



Mathbits

STEM—Science, Technology, Engineering and Math

The Minnesota Council of Teachers of Mathematics
The Minnesota Science Teachers Association

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2008 Fall Conference—Friday October 17, 2008

Timothy Jump, director of the pre-engineering program (Advanced Competitive Science) at Benilde-St. Margaret's School in St. Louis Park, will be the featured keynote speaker. His address is entitled "Making Technology Come Alive in the Classroom." Jump's high-energy, hands-on approach to engineering education has produced award-winning science and engineering students. For example, in 2005 a team of students from the school won the U.S. Open RoboCup, competing against teams of graduate-level college students, and went on to represent the United States at the world championships in Japan.

All are encouraged to attend this day of professional development and networking. There will be numerous 45-minute sessions at all grade levels. Bring a colleague and encourage the new teachers in your school to attend; there will be several sessions designed to meet their needs and interests. Elementary grades teachers also have the opportunity to attend sessions in both math and science. Check the website (www/mctm.org) for further program updates.

Minnesota Teacher a Candidate for NCTM President

MCTM member Bonnie Hagelberger is a candidate for President of the National Council of Teachers of Mathematics. Bonnie taught first grade at Monroe Elementary in the Anoka-Hennepin School District. She was a member of the National Council of Teachers of Mathematics Board of Directors from 2004 to 2007 and is Program Chair for the 2010 NCTM Annual Meeting. Bonnie has held several positions in the Minnesota Council of Teachers of Mathematics, including Executive Secretary and Vice-President - Elementary as well as serving as a member of the Spring Conference Program Committee. She received the Presidential Award for Excellence in Mathematics and Science Teaching for elementary mathematics in 1992. Bonnie has been very involved in mathematics education throughout her career at the district, state, and national levels serving on numerous committees and advisory panels.



See you at Fall Conference!



MCTM is very proud of the fact that Bonnie has been selected as a candidate for NCTM President. Ballots will be available in late September and must be returned by October 31. They may also be submitted online. If you are an NCTM member, be sure to watch for your ballot and to vote by the October 31 deadline.

Mathbits

President's Memo

Judy Stucki
MCTM President
judy@stucki.us



Here we are again with the start of a new school year. Whether this is your first year or your 39th year as it is mine, it is always exciting. As we drive to school many questions cross our minds. Am I ready? Will I be able to help these students achieve their goals? Will all my new ideas work? What can I do to help other math teachers be the best they can?

Minnesotans have a great opportunity this year to help the teachers of America as Bonnie Hagelberger, retired first grade teacher from Monroe Elementary in the Anoka School District, has been approached to run for president of the National Council of Teachers of Mathematics (NCTM). You have read the email from Vance Revenaugh and Bill Eppright listing Bonnie's qualifications.

You have probably attended one of Bonnie's sessions at our conferences, received a speaker gift chosen by Bonnie for speaking at our spring conference, and benefited from her many years of service to the teachers of Minnesota through MCTM. Minnesota has always been known for its education which is due in part to its qualified, hard-working teachers of which Bonnie is one of the best. Help Minnesota, MCTM, and American students by joining NCTM (NCTM.org) and voting for Bonnie this September. Bonnie will turn the eye of mathematics teachers on Minnesota and work to improve mathematics teaching and student learning for all.

Have a great year,
Judy Stucki

P.S. Remember, being a member of MCTM does not automatically make you a member of NCTM. Some schools have one NCTM membership for the school. Check to see who is voting for you.

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Thanks to those who served on review panels this summer. We at MDE appreciate the professional conversations and thoughtful feedback we receive from panel members.

As the 2008-2009 school year begins, there is a lot of interest and concern about updating the grade 8 mathematics curriculum to incorporate the 2007 standards and benchmarks for Algebra. School districts make choices about curriculum based on alignment with the standards. Classroom teachers make decisions about how students best learn the concepts. Accessing students' prior knowledge and identifying misconceptions are first steps in instruction.

Data Review of the field-test items provides some information that may be helpful for instruction aligned with the 2007 benchmarks.

In the 2003 standards, benchmark III.A.2 states, "Students will represent quantitative relationships graphically and use the graphs to solve real-world and mathematical problems." The field-test data suggests that students are able to substitute numbers into an equation in order to match the equation with a table of values. Students struggle with expressing a relationship as a set of ordered pairs when the graph is provided. They also struggle with verbalizing a relationship that is shown graphically.

A related benchmark in the 2007 standards, 8.2.1.1, states that students will "Understand that a function is a relationship between an independent variable and a dependent variable in which the value of the independent variable determines the value of the dependent variable. Use functional notation, such as $f(x)$, to represent such relationships." Benchmark 8.2.2.1 in the 2007 standards states that students will "Represent linear functions with tables, verbal descriptions, symbols, equations and graphs; translate from one representation to another." To address the issues pointed out by field-test data, be sure students are firmly grounded in the concept of function as a relationship as set forth in benchmark 8.2.1.1 and that they spend ample time translating among various representations of a function as stated in 8.2.2.1.

Benchmark III.B.1 states, "Students will multiply and divide expressions of the form ax^n ." Field-test data indicates students struggle with comprehending a coefficient of 1 when working with a common variable base. There is also evidence that students confuse the "rules" about multiplying and dividing expressions of the form ax^n .

Benchmark III.B.4 states, "Students will apply the correct order of operation to simplify and evaluate algebraic expressions." Field-test data indicates students lack skill in applying the distributive property – especially with negative numbers. The related benchmark in the 2007 standards, 8.2.3.2, states that students will "Justify steps in generating equivalent expressions by identifying the properties used, including the properties of algebra. Properties include the associative, commutative and distributive laws, and the order of operations, including grouping symbols." To address the issues pointed out by field-test data, be sure to emphasize the "justification" during a lesson.

The Test Specifications for Grades 3-8 Mathematics MCA-III are available in draft form on the MDE website.

http://education.state.mn.us/MDE/Accountability_Programs/Assessment_and_Testing/Assessments/MCA_II/MCA_II_Test_Specifications/index.html

The test development folks at MDE are looking forward to seeing you at the fall conference.

Theorem of the Day offers a different theorem (or lemma, law, formula, or identity) each day. www.theoremoftheday.org

Matching fractions. This Flash matching game requires students to match a diagram of a fraction with the written fraction.

www.sheppardsoftware.com/mathgames/fractions/memory_fractions1.htm

What's New in Statewide Assessment?

Rosemary Heinitz

Math Content Specialist
MDE Research & Assessment
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Worthwhile resources to
remember :

Math Tools
[http://mathforum.org/
mathtools/](http://mathforum.org/mathtools/)

**National Library of
Virtual Manipulative**
<http://nlvm.usu.edu/>

MCTM Foundation 2007 Annual Report**CONTRIBUTORS****MCTM
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For more information about the MCTM Foundation, visit the MCTM web site or contact Bill Johnson, Foundation Board Chair, wedge1973@yahoo.com

HELP OUT A NEW COLLEAGUE!

If there are teachers in your building who are in their first few years of teaching math, make sure that they get CONNECTed to MCTM. The MCTM CONNECT Committee has several opportunities available to help novice teachers feel supported and grow professionally. Since there is no convenient way to get in touch with new colleagues, we rely on you, our members, to help us get connected.

Services that MCTM CONNECT provides include:

Virtual mentoring: Biweekly emails to connect with teaching ideas, problem ideas, useful websites and professional growth opportunities. To be CONNECTed in this way email Ann Sweeney, College of St. Catherine, at ajsweeney@stkate.edu.

Mentors: Beginners who are interested can be connected with an experienced math teacher for email and telephone consultation and support. To be CONNECTed in this way, contact Larry Luck at larryluck@aol.com.

The MCTM Fall Conference, Oct 17, 2008: Several sessions are designed especially for beginners as well as many more that will be useful to beginners but also of interest to those looking for new ideas. To be CONNECTed in this way, go to www.mctm.org and click on conferences.

The Winning Strategies Conference, March, 2009: While not math-specific, this conference addresses the every-day concerns of novice teachers and connects them with others having similar concerns. Check www.mctm.org for updates.

The MCTM CONNECT Session. April 30, 2009: Held the evening before the Spring Conference, pre-service and beginning teachers will make connections, learn how to maximize their conference experience, enjoy a meal compliments of MCTM and participate in the famous door prize and book give-away.

The MCTM Spring Conference, May 1-2, 2009: The major mathematics professional development event in Minnesota each year will enable new teachers to become more aware of what others are doing and of the resources available in addition to getting connected to state and national leaders in mathematics education

To be sure that all new math teachers are CONNECTed to these professional growth and support opportunities, encourage them to contact MCTM. We can't inform them of these activities if we don't know who they are. For more information visit www.mctm.org or to be CONNECTed, contact Larry Luck at larryluck@aol.com or at 763-784-0084.



CONNECT

Committee to Orient and Network New/Novice Educators into a Community of (math) Teachers

Announcing Conference and Study Grants for Mathematics Teachers

Do you need some financial assistance to participate in the 2009 MCTM Spring Conference? Are you a middle school mathematics teacher planning to increase your own understanding of mathematics through course work? The MCTM Foundation can help you.

The maximum dollar amount of **Conference Support Grants** has increased to \$500. These grants are available to both beginning teachers and mid-career teachers. Applications are due by January 16, 2009. Application information and forms will be available at the MCTM Fall Conference and will also be on the MCTM website after October 20th.

The **Arnie Cutler Scholarship for Mathematics Course Work for Middle Grades Teachers**, a new funding initiative, will offer up to \$800 to grades 6 – 8 teachers for mathematics content course work. Watch this column for more information and application details about this new opportunity. For more information about the MCTM Foundation, contact Bill Johnson, Foundation Board chair, at wedge1973@yahoo.com.

MCTM Foundation Grants

60 Years of History for MCTM

The 2008-2009 school year marks 60 years of rich history for the Minnesota Council of Teachers of Mathematics! The archives containing MCTM's publications date back to the 1948-1949 school year. Watch for historical tidbits and celebrations throughout the coming year as we take a journey back through the past and look at our roots, while at the same time continuing to prepare for the future.

The following is from the *Minnesota Mathematics Newsletter*, Vol.1, No.1, April 1949.

Greetings to the Mathematics Teachers of Minnesota!

The past year has been an important one to us. At the Conference of Mathematics Teachers held at the University of Minnesota in May of 1948, the need for a state organization of mathematics teachers was expressed by you. Miss Edna Norskog, formerly State Representative of the National Council of Teachers of Mathematics, and Mr. Donovan Johnson of the University of Minnesota took the initiative in starting the organization. The result is that an executive board has been functioning since October. This board is made up of fifteen members, one from each of the nine congressional districts in the state, and six members chosen at large. At the Conference of Mathematics Teachers on April 29 and 30, you will have an opportunity to hear what this board has done, and what it plans for the future.

To all of you we extend an invitation to attend the Spring Conference at the University, to all of you we extend an invitation to become a charter member of the Minnesota Council of Teachers of Mathematics. From all of you we want suggestions on how to make this organization a vital and valuable part of the professional life of every teacher of mathematics in Minnesota.

Cordially yours,
Edith Woolsey, President of Executive Board
Minnesota Council of Teachers of Mathematics

MINNESOTA COUNCIL OF TEACHERS OF MATHEMATICS

Membership Blank

I hereby apply for membership in the Minnesota Council of Teachers of Mathematics. I enclose \$1.00 for annual membership dues which includes one year's subscription to the Minnesota Mathematics Newsletter.

Name in full _____

First name

Last Name

Title

School Address _____

Institution and address

Send the blank and \$1.00 to: Miss Edna Lingren, St. Paul, MN

From the archives
...the way it was
back then...

Ask Matt Mentor!!



Dear Matt Mentor,

The other teachers in my department seem to emphasize the importance of students taking notes in class, yet when I ask students to do this they seem to spend more time and effort trying to get all the details written rather than understanding what they're writing. It's also hard to do this when they are engaged in activities. What do you think is the proper use, if any, of note taking in math class? Is it appropriate for middle school students or just for advanced high school students? What should students do with them once they've written them?

Uncertain Middle School Teacher

Dear Uncertain:

For most people, keeping a written record acts as a summary of thinking and a tool for future reference. Such records are appropriate for middle school students, and younger students as well. There are many ways of taking notes that are useful and different students will find different types of written records helpful for different occasions. Here are some suggestions that will work for an activity-based classroom, which your question implies you have.

- Terminology and definitions are useful items for most students to record.
- Summaries act as powerful learning and remembering tools.
- Allowing students to use notes on classroom tests and quizzes is a motivator to learn to take notes that are orderly, clear, and helpful.
- Revisiting and revising notes, and refining the written record as a class allows for adding precision to the mathematical ideas and terms.
- The most well-remembered ideas are those that are developed by each student individually and stated in her/his own words.

In a classroom where many class periods are used for student activities, it is extremely important to allow time after the activity for students to write (in their own words) a summary of their thinking, results, confusions, new terms and concepts. Definitions are best understood and remembered when they follow experiences and activities rather than preceding them. It is not necessary to focus on all of these each day, but some record of each day is important. Your professional planning is an important piece of this approach to note taking, since you need to be clear on the goal for the lesson, and plan prompts accordingly to align with the goal. Since this kind of note taking occurs at the end of class, it is also necessary for you to plan to allow enough time for this activity. A timer can be very helpful here. Let's look at several different types of written records, and how they might play out in class.

Vocabulary terms should be useful and used by students. A word wall can help students see the terms that have been introduced, and when appropriate, they should be defined with examples and non-examples somewhere in a student's notes so they can be used as a resource. Here is a possible prompt for vocabulary: *"Today we talked about the concept of..... Define this concept in your own words and give 1-2 examples."*

Summarizing is also important—for both teachers and students. Students need to review the goal for the day and see if they 'got it'. Teachers need to assess as well to plan how to follow up. This doesn't always have to be done in writing, but a combination of verbal and written reflection will help students remember. Here are some possible prompts for summarizing: *"What was the big idea in today's lesson? How does it connect to the work we have already done?"* *"Here is a problem related to today's work that Stella and Harrison tried to solve. Stella thinks that ...and Harrison thinks thatWho do you agree with? Why?"*

Writing/drawing, etc., can help students reflect on their learning, make connections among different concepts/ideas, and/or challenge students to represent ideas in different ways. On those occasions when you want to ensure that all students are clear on an idea, you can use a written summary as an exit slip, to be handed in before leaving class. Then as you review them after students have left, you can plan your next lesson to embed clarifying activities if needed, or arrange to meet with a small group for moving their thinking toward the goal. Here are some possible prompts for general writing: *"What math do you know now at the end of class that you did not know at the beginning?"* *"What material is still confusing you? What material is becoming clearer to you?"*

You might want to have students use one part of their journal or notebook for the written summaries, another for vocabulary, definitions and terminology, and possibly another section for personal reflections. If students know they will use these for future work, including tests, they will learn to produce orderly and clear notes, organized in a way that helps them to retrieve information as needed. They also will learn from sharing with other students ways of expressing their ideas and organizing their work.

This type of note taking probably will look very different from the note taking you remember from your former math classes. But it is designed to help your students learn and remember. Good luck trying out some of these ideas, planning for your students' note taking, and your students will have a good year of learning mathematics!

Sincerely, Matt

Definitions are best understood and remembered when they follow experiences and activities rather than preceding them.

Have a Question for Matt?

Send your questions about teaching math topics to MattMentorMCTM@aol.com and watch for Matt's response in the next issue of *Mathbits*.

National Math Panel Report

The National Mathematics Advisory Panel, which over the past two years focused national attention on mathematics education in the United States, released its final report, *Foundations for Success*, at Longfellow Middle School in a Washington, D.C., suburb on March 13. NCTM Past President Francis (Skip) Fennell and NCTM members Deborah Ball, Doug Clements, Joan Ferrini-Mundy, and Russell Gersten were members of the panel. Fennell chaired the task group on conceptual knowledge and skills, Ball headed the task group on teachers and teaching, and Ferrini-Mundy and Gersten co-chaired the task group on instructional practices.

Created in 2006 by an executive order of President Bush, the National Math Panel was charged to examine and summarize the scientific evidence related to the teaching and learning of mathematics, with a specific focus on preparation for and success in learning algebra. The Panel also analyzed the prerequisites for algebra that must be developed in pre-K through grade 8 and identified these Critical Foundations and accompanying Benchmarks.

The Critical Foundations are consistent with NCTM's *Curriculum Focal Points for Prekindergarten through Grade 8: A Quest for Coherence*. Although NCTM advocates a broad vision of mathematics for all students at these levels, it also recognizes the necessity for focus and coherence within a prekindergarten through grade 8 mathematics program to prepare students fully for algebra, whether as a distinct course or courses or within an integrated mathematics curriculum.

The panel's report is organized around six principal messages, and it includes more than 40 recommendations and findings. One principal message of the report stresses the importance of children having a strong start, the mutually reinforcing benefits of conceptual understanding, procedural fluency and problem solving, and the idea that effort—not just inherent talent—really counts in mathematical achievement.

Another principal message emphasizes that the nation must continue to build a capacity for more rigorous research in education that can inform policy and practice more effectively. The panel's report also calls for more research related to mathematics education. The use of technology—particularly graphing calculators—student preparedness for algebra, professional development, and effective approaches for teacher retention will require extensive and ongoing research to identify approaches that can be broadly applied.

A solid grounding in mathematics should begin with each child's introduction to schooling and continue as children learn important mathematical concepts, develop proficiency, and solve problems. To provide this mathematical foundation, NCTM concurs with the panel's emphasis on preparing and retaining highly qualified and effective classroom teachers. The Council also supports increased research in instruction, learning, the use of mathematics teacher specialists, improving teacher effectiveness (including preservice teacher education and professional development) and assessment. The Council urges policymakers to provide the necessary funding to conduct these studies.

The final report and reports of the five task groups (conceptual knowledge and skills, learning processes, instructional practices, teachers, and assessment) are available online at <http://www.ed.gov/about/bdscomm/list/mathpanel/index.html>. NCTM has prepared an online response to the report, which is available at <http://www.nctm.org/NMPresponse.aspx>.

This article was originally printed in the *NCTM News Bulletin*, Vol. 44, Issue 9 (May/June 2008), and is reprinted with permission.

MET Funding for Teachers

NCTM's Mathematics Education Trust (MET) channels the generosity of contributors into grants, scholarships, and awards that support the improvement of mathematics teaching and learning at the classroom level. During 2008–09 many individuals and schools will receive MET funding to enhance their mathematics teaching skills, try new classroom projects, and attend their first NCTM annual meeting. MET also presented Lifetime Achievement Awards to Frank K. Lester, Jr., and Robert E. Reys. MET's grant program offers funding for the following: School In-Service Training, Emerging Teacher-Leaders in Elementary School Mathematics, Improving Classroom Instruction, Mathematics Content, Research, Mathematics Course Work, Conference Attendance, NCTM Lifetime Achievement Awards, NCTM Affiliate Awards.

2009–10 applications must be postmarked by November 14, 2008. To learn more about these programs and the funding opportunities available to you, or for helpful tips on writing successful proposals for MET grants, visit <http://www.nctm.org/met.aspx>

NCTM's Regional Conference and Exposition is scheduled for the Minneapolis Convention Center on **November 4-6, 2009**. MCTM last sponsored an NCTM regional conference in 2004. The conference was so successfully planned and organized that NCTM approached the MCTM board and requested Minnesota sponsor another. The opportunity to host two regional conferences within 5 years is quite an honor.

Minnesota has a longstanding tradition of hosting NCTM events. Our state has hosted the national conference three times, in 1933, 1969, and 1997. NCTM has held a regional conference in Minnesota in 1964, 1981, 1987, 1992 and 2004.

Each year NCTM conducts one national and three regional conferences. Regional conferences attract mathematics teachers and administrators from throughout the United States and Canada. Over 3,000 attendees are expected to fill sessions and the exhibit hall next November. Conference planners started meeting this summer, intent on making this regional a meaning experience for attendees, speakers and exhibitors.

If you have attended any of the NCTM regional or national conferences held in Minnesota we would like your help. Please send us some of the meaningful experiences you have had at prior conferences; we may publish them in future editions of Mathbits. Our goal is to demonstrate to new teachers the benefits of attending a regional conference. Also, experienced teachers who have not been able to go to prior regional conferences may be able to use the testimonials of others to obtain money from their districts' limited staff development budget.

If you are interested, you can send an email of your conference experiences to either **Vance Revenaugh (vlr@nwc.edu)** or **Bill Eppright (wje@nwc.edu)**. Your story may be instrumental in allowing a colleague to attend!

If you are interested in speaking at NCTM's Regional Conference and Exposition in Minneapolis, November 4-6, 2009 plan to submit your proposal by **November 1, 2008**. Notifications of acceptance are made in January 2009. Visit the NCTM website (www.nctm.org/conferences/) for speaker guidelines and the process for submitting a proposal.

NCTM is offering more topics in its E-Workshop series. Participate in interactive professional development workshops that engage multiple teachers at your site with no travel required. These 90-minute E-Workshops offer a collaborative opportunity to explore a topic with colleagues. Visual information is delivered via the Internet while audio is delivered by telephone. E-Workshops include a follow-up session to reflect and discuss the impact of the activities on student learning and to explore some additional activities.

The registration fee of \$149.00 per workshop includes one Internet and one phone connection to the live program, participation in two 90-minute sessions (initial workshop and follow-up) or one 3-hour workshop, and one electronic copy of the activities explored in the workshop for classroom implementation. By using a projected or large-screen computer and a speaker phone, you and your colleagues can participate in an E-Workshop together for one registration fee.

The Fall 2008 E-Workshops are listed below by topic and by grade band. A schedule of additional E-workshops offered for winter and spring will be posted later in the fall at www.nctm.org/profdev/

<u>Dates</u>	<u>Time</u>	<u>Grade</u>	<u>Topic</u>	<u>Workshop Leader</u>	
Oct 7	Nov 18	3:00	9-12	Reasoning with Data & Probability	Fred Dillon
Oct 21	Dec 2	3:00	PK-2	Implementing the Algebra Standards	Emily Hendricks
Oct 22	Dec 3	6:00	3-5	Reasoning with Data & Probability	Wendy Schudmak
Oct 27	Dec 8	6:00	6-8	Implementing the Algebra Standards	Jennifer Seay
Nov 4		3-6pm		New and Pre-service Teachers	
Nov 12		6-9pm		New and Pre-service Teachers	

For registration and more information visit <http://www.nctm.org/profdev/>

NCTM Regional Conference Scheduled to Return to Minnesota in 2009

Present at the NCTM Regional Conference

Professional Opportunities



www.mctm.org

MCTM Fall Conference

Minnesota Council of Teachers of Mathematics

STEM—Science, Technology, Engineering and Mathematics

Friday • October 17, 2008

Lakeville South High School
21135 Jacquard Avenue, Lakeville, MN 55044

<http://www.lshs.isd194.k12.mn.us/>

Schedule Highlights

7:30 • Registration & Breakfast
7:30 – 1:30 • Exhibits Open
8:00 — 9:15 • Opening Session
9:30 – 10:15 • Session I
10:30 – 11:15 • Session II
11:30 – 12:15 • Lunch
12:30 – 1:15 • Session III
1:30 – 2:15 • Session IV
2:20 – 2:40 • Door Prizes

Registration Fees

Includes lunch

	<u>Pre-Registered</u>	<u>On-Site</u>
Member	\$35	\$40
Student Member	\$20	\$25
Non-Member	\$60	\$65
Student Non-Member	\$32.50	\$37.50

Special \$20 rate for each pre-service Math Education student if group from same college registers together, in advance, with one payment. Membership is included.

Over 50 Sessions for Kindergarten through Higher Ed throughout the day.

Keynote Speaker

Timothy Jump, Benilde-St. Margaret's School, St. Louis Park, MN

Making Technology Come Alive in the Classroom

Directions to Lakeville South High School

From 35W:
From I-35, exit at County Highway 70.
Go east on Hwy 70, and turn left (north) on Jacquard Avenue.
The school is on the left side of Jacquard Avenue.

For more information contact:

Ann Sweeny
Conference Chair
ajsweeney@stkate.edu

Bill Tomhave
Conference Chair
tomhave@cord.edu

Tom Muchlinski
Registration
tmuchlinski@earthlink.net

Visit www.mctm.org for registration and speaker forms and more information as it becomes available.



EARLY REGISTRATION FORM

**Minnesota Council of Teachers of Mathematics
FALL CONFERENCE
Friday, October 17, 2008**

STEM—Science, Technology, Engineering, and Math

Lakeville South High School
21135 Jacquard Avenue
Lakeville, MN 55044
<http://www.lshs.isd194.k12.mn.us/>

REGISTER BY OCTOBER 8, 2008 TO QUALIFY FOR EARLY REGISTRATION.

Registrations postmarked or submitted on-line after October 8 will be charged an additional \$5.00. You may register for the Fall Conference by completing this form or you may register online at www.mctm.org

Name _____

Address _____

City _____ State _____ Zip Code _____

If you are a new member OR if any of the following has changed, fill in the information below.

Home Phone (_____) _____ Work Phone (_____) _____

E-mail _____

District Name _____ School/Institution _____

Early Registration Fee <i>(includes lunch)</i> <i>Non-member fee includes one year membership</i>	Level	Position
<input type="checkbox"/> MCTM Member \$35.00	<input type="checkbox"/> Elementary	<input type="checkbox"/> Teacher
<input type="checkbox"/> Non-member \$60.00	<input type="checkbox"/> Junior High/Middle	<input type="checkbox"/> Specialist/Coach/Supervisor
<input type="checkbox"/> Student Member \$20.00	<input type="checkbox"/> High School	<input type="checkbox"/> Principal
<input type="checkbox"/> Student Non-member \$32.50	<input type="checkbox"/> District	<input type="checkbox"/> Student
<input type="checkbox"/> Speaker \$20.00	<input type="checkbox"/> Post Secondary	<input type="checkbox"/> Retired
<input type="checkbox"/> Undergraduate Mathematics Education Student Group Rate \$20.00/person <i>(Group from the same institution sent together with one payment and individual forms attached – includes one year of membership dues)</i>	<input type="checkbox"/> Other	<input type="checkbox"/> Other

MCTM Dues

New Renewal Do not need to renew

Regular Membership

One Year - \$25.00 Two Year - \$40.00

Student/Retired Membership

One Year - \$12.50 Two Year - \$20.00

I would like to make a tax-deductible contribution of \$ _____ to the MCTM Foundation

Amount Due	Method of Payment	Mail to: MCTM PO Box 289 Wayzata, MN 55391
_____ Early Registration Fee	<input type="checkbox"/> Credit Card __ V __ MC __ D Card Number _____	<i>Register online at www.mctm.org</i>
_____ Dues	Expiration Date _____	
_____ Foundation Contribution	Signature _____	For office use only: Record _____ Received _____ Payment _____
TOTAL DUE	<input type="checkbox"/> Check	
	<input type="checkbox"/> PO Number _____ <i>(Purchase order must be attached)</i>	

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Mission Statement:

The MCTM is an organization of professionals dedicated to promoting the teaching and learning of meaningful mathematics for all students by supporting educators in their efforts to improve mathematics education.

Mark Your Calendar

October 17	MCTM Fall Conference, Lakeville South HS
September 30	Deadline for MCTM Fall Conference speaker proposals
November 1	Deadline for NCTM Regional Conference speaker proposals
May 1-2, 2009	MCTM Spring Conference, Duluth, MN
November 5-6, 2009	NCTM Regional Conference, Minneapolis, MN

Do we have your correct address?

MCTM strives to provide membership with current information regarding mathematics education in the state of Minnesota. To accomplish this goal, we need an accurate, permanent address for each member. Is your correct address printed on the label of this issue of *Mathbits*? If not, contact Executive Director Tom Muchlinski at tmuchlinski@earthlink.net or visit the MCTM web site (www.mctm.org) membership page to make your change. Student MCTM members and members in transition are encouraged to provide a permanent address. Newsletters mailed to student members will not be forwarded. Thank you for helping us stay in touch!
FYI: In an effort to be cost effective, MCTM sends newsletters at USPS bulk rate. As a result, delivery times may vary between postal districts.

**Check the mailing label for your membership renewal date.
Renew online at
www.mctm.org**

Please submit content for publication in the December issue of *Mathbits* to tlgonske@nwc.edu by October 31, 2008. Email or call 651-631-5228 with any questions. - Teresa Gonske, Editor
