

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

MATHWEST NEWS

May 2004 Volume 17, Issue 2

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Define Mathematics Throughout The Land!!

The NCTM 2004 Presidential Address laid out the mathematics teacher's mission: Ask Not for Whom the Bell Tolls! It is Ringing for Mathematics! "Defining mathematics for the future is our job," said NCTM President Johnny Lott. "And it's more than curriculum." Taking liberties with the inscription on the Liberty Bell, Lott charged the audience in Philadelphia to "define mathematics throughout all the land unto all the inhabitants thereof."

The Council has long advocated more and better mathematics for all children, said Lott, and we are gathered here to learn new and better ways to accomplish that mission. His talk laid out how teachers could achieve that goal.

How are we to do this? He listed three main areas: Publications, Conferences, and Actions.

Some of the key points of the Council's legislative platform include: Equity, Teacher Quality, and Technology.

Lott concluded his talk with the Mathematics Teacher's Oath which he invited the audience to join him in reciting. The oath includes the lines: "Students are my first concern. I promise that I will use my knowledge to benefit students." The complete "Oath for Mathematics Teachers" can be found in the April 2004 NCTM News Bulletin.

Lott also invited the audience to e-mail him at jlott@nctm.org
Articles and highlights of this year's conference can be found at: www.nctm.org/meetings/Philadelphia/#highlights



VISIT OUR NEW WEB SITE

www.geocities.com/MATHWESTnews

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A Message from Our President

Dear MATHWEST Educators,

Imagine the historic city of Philadelphia with its constant reminders of the time of Ben Franklin and the beginning of our nation. See in your minds-eye its sidewalk café's, its uniquely creative sculptures strewn throughout the downtown business area, its Liberty Bell and its friendly people...

Imagine a building, as magnificent as it is gigantic, with several rooms the size of Grand Central Station; with works of art in every corner and hallway; with hundreds of meeting halls of all sizes, with indoor access to banks, a train station, two hotels, a food court, and a mall...

Imagine elbowing with close to 20,000 mathematics educators from all over the USA and a few foreign countries... all thinking, learning and sharing ideas, pedagogy, methodology, and mathematical content, at all levels of education...

Imagine the intellectual and professional stimulus of over 1000 workshops and presentations that run the gamut of K-12 mathematical and pedagogical topics, with a myriad of opportunities for personal and professional enlightenment, enrichment, and growth...

Imagine the buzz of over 2200 exhibitors in one room, with their new books, manipulatives, assortment of educational products, ideas, sales pitches, and free promotional gifts...

Imagine NCTM's New President, Cathy Seeley, giving mathematics educators a rallying call to greater professionalism; to political advocacy; to quality mathematics teaching/learning; to self-reflection, assessment, and growth; and to "no child left behind"...

Imagine all that and more, and I have taken you to the Philadelphia "**experience**" called **NCTM's 83rd National Convention - 2004**.

Indeed, it has already become a part of history, but its inspiration, challenge, vision, is certainly affecting teachers and students in thousands of classrooms, across the nation, at this time. I invite each of you to check out www.nctm.org to capture more of the flavor of this historic gathering.

May each of you be moved by its **inspiration**, **challenge** and **vision** as you touch the lives of your students and connect them to the real power of mathematics.

I wish you the creativity, insight, patience, endurance and perseverance necessary to make the end of the 2003-2004 school year a productive and enriching experience for you and for each of your students. Have a restful and renewing summer.

See you in the Fall!

Louise M. Lataille

AP Practice A Huge Success!

Over one hundred students and teachers, from more than sixteen area schools, gathered on Saturday, April 3rd for the 2nd annual administration of the Advanced Placement (AP) practice exams in calculus and statistics. Held at the First Baptist Church of Agawam and Ralph C. Mahar Regional High School in Orange, the three-hour session was open to any mathematics student in western Massachusetts who wished to prepare for the actual exams to be held in the beginning of May.

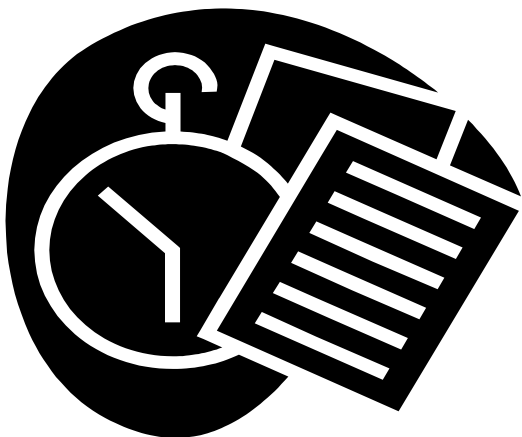
The Advanced Placement program and exams, developed by The College Board, allows students to take college level course work in high schools. At the end of the course, students have the option of taking the AP exam in the subject. Categorized as a competency exam, the exams are graded on a scale from 1 to 5, where 5 is proficient. Students who obtain a 3 or better on an exam can apply for credit from the colleges or universities they plan to attend.

Sponsored by MATHWEST, the Association of Mathematics Teachers in Western Massachusetts, the event allowed high school students the opportunity to take either former released exam in an appropriate timed atmosphere. Before students left the exam sites, they received their graded tests, an AP score, and a complete answer key. Scott Trahan, a math teacher at Agawam High School and organizer of the event, said, "This is a great opportunity for students to see what the test is really like. Most teachers, who have students attend this event, will spend time reviewing their test results in the coming weeks. Hopefully, students will achieve higher scores on the actual exam."



LEFT – Students from Agawam High School enjoy lunch while waiting for their results from the practice exam. Back Row: Alex Alvanos, Brendan Cayer, Joseph Koehler, Aditya Patel. Front Row: Alissa Tully, Eva Udobina, Jordan Frederick, and Sara Dorans.

BELOW – Jordan Frederick, a junior at Agawam High School, contemplates a difficult calculus problem during the Advanced Placement practice exam session sponsored by MATHWEST.



PROFESSIONAL DEVELOPMENT OPPORTUNITIES

We wish to bring to your attention an exciting Summer Content Institute on mathematics sponsored by DOE. It will be conducted by Dr. Andrew Chen, Dr. George Johnston and Elaine Previte. The Institute will start soon and spaces are limited, please apply soon and also forward a copy of this e-mail to your math colleagues.

The Institute is designed to assist teachers to advance their deep understanding of important topics and their conceptual foundations, and to craft their pedagogy from that deep understanding.

Upon successful completion of the Institute, participants will obtain 67.5 PDPs at no cost. In addition, for participants who wish to obtain graduate credit, Salem State College will award, for a reasonable fee, three graduate credits.

Unlocking Linear and Quadratic Equations [for High School teachers]

Dates: Thursday, June 3, 2004, 3 - 6 p.m., July 19-22 & July 26-28, 8 a.m. - 2:30 p.m.

Follow-up Dates: September 30, October 28, and November 16, 2004

Location: Nathaniel Bowditch School, Salem, MA

For information and an application, contact:

Kai C. Liu

EduTron Corp.

5 Cox Road

Winchester, MA 01890

(781)729-8696 OR FAX (781)729-8718

CIE2004@EduTron.com

For detailed information, go to: http://edutron.com/0/news/2004CI_High_School_Brochure.pdf

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.

Data Analysis & Probability Workshop

Boston, Massachusetts

July 12 - 14, 2004

Sheraton Braintree Hotel

Registration Deadline: June 18, 2004

The NCTM Academy for Professional Development offers content-focused Workshops that feature rich investigations of mathematical concepts in a collaborative environment. Available in three levels -elementary, middle, & high school- the Workshops are facilitated by experienced classroom teachers who are experts in the field.

Data Analysis and Probability Workshop participants will deepen their content knowledge of how to collect, organize, and display data; analyze data using statistical methods; infer and predict based on data; and apply concepts of probability. Visit the NCTM website for more details on what you'll learn for your specific grade band and registration forms.

TO REGISTER, call NCTM Customer Service at (800) 235-7566 or fax your registration form to (703) 476-2970.

MATHWEST DATES TO REMEMBER

June

30th ~ MATHWEST Board Meeting
Friendly's, West Springfield

September

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

October

21-23 ~ NCTM Regional Conference
Providence, Rhode Island

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 there 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**.

Summer Professional Development

For many teachers, the months of summer provide an opportunity for professional development, along with, hopefully, rest and relaxation! Here is a series of tips to promote professional development between the end of one school year and the beginning of the next courtesy of Teacher's On-line.

1. Attend a Professional Conference

Research conferences for educators and locate one that appeals to you both professionally and personally. Visit the Center for Professional Development at www.pdkintl.org for listings of conferences for educators. Visit your state Department of Education website to discover summer workshops where you will not only network with colleagues from other districts, but also collect a plethora of materials for classroom use.

2. Enroll in a College Course

Seek information from local colleges or universities about summer classes or workshops. Many college campuses offer stimulating, interactive, condensed courses that not only invigorate teachers as life-long learners, but also equip them with new teaching ideas they can carry to their classrooms in the fall. From the ordinary summer-term class to Shakespearean festivals, ecological camping trips, writers' camps, or archeological digs, institutions of higher learning often cater to local educators during the summer months.

3. Participate in Division Offerings

Contribute to your school system by getting involved. Whether professional development, curriculum development, textbook adoption, technological advancement, or special student programs—whatever the need, consider getting involved. Such involvement allows you to network, voice your opinion, collect information, and possibly even influence classrooms division-wide.

4. Catch Up on Reading Professional Books and Journals

Match your professional interest to professional readings. Browse the shelves of the local bookstore or visit one of the larger bookstores online to investigate titles dealing with educational topics. Consider organizing a professional book group!

5. Rest, Relax, and Renew

Perhaps the most effective therapy for teachers is to rest, relax, and renew the spirit. Educating is demanding, emotionally and physically. Summer is the time to prepare mind, body, and spirit for the upcoming school term.

Just a thought... Just a thought...

How Does It Add Up? Views on Math Education

By Alfred Posamentier, Ph.D.

Once again it seems that mathematics has garnered front stage on the education agenda. Many people have had less than euphoric experiences with mathematics instruction in their formative years. Consequently there is anxiety about children's learning of mathematics, especially with parents who have had less than favorable experiences themselves. Currently there is a battle between two widely divergent philosophies in teaching mathematics. On the one side there are the mathematics educators who believe passionately in the "constructivist" philosophy and on the other side there is a group of conservative mathematicians who would like to see mathematics taught as it has been for the last many decades.

I have tried to look at the situation as objectively as possible. This is somewhat difficult for someone, as myself, who has grown to love mathematics early on and has been successful with the way it has been taught. It is a natural tendency to like what you are good at and then to praise the process that made that happen.

Our current dilemma is facing off those who successfully learned mathematics with those who feel that there must be a better way to learn mathematics, since so few learn it successfully and then develop a love for the subject. We are obviously not doing this task as well as we should, or else there wouldn't be so many people ready to admit (and be proud of it) that they were never good in mathematics. Would we have this math teacher shortage today if we had taught mathematics better at the lower grades?

In one of the best performing school districts in NYC a group of parents became unhappy with their perception that their children were coming home from schools incapable of doing arithmetic. Or, perhaps, in a way that they learned it. We should not yet abandon the notion that everyone should have a proper facility with arithmetic computations. These algorithms, properly presented and having passed the test of time, provide an important foundation for future study as well as useful insights into number theory. By the same token, youngsters should be educated to view arithmetic challenges in sophisticated ways that allow a deeper understanding of number relationships. For example, a youngster can use an algorithm to multiply 13 times 7, or be encouraged to approach this problem by considering this as the sum of the easy (mental) calculations: 10×7 and 3×7 and then (still without writing) come up with $70 + 21 = 91$. Understanding the relationships between fractions with different denominators provides greater facility in understanding quantitative comparisons. These understandings bode well when using the calculator. When the elementary instruction focused exclusively on rote memorization of algorithms, mathematical understanding was usually minimized or lost.

Since the calculator is so ubiquitous, the average person might then question why bother learning these algorithms when they will be rarely used. A mathematician might argue that a good knowledge of the division algorithm greatly facilitates algebraic manipulations later on. Is this a sufficient reason to drill our youngster with this skill? In the past our models of psychology and teaching were about behaviors. We thought that all we had to do as teachers was to explain concepts and procedures clearly, have learners practice, and then give them reinforcement and feedback. Now with technology, we have been studying the brain and how meaning develops. Neurobiologists have shown that algorithms are performed on a different side of the brain than the side used for mathematical thinking and that focusing on the practice of algorithms in the early years actually can impede the development of mathematical reasoning. Cognitive developmental researchers have also proven repeatedly over the last fifty years that meaning develops progressively. Mathematics cannot just be explained or transmitted. The brain chunks information in order to organize it and make sense of it, and thus new ideas are connected to prior conceptions.

We must keep some basic and indisputable tenets above the fray. Surely both sides of the argument will agree that it is of primary importance that a chief goal of mathematics instruction is to imbue our youngsters with the problem-solving skills necessary for the future study of mathematics and beyond. Done well, this should result in many more individuals appreciating the beauty of mathematics—something we thus far just haven't been able to achieve!

Dr. Alfred S. Posamentier is Dean, School of Education, and Professor of Mathematics Education at City College of



Don't be left in the dark! Update today!!

Please update your information in our database. Updated addresses, phone numbers, and email addresses will make it easier for us to send you important information regarding MATHWEST business. Without this information, you may miss out on meetings, newsletters, and updates. Please update this information as soon as possible. You can mail this information to MATHWEST or you can e-mail it directly to our new membership coordinator, Cecilia Goncalves at:

msgoncalves2002@yahoo.com

Help MATHWEST Help YOU!

The 20th anniversary of the first MATHWEST meeting is almost upon us. Times have definitely changed since that day, as well as the needs of MATHWEST members. Therefore, the MATHWEST Board of Directors needs your help.

We have become increasingly concerned with the dropping number of members and the low attendance at MATHWEST sponsored events. We are asking YOU, our fellow members, to give us some ideas and feedback. How can we better serve you? How can we help you become the best mathematics educators you can be? What direction should MATHWEST be headed?

Your input is important to us and to how we are able to serve you. Please take a little time out of your busy day to answer some or all of the following questions. E-mail your feedback to MATHWESTnews@yahoo.com or send them via USPS to the MATHWEST address on the back of your newsletter. Thank you for your time and consideration!

- What times and days would you like our general meetings to be held?
- Would you be interested in an all day conference (including a follow up) for PDPs?
- Do you have any topics that you would like to see discussed at the Fall or Spring Meeting? Or for a conference? Or a workshop?
- Would you like to see the newsletter on a website rather than receiving it via USPS?
- How can we promote membership in MATHWEST? Special offers? Membership packages? Special Promotions?

The Mary Alice Wilson Grant

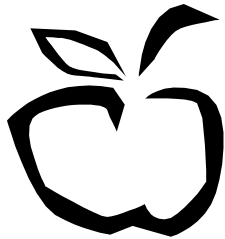
GRANT APPLICATION

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. Only 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 in the text of an e-mail message.

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

P.O. Box 784
Easthampton, MA 01027

MATHWEST NEWS

Are you ready for the summer?



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

Are you a member of NCTM? YES NO

Are you a member of another NCTM affiliate? YES NO

If yes, which one? _____

Amount Enclosed \$ _____

3 Year Regular (\$40)

1 Year Full-Time Retired (\$10)

1 Year Full-Time Student (\$5)

1 Year Regular (\$15)

Membership Category:

Area of Professional Interest:

Elementary

Middle School

Secondary

College

Application Type:

New Membership

Renewal

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

MATHWEST MEMBERSHIP APPLICATION FORM