

# Intersection Points

The Newsletter of the Research Council on Mathematics Learning

IMPORTANT! ✦ BALLOT on Page 7 -- due Dec. 31st

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The Research Council on Mathematics Learning seeks to stimulate, generate, coordinate, and disseminate research efforts designed to understand and/or influence factors that affect mathematics learning.

Visit us on the Web at: [www.unlv.edu/RCML](http://www.unlv.edu/RCML)

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## PRESIDENT'S COLUMN

# A Call to ARMS✦

Patricia Jordan, President

Recently, as part of my requirements as a professor in the College of Education and as a certified teacher in mathematics and English, I observed a high school English teacher as she taught her class. The activity she presented was predicated on the State's celebration of its 100th year of statehood. Unfortunately, the students were at a loss to carry out the activity because she had failed to provide the experiences they needed to be successful in completing their task. Half of the class was to write about their experiences in 1907 and the other half about their experiences in 2007. Then the two groups would compare and discuss their "lives."

This event occurred about the same time the latest NAEP results were being reported by the press and many of the conservative radio talk-show hosts were deriding the effects of "government schools" on the education of our youth. While I don't support much of what most of these talk-show hosts espouse regarding public education, I do believe that it is time we become involved in this educational process. Many of us are involved in mathematics learning research projects with pre-service candidates, in-service teachers, and within the classrooms in both the public and private K-12 venues. Many of us are parents, or grandparents, of students in the K-12 setting.

The time is right for each one of us to become politically active and involved as well. Who better to assist students, teachers, and school districts than those of us who have a keen understanding of how children and adults best learn mathematics. We must become actively involved in our local school districts in ways beyond the interest of research. How many of you serve on local school boards or school leadership teams? How many of you serve on state and local textbook adoption committees? How many of you serve on local school advisory boards? How many of you serve on the state regulatory councils for testing and teacher certification? "Ah," you say, "I just don't have time for that," or "Why should I get involved? I have enough politics at work." It is imperative that the future of all students should be in our hands, not in the hands of those who think that effective learning of mathematics is based on an acquisition of isolated facts that meet state or national testing objectives and improve test scores. We must begin attending local school meetings. What happens in these local schools will eventually effect who we will eventually encounter at the university level.

We must carry our political awareness into the elections at local, state, and national levels. As we have seen the funding to granting agencies for the improvement of mathematics learning slowly diminish over the last several years, who we elect is critical! Congress sets allocations to the National Science Foundation, National Research Council, and many other agencies that fund our research. The importance of becoming politically active and well informed regarding political issues is greater than it ever has been. We must step up our research activity within the K-12 schools. The results of our research must be the foundation for critical school decisions. We must encourage funding of grants to enhance the learning of mathematics by all students. We

must be the ones who assist in making the decisions regarding the learning of mathematics in the K-12 setting.

The future is now and we are the instruments of our own fate! Our active participation in the political process and decision-making is critical for the futures of all our students.

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\*Accelerated Research in Mathematics learning in Schools

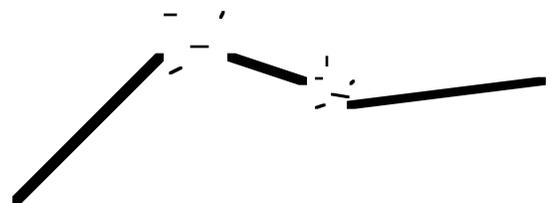
## Points of Puzzlement

by Michael Naylor

Here's a puzzle posed to me on a recent trip to Norway, one with which I had a lot of fun coming up with multiple solution methods. Send your solution to [mnaylor@cc.wvu.edu](mailto:mnaylor@cc.wvu.edu). Correct solutions receive a year's supply of intrinsic rewards. Enjoy!

### THAT'S THE BREAKS

A stick is broken in two random places. What is the probability that the three pieces can form a triangle?



# For the Joy of It

David Boliver

Last June 30, I drew my full-time teaching career to a close, retiring for a second time. It included 43 years of classroom teaching, with 40 of them at the collegiate level. Those years included far more than I can or should detail here, but foremost among my recollections are moments of joy.

Initially that joy came from problem-solving experiences in difficult courses and the mind-liberating effects of truly general concepts. Who could resist such conceits as the infinite hotel? [For those unfamiliar, the infinite hotel was said to contain infinitely many rooms with positive integer numbers on the door. When it was full and five new guests arrived, all those already there were instructed to move to a room whose number was five larger and the new arrivals were then placed in rooms 1 to 5. When it was full and an infinite number of guests arrived, those already there were instructed to move to a room whose number was twice as large and the new arrivals were then placed in the odd numbered rooms which were now vacant. There are many more examples.] Who could resist Tom Banchoff's website with animated 4-dimensional geometric objects?

After I discovered while still an undergraduate that I was probably meant to teach mathematics, the motivation quickly became to share the joy of acts of solution and discovery of concepts with others who had not yet experienced it. I soon learned that seeing others become involved in such experiences was also a source of joy for the instructor. One memorable day about 35 years ago, I watched a class of college Freshmen take a major examination which involved challenging problems. The best student in this class was a very conservative and conscientious young woman and I happened to look her way as she struggled with what she told me later was the only question on the exam which she had yet to see through. Her youthful face was screwed up into a grimace of perplexity and her frustration caused her to wave a clenched fist which did not quite pound the table top in the silent room. Suddenly her countenance completely changed to one of joy as she somehow leaped about 6 inches straight up without ever fully standing and shouted "I've got it." Her classmates were quite startled and she blushed as she apologized for disturbing them, but it was abundantly clear that she had indeed found what I had hoped for all of my students.

As I began to focus on such experiences for students, it was obvious that one excellent way to know this joy was to communicate with others who had similar goals for their students, profiting from their perspectives and teaching research experiences. This has led me to find joy in several professional organizations. While RCML is far from the only such organization, it has been a major influence for joy in my professional life.

Through attending RCML conferences scattered throughout 33 years of my career, I have learned much about the contexts in which others teach and the learning experiences of students within those contexts, gained valued insights from distinguished mathematics educators as keynote speakers, and greatly enjoyed the outsider viewpoints of Wilson lecturers. The Wilson lecturers are usually not mathematics teachers per se, but have interesting and relevant scholarly views of what we do. Even more than the items on the printed program for an RCML Conference, the general attitude of openness and sharing of good ideas at these conferences has been truly refreshing.

This enjoyment led naturally to wishing to host RCML conferences and the upcoming 2008 conference marks the third time I have done this in partnership with several distinguished mathematics educators. We have an outstanding keynote speaker on mathematics and special education in the person of Anne Reynolds and an exceptional Wilson lecturer in Alan Jones, a former secondary mathematics teacher who has been a problem solver for many years for the Federal Aviation Administration and is really good at encouraging us to teach problem-solving to our students. Besides these headliners, there are the usual mathematics educators making presentations and informally sharing their insights. Many of them are among my dearest friends and they can be yours as well. Come for the joy of it!

David E. Boliver, VP for Conferences of RCML and Professor Emeritus of Mathematics and Statistics at both The College of New Jersey and University of Central Oklahoma.

NOTE: To see the registration form including separate lodging information, click on <http://www.unlv.edu/RCML/> and follow the links. Look for a follow-up message concerning available special event(s) on Friday evening, March 7.

## Treasurer's Report

Dixie Methany

As of 10/31/07, the RCML account balances indicate that we are strong financially. We have been able to support the publication of our journal and continue to seek ways to support member services. Since membership renewals are coming in and conference registrations will soon start, the balances will soon increase. In the past because we have made sound financial decisions, we have been able to supplement the costs of the annual conference and keep registration fees affordable for our members and our graduate students.

**Registration Form - RCML Mar. 6-8, 2008****Name** \_\_\_\_\_**Institution** \_\_\_\_\_**Street/P.O. Box** \_\_\_\_\_**City** \_\_\_\_\_**State & Zip Code** \_\_\_\_\_**e-mail address** \_\_\_\_\_**Speaker registration** (1 per session, check below, enter amount) \_\_\_\_\_

\_\_\_\_ member @ \$125    \_\_\_\_ non-member @ \$145

**Non-speaker registration** (check below and enter amount) \_\_\_\_\_

\_\_\_\_ member @ \$135    \_\_\_\_ non-member @ \$150

\_\_\_\_ guest, meals &amp; keynotes only @ \$70 \_\_\_\_\_

Guest name

\_\_\_\_ full-time student @ \$50 \_\_\_\_\_

Institution at which you are a full-time student

**Make check payable to RCML, write total \$** \_\_\_\_\_

Note: All registrations increase by \$20 after Feb. 15.

**Check below meal functions you will attend:****Thursday Reception** \_\_\_\_\_    **Friday Lunch** \_\_\_\_\_**Friday Reception** \_\_\_\_\_    **Saturday Lunch** \_\_\_\_\_

For lodging, call Best Western Saddleback Inn and Conference Center at (405)947-7000. Our conference rate of \$89.99 is only available by telephone through Feb. 1. To see the inn visit <http://bestwestern.com/saddlebackinn> .

Print out this form, enclose your check and mail by Feb. 15 to:

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# Election Ballot – Fall 2007

Please mail this page to: Bea Babbitt, 2334 Schillings Ct., Henderson, NV 89074  
OR email your selections to [bea.babbitt@unlv.edu](mailto:bea.babbitt@unlv.edu)

BALLOTS ARE DUE DECEMBER 31, 2007. PLEASE VOTE!

## President-Elect

Serves a 1-year term as president-elect, subsequently serves as president for 2 years, and serves a final year as past-president. Executive Committee Member.

Duties - Assists president, works on changes in By-laws, serves as chair of nominations committee, announces slate of officers and tabulates election results.

CHOOSE ONE:

- Sue Brown – University of Houston - Clear Lake
- Anne Reynolds – Kent State University

## Treasurer

Serves a two-year term. Executive Committee Member.

Duties – Collects dues and disperses funds, prepares and presents budget, reports income, expenses, and cash balances to Executive Committee and membership.

CHOOSE ONE:

- Donna Foss – University of Central Arkansas
- Mary Swarthout – Sam Houston State University

## Vice-President for Conferences

Serves a two-year term. Executive Committee Member.

Duties – Coordinates conferences. Receives conference proposals. Chairs conference committee.

CHOOSE ONE:

- Carolyn Pinchback - University of Central Arkansas
- Sally Robison - University of Arkansas, Little Rock

## Conference Committee (we will elect two members)

Serves a three-year term.

Duties – Works with the Vice President for Conferences as requested in reviewing conference proposals, assisting with annual conference activities, and reviewing conference evaluations.

CHOOSE ONE:

- Azita Manouchehri – Central Michigan University
- Eileen Faulkenberry – Texas A&M University at Commerce

## Conference Committee II

CHOOSE ONE:

- Patrick Wachira – Cleveland State University
- Gabriel Matney – University of Arkansas, Fort Smith

# RCML 2007 Officers

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Intersection Points -- RCML Newsletter

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