

ASSOCIATION OF TEACHERS OF MATHEMATICS
IN WESTERN MASSACHUSETTS, AN AFFILIATED
GROUP OF THE NATIONAL COUNCIL OF
TEACHERS OF MATHEMATICS

MATHWEST NEWS

February 2004 Volume 17, Issue 1

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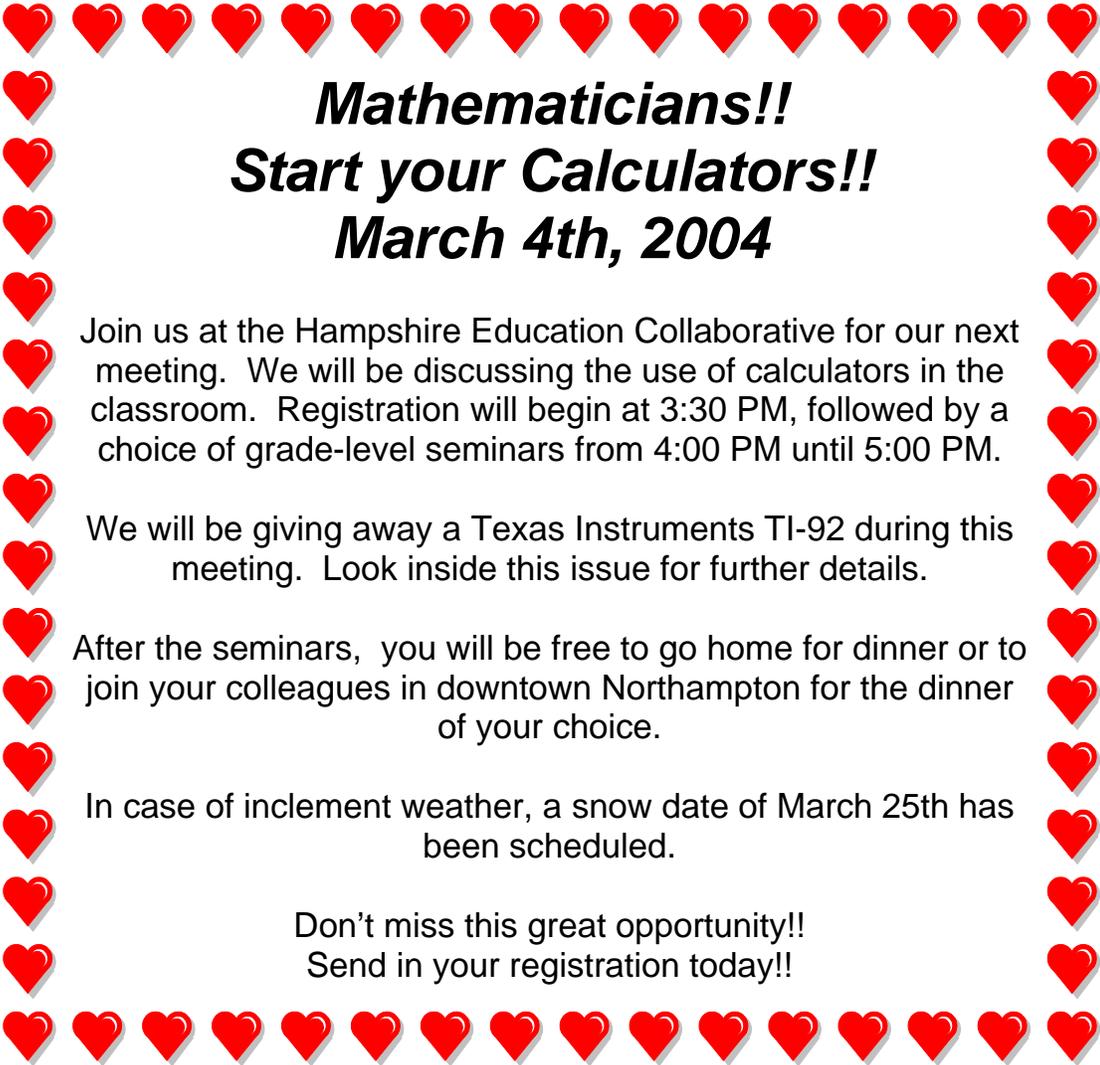
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Mathematicians!! Start your Calculators!! March 4th, 2004

Join us at the Hampshire Education Collaborative for our next meeting. We will be discussing the use of calculators in the classroom. Registration will begin at 3:30 PM, followed by a choice of grade-level seminars from 4:00 PM until 5:00 PM.

We will be giving away a Texas Instruments TI-92 during this meeting. Look inside this issue for further details.

After the seminars, you will be free to go home for dinner or to join your colleagues in downtown Northampton for the dinner of your choice.

In case of inclement weather, a snow date of March 25th has been scheduled.

Don't miss this great opportunity!!
Send in your registration today!!

VISIT OUR NEW WEB SITE

www.geocities.com/MATHWESTnews

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A Message from Our President

Dear MATHWEST Educators,

There is no doubt that we live in challenging times! We face daily challenges in every aspect of our lives, and our lives as educators is certainly no exception. Are we role models for our students in the way we approach change and challenge? Are we willing to go beyond our daily routines? Are we open to personal and professional growth (those we choose as well as the ones we don't)?

Here are a few questions for personal reflection and/or for discussion with a colleague or a group of colleagues. Yes, another challenge to keep us vibrant, flexible, intuitive, optimistic, innovative, knowledgeable, creative, resourceful, enthusiastic, and on the cutting edge of educational progress!

- Have you learned something new in your field in the last six months?
- Do you have a vision of what good teaching involves?
- Have you tried a "new" teaching method or approach in the last six months?
- Do you have a vision of what a good math teacher does daily? Monthly? Yearly?
- Have you taken any time to reflect on your teaching in the last six months?
- Do you have a vision of how you would like to improve your teaching?
- How much professional reading have you done in the last six months?
- Do you have a vision of the future of education? Of math education?
Of education in YOUR classroom?
- Have you collaborated with a colleague in the last six months?
- Has your vision changed in the last six years?

Good luck as you face challenge and change in your corner of the world!

Louise M. Lataille

Do you know any new teachers who could benefit from MATHWEST?

We are in search of new teachers in Western Massachusetts who would benefit from membership in MATHWEST. If you know of anyone, please let Scott know at SLTrahan@aol.com. All people who are referred will receive a welcome package from MATHWEST including a free gift. So take the time and help us, help others!

AP Calculus Meetings

This is a reminder that the AP Calculus group continues to meet one Tuesday a month at Brett's Restaurant on Route 5 in West Springfield. Come, meet other Calculus teachers, and share resources. There's even free food! For more information contact Scott at SLTrahan@aol.com. Upcoming Meetings: February 10th, March 9th, and April 13th.

The New TI-84 Plus SE Graphing Calculator

Yes, it's here! The upgrade for the TI-83+ is here. Complete with a USB port, the TI-84+ has more memory and a faster processor. According to Nancy Shnick, the TI representative for the Northeast, teachers can get their hands on a teacher's calculator for only 20 proofs of purchase while supplies last, starting May 1st through TI's Volume Purchase Program for educators. So save up your proofs of purchase and send them in. Check out TI's website for more information at: education.ti.com.

In The News...

Trying to Figure Out Why Math Is So Hard for Some Theories Abound: Genetics, Gender, How It's Taught By Valerie Strauss (From the Washington Post, Tuesday, December 2, 2003.)

Three little words -- "math is hard" -- uttered a decade ago by Teen Talk Barbie drew enough protests of sexism that its maker, Mattel Inc., pulled the doll from stores. But researchers today say Barbie wasn't all wrong: Math is hard for many -- male and female, children and adults. And while a "math gene" has not been discovered, experts say that early school-age boys and girls tend to approach the subject differently, influenced by biological, environmental and educational factors. So why, despite this year's fanfare over SAT scores reaching a 30-year high, does math still stump so many? "That's the question we are all asking and that is driving the research," said Michelle Mazzocco, director of the Math Skills Development Project at Baltimore's Kennedy Krieger Institute, a clinical and research facility for pediatric developmental disabilities. "There could be so many different causes leading to what we call poor math achievement and math disability, which are not necessarily the same thing," she said. "It has taken researchers decades to understand the fundamental difficulties of reading, and we are now at the place with math research where reading researchers were 20, 30 years ago." Some say that learning math is similar to tackling a foreign language; others say it is different from all other subjects, because math is abstract and requires more logical and ordered thinking

There are battles over how to teach it, dissension over gender issues, questions about the causes of poor student performance, and no universal definition for "math learning disability," known as dyscalculia. What is known is that math is hierarchical, so that "if you hit a hurdle somewhere along the way, it's tough to catch up," said Julie Sanders, a math teacher at Episcopal High School, a private school in Alexandria. Yet researchers are only beginning to grasp why someone such as Mike Zaydman, a senior at Thomas S. Wootton High School in Rockville, seems to be a natural -- completing advanced calculus last year and now having a "pretty good time" with multivariable calculus/differential equations -- while Lesley Ann Hecht, a junior at the University of Massachusetts at Amherst, has always struggled with math. Hecht was diagnosed with a math learning disability after she had trouble figuring out multiplication tables as a child in Avon, Conn. She recalls working harder than other students to earn a B in high school geometry, but her problems didn't end there. She nearly had to drop her psychology major in college because it required taking a math test, which she failed. After retaking the test with approved special help, she passed. Hecht, who excels in others subjects, attributes her math difficulties to genetics, anxiety and poor teaching. But she doesn't think she is any worse at math than some friends who were never diagnosed. "I really don't see myself as having a disability," she said. "I just think I'm not good at math."

Mazzocco and other researchers say they don't know at what point difficulty with math becomes a learning disability. There is no specially designed test for diagnosis, and estimates about how many children have dyscalculia range from 5 percent to 8 percent. But one thing is clear, said David C. Geary, a researcher and psychology professor at the University of Missouri: The human brain is not designed to accept math easily. "Much of what kids are expected to learn has been developed in the past 1,000 to 2,000 years, sometimes much more recently, and thus people's brains aren't really designed to learn much of it -- except, for instance basic counting and simple arithmetic," Geary said. "Language, including foreign languages if they are introduced early enough, is a completely different matter, as the brain is pre-wired to learn this."

New neuroimaging techniques are making clearer how different areas of the brain are tapped for various visually and linguistically based mathematical tasks, which helps explain the ways someone can trip over math. Fact retrieval appears to be the most common type of problem for elementary school students, for instance, and spatial difficulties may interfere with geometry learning, researchers say. JoAnn Deak, a psychologist and author of "Girls Will Be Girls: Raising Confident and Courageous Daughters," said most schools approach math in the early grades "as if there is one kind of brain" -- though neuroimaging suggests that most girls develop language skills faster and most boys develop spatial and visual abilities faster.

(Continued on next page...)

In The News (continued)...

Theories Abound: Continued from page 3...

This helps explain why boys traditionally have been seen as "better at math," and why some girls have steered away from it. Different teaching approaches early in a child's life can make up for these gender differences, Deak said, but most teachers don't try. Researcher Art Baroody, a professor of curriculum and instruction in early childhood and elementary mathematics education at the University of Illinois at Urbana-Champaign, said he is "willing to bet the ranch" that the primary culprit for students' math struggles is poor instruction. "Children with genuine organic dysfunction probably make up a small portion of the children struggling with math, or even of those labeled 'learning disabled,'" Baroody said. As for whether it is ever too late to learn math, he said: "It is probably never too late, if the spirit has not been broken." That underscores the fierce battles over how to teach the subject; a nearly 2,000-page history of school mathematics, recently published by the National Council of Teachers of Mathematics, details decades of conflict with different eras of math instruction.

Applause recently sounded when U.S. math scores rose on the National Assessment of Education Progress, often called "the nation's report card," coming on the heels of last summer's SAT results. Johnny Lott, president of the National Council of Teachers of Mathematics, said he credits reform math programs that help children learn by finding the meaning of problems themselves rather than learning by rote memorization. Others, including W. Stephen Wilson, a Johns Hopkins University math professor, believe that those programs confuse as many students as they help and that rising test scores are unrelated. Anthony Belber, a third-grade teacher at the private Georgetown Day School in the District, said some children are asked to learn concepts before they are developmentally ready. He still remembers, he said, "that panicky feeling about math, always trying to get by and never really understanding what I was doing" while attending St. Albans School in the District. "Kids are sometimes exposed to things a year or two years before they are ready," said Belber, who noted that he didn't fully become comfortable with math until he started teaching. "If they start thinking they aren't good in a topic because it is too soon, they are always behind."

Massachusetts Hall of Fame for Mathematics Educators

Math Hall of Fame Seeks Top Educators' Names MTA Today Magazine, Volume 34, No. 3

Nominations to the Massachusetts Hall of Fame for Mathematics Educators are open. To qualify, a nominee must have been involved in math education in the state for a minimum of 20 years and have made an extraordinary contribution to the advancement of math education and/or math teaching.

Nominations should come from math educators and include the name, address, phone number, and e-mail address of the nominee and a maximum of two pages describing why the nominee should be considered. Posthumous and emeritus nominations are encouraged. The nominator of a posthumous candidate should provide his/her own reference letter and two additional letters from math educators.

The nominee should send the Hall of Fame Committee a resume and three letters of reference by March 19. One letter can be that of the nominator. Send material to: Joseph Caruso, Math Educators Hall of Fame Committee, Framingham State College, Hemenway Hall, Room 204, 100 State St., Framingham, MA 01701. For further information, please visit <http://www.massteacher.org/teaching/>

Nominate a Teacher from Western Massachusetts Today!!

Advanced Placement Practice Exams

Saturday, April 3, 2004

8:30 AM - 1:30 PM

Philly Phun Phacts!

Philadelphia has been the home of many exciting, historical events in the United States. It was the capital of our country, before Washington D.C.. It was also the home of the first mustard, the first hospital, the first lemon meringue pie, the first library, the first brewery, the first zoo, and the first insane asylum.

How much do you know about Pennsylvania? Try to answer the following questions:

- 1. What is the state flower?**
- 2. What is the state beverage?**
- 3. What is the state bird?**
- 4. What is the state dog?**
- 5. What is the state animal?**
- 6. What is the state tree?**

The answers are below. How did you do??

Answers: 1. Mountain Laurel 2. Milk 3. Ruffed Grouse 4. Great Dane 5. Whitetail Deer 6. Hemlock

*ATNME Annual Conference
MatRix for Success
October 21—23, 2004
Providence, Rhode Island
Rhode Island Convention Center*

Topics for this year's meeting will include curriculum, differentiated instruction, standards, assessment, professional development, and educational technology.

For more information, contact:

Dr. Gertrude R. Toher
General Chair
32 Carriage Drive
Lincoln, RI 02865-3428
gtoher@cox.net

The 2005 Annual Conference will be held in Hartford, CT.

Did you miss the Mohegan
Sun trip???

If you did, then you missed out! It was a great night of food, fun, and MATHWEST friends! Over 30 people took the bus from Holyoke to Mohegan Sun on a bitterly cold Friday evening to see if they could beat the odds. With only one big winner (of \$650), we are sure they will be building the MATHWEST addition to the casino any day now. And the only thing the newsletter editor came home with was a small pearl that was inside one of the mussels from the buffet.

See you again next year!!

MATHWEST ***DATES TO REMEMBER***

February

2nd ~ AP Calculus Get-Together
Brett's Restaurant, West Springfield

March

4th ~ MATHWEST Spring Meeting
(Snow Date of March 25th)

9th ~ AP Calculus Get-Together
Brett's Restaurant, West Springfield

April ~ Math Education Month

1st ~ MATHWEST Board Meeting, 4 PM
Friendly's, West Springfield

3rd ~ AP Calculus Practice Exam
(Snow Date of April 10th)

UPCOMING EVENTS ***DATES COMING SOON!!***

April (continued...)

9th ~ AP Calculus Get-Together
Brett's Restaurant, West Springfield

21-24 ~ 82nd Annual NCTM Conference
Philadelphia, PA

May

6th ~ MATHWEST Board Meeting
Friendly's, West Springfield

September

9th ~ MATHWEST Board Meeting
Friendly's, West Springfield

"Defining Mathematics for All"

NCTM's Annual Meeting in Philadelphia April 21st through April 24th, 2004

Philadelphia has much to offer visitors. In addition to Independence Hall, the city is home to the African American History Museum, Fireman's Hall Museum, and Elfreth's Alley — a narrow cobblestone street that is the nation's oldest continuously inhabited avenue. And Philadelphia also boasts world-class art treasures at the Philadelphia Museum of Art and the Rodin Museum.

The NCTM Annual Meeting preregistration forms and hotel reservation form will be included on the NCTM website. To help you make your plans early and to save you money, preregister before the deadline of Monday, March 15, 2004.

Spend your spring break On professional development

Several MATHWEST members will be attending the conference in Philadelphia and would love to have more of our members join them. Many of them have found hotels and train tickets at a more affordable rate than those being offered by NCTM. If you are interested in joining the MATHWEST constituent in Philadelphia, please contact Barbara Martowski. (Her contact information is located on the Board of Directors page at the end of this newsletter.)

Because the NCTM conference is scheduled the same time as our spring break, this is an incredible opportunity to attend some great seminars without worrying about making plans for a substitute!! Make plans to attend as soon as possible!

MATHWEST SPRING MEETING

The topic for the MATHWEST Spring Meeting will be calculators! We have three exciting seminars for you to choose from.

Elementary Calculators: Although there will be no formal meeting, a handout of games and activities, which lend themselves to the elementary level that use calculators in a productive and investigative way, will be a. Feel free to pick one of these up, then attend another seminar.

Middle School Calculators: Are you wondering how to perform special operations on a scientific calculator to enhance your math classroom? Well then this is the workshop for you! We will discuss fractions, exponents, square roots and the way order of operations is processed. Bring your calculator and questions...we're her to help and have fun. TI resources will be available. Taught by Cindy Tuthill, Cathedral High School, for middle school grades 5 - 9.

High School Calculators: Are you interested in fun and creative activities for using the TI-83+ in your high school mathematics classroom? If so, do we have the workshop for you. During this session, we will discuss various TI activities and resources that can be used for the high school mathematics classes. Experiment with a CBL, see a preview of Cabri Jr., and visit equations of lines in a fun and exciting way. Ready to use handouts and free TI resources and materials will also be available. This session will be taught by Scott Trahan of Agawam High School.

*****Cancellation due to weather will be decided at noon on the day of the event.
Call 1-413-586-4900 for any cancellation announcement.*****

Thursday, March 4th, 2004
Hampshire Education Collaborative
97 Hawley Street
Northampton, MA
Registration Starts at 3:30 PM
Seminars start at 4:00 PM
Snow Date: March 25th

REGISTRATION:

Fill out the form to the right and send it, along with your \$10 check payable to MATHWEST, by the February 25th deadline, to:

**MATHWEST
P.O. Box 784
Easthampton, MA 01027**

DIRECTIONS:

From the north: Take I-91S to Exit 19 (Rt9). Take Rt9 West (this is Bridge Street). Just before the train track overpass in downtown, turn Left on Hawley Street. HEC is about five blocks down on the corner of Eastern and Hawley streets.

From the south: take I-91N to Exit 18 (Rt 5). Take Rt 5 North (this is Pleasant Street). About 1/3 of a mile up Pleasant Street, turn Right on Holyoke Street. Turn Left on Hawley Street. HEC is about two block up on the corner of Eastern and Hawley streets.

Name: _____

Address: _____

Telephone: _____ Email: _____

Which workshop will you be attending? (Check all that apply)

Elementary School Handout

Middle School Seminar

High School Seminar

Which type of registration do you need?

\$10 for members

\$25 for members (includes membership renewal)

\$25 for non-member (includes 1-year membership)

Note: If you need a membership, please also fill out the form on the back page of the newsletter.

SPRING MEETING RAFFLE

The Mary Alice Wilson Grant

GRANT APPLICATION

While associated with The Five College/Public School Partnership, Mary Alice Wilson was instrumental in the first PIMMS Initiative from which the decision to fund MATHWEST originated. The Mary Alice Wilson Grant is funded by MATHWEST, The Association of Teachers of Mathematics in Western Massachusetts, for the purpose of enhancing mathematics understanding and appreciation in grades K—16. Grants are awarded annually for up to \$500 per project, \$1000 per year. All members of MATHWEST are eligible to receive the award.

Grant proposals will be reviewed and granted by the MATHWEST board on the first meeting following the respective application cutoff dates. All applicants will be notified within two weeks of the Board's meeting. The check award and form for the final grant evaluation will be sent with notification to the grand awardee(s).

Name of Applicant: _____

Mailing Address: _____



Phone: _____

Fax: _____

E-mail: _____

School System: _____

School Name: _____

Years of Teaching Experience: _____

Amount Requested: _____

Please return proposals by **October 1st** or **February 1st** of each year. Grants are reviewed and awarded in November and March with the final report due by November or March of the following year.

Return proposal to:

Nancy Strouse
MATHWEST
PO Box 784
Easthampton, MA 01027

Summarize your proposal on no more than two pages and include:

- A. goals and objectives
- B. the population to be served
- C. tasks to complete the project
- D. timeline
- E. evaluation instrument
- F. how it will affect the MATHWEST membership
- G. project budget



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Editor's Corner

If you have any articles or professional development opportunities that you feel would benefit other MATHWEST members or if you have any suggestions, please email them to...

MATHWESTnews@yahoo.com

Please send them as either a Microsoft Word document or as an actual e-mail message.

We appreciate your input into this newsletter!! Thank you for your contributions.

P.O. Box 784
Easthampton, MA 01027

MATHWEST NEWS



Please: If paying by PO, please include the names and addresses of members to be renewed.

NAME _____
STREET _____
CITY _____
STATE _____ ZIP _____
PHONE _____ EMAIL _____

Are you a member of NCTM? YES NO
A member of another NCTM affiliate? YES NO If yes, which one? _____

Amount Enclosed \$ _____

Membership Category: _____
1 Year Regular (\$15) _____
1 Year Full-Time Student (\$5) _____
1 Year Full-Time Retired (\$10) _____
3 Year Regular (\$40) _____

Area of Professional Interest: _____
Elementary _____
Middle School _____
Secondary _____
College _____

Application Type: _____
New Membership _____
Renewal _____

MATHWEST MEMBERSHIP APPLICATION FORM
Mail to: MATHWEST, P.O. Box 784, Easthampton, MA 01027