houston)
<http://math.rice.edu/~lanius/Lessons>
Cynthia Lanius is the executive director of the Centre for Excellence and Equity in Education. This site allows K–12 students to interact with and explore topics such as counting, fractions, infinite series, fractals, calculus and data analysis.
- Multiplication: An Adventure in Number Sense
<http://naturalmath.com/mult/index.html>
Each page on this site consists of a dialog between a student and a mentor. The focus of the site is helping students uncover useful algebraic patterns in multiplication. The site is suitable for Grades 4–9 students.

Sites for Teachers

- Mathematics Information Servers (Penn State University)
<http://www.math.psu.edu:80/MathLists/Contests.html>
This page provides links to various mathematics web servers and sites around the world. You can connect to mathematics departments all over the globe and find links to mathematical societies and associations, institutes and centres, mathematical journals and other archived material. This is a great place to start your math web surfing.
- Bamdad's Math Comics Page
<http://www.csun.edu:80/~hcmth014/Comics.html>
This site is a collection of math-related comics intended for your own enjoyment or educational use. You can see math through the eyes of famous cartoon characters. ♣

—Elizabeth Donovan

The Last Three!

The October 2000 issue introduced four new executive members. Here are three more.

Indy Lagu

Indy Lagu received his Ph.D. in mathematics from the University of Calgary in 1996 and has been at Mount Royal College in Calgary since. He is also education coordinator for the Calgary site of the Pacific Institute for the Mathematical Sciences.

Evelyn Sawicki

I have served Calgary RCSS District No. 1 as a classroom teacher, mathematics consultant and now mathematics supervisor (K–12). I have taught K–9 and Education Plus (the district's program for gifted and talented students), as well as mathematics methodology courses for the Faculty of Education, University of Calgary (summer sessional instructor).

Len Bonifacio

I have taught for Edmonton Catholic Schools for 25 years, including a secondment term at Alberta Learning as a Math 30 examiner. I am now at Holy Trinity High School as math/sciences coordinator. ♣

Math Books Need Review

Irving Publishing invites math teachers at all levels to review math resources (primarily books). Short reviews would then appear in *delta-K* describing each work's usefulness for teaching, enrichment, remediation or as a general/specific reference for teachers or students. Reviews are not to be commercial ads to promote sales. Contact Klaus Puhlmann, PO Box 6482, Edson T7E 1T9; fax (780) 723-2414, e-mail klaupuhl@gyrd.ab.ca. ♣

Books, Books, Books

The Number Devil: A Mathematical Adventure by Hans Magnus Enzensberger
The Playful World by Mark Pesce
The Language of Mathematics by Keith Devlin
The Last Samurai by Helen Dewitt
Playing the Future by Douglas Rushkoff

Visit your local bookstore, talk to friends or use the Internet (particularly search engines) to obtain further information about these interesting books. ♣

—Dale Burnett

Out and Around with MCATA

Family Math Night in Calgary

At Sunnyside Community School in Calgary, we had a great evening of mathematical thinking and pizza. For the second year, we successfully had families come out to enjoy a math activity together. Indy Lagu and his fellow mathematicians helped everyone through an activity that used Pascal's triangle to generate a pattern of odd and even numbers. As the odd numbers were colored, a beautiful, lacey triangle design appeared. The students (and some parents) took the activity home and then returned the triangles so that they could be placed together to make the design grow into a wall-sized piece of art. It really is something to see. The 100 participants aged five to adult worked together to understand and then construct this math-art form. The evening was sponsored by Mount Royal College and the Pacific Institute of Mathematical Sciences, with some MCATA representation.

TERM Meetings in Edmonton

The "Teachers of Mathematics in the Edmonton Region" (TERM) will meet again May 7 and June 4. These meetings are at 5 p.m. in Room 177 at Paul Kane High School in St. Albert. The "cost" is 30 copies of an exam/quiz/worksheet/handout for the new implemented curriculum. For more information, contact Donna Chanasyk at donnajc@connect.ab.ca. Thirty-four teachers from 23 schools attended the September 24 meeting.

Pure and Applied Math 30 Projects

MCATA will award \$50 prizes to the two best Pure Math 30 projects and the best Applied Math 30 project from Semester 1. The prizes will be awarded to the students, and their work will be published in a future issue of *delta-K*.

Send project submissions to Cynthia Ballheim, 612 Lake Bonavista Drive SE, Calgary T2J 0M5. Deadline: May 1. Submissions *must* include a letter granting MCATA permission to publish the student's name and the name and location of the school in its journal, newsletter or other official publications, as well as the full address of the school and the student's signature and a parent's signature (if the student is younger than 18).

Teachers Wanted in Las Vegas

The 2002 annual meeting of the NCTM will be in Las Vegas, Nevada, Sunday, April 21, to Wednesday, April 24. The major venues will be the Venetian, the Sands Expo Centre, and Harrah's.

The theme for the 2002 annual meeting is "Realizing the Vision of School Mathematics." The vision is explained in *Principles and Standards for School Mathematics* (released in April). ▲

Math Contest Results

The Mathematics Council supports three mathematics contests in Alberta: the Edmonton Junior High Math Contest, the Calgary Junior High Math Contest and the Alberta High School Mathematics Competition.

The Alberta High School Mathematics Competition is open to students in Alberta and the Northwest Territories. The prizes are books and scholarships, ranging in value from about \$50 for some Part I prizes to \$1,500 for the major Part II prize. The top three prize winners automatically qualify for the Canadian Math Olympiad. For the 44th competition in 1999–2000, first place overall went to Old Scona Academic High School, Edmonton; second to Western Canada High School, Calgary; and third to Sir Winston Churchill High School, Calgary. The first part of the 1999–2000 competition was written by 1,057 students from 50 schools. Forty-one schools entered a team of at least 3 students. Special thanks to Ted Lewis and Andy Liu from the University of Alberta for administering the competition.

The Calgary Junior Math Contest is held every spring. The 90-minute exam is primarily for Grade 9 students; however, all junior high students attending Calgary and surrounding districts are eligible. Thanks to Robert Woodrow from the University of Calgary for administering this contest.

Held in early May, the Edmonton Junior High Math Contest is open to all Grade 9 students attending Edmonton Public and Edmonton Catholic schools. Increasing numbers of Grades 7–8 students are successfully participating in the 90-minute contest. The 2000 contest was the 24th annual and 673 students took part from 31 schools. In the school category, Parkview School was first; Grandview Heights School, second; and Vernon Barford School, third. Thanks to Andy Liu for creating the questions and to Darrell Sushynski for chairing the contest. ▲