

Math Murmurs



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*The Official Newsletter of the Association of Teachers of Mathematics in Massachusetts
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A Message from the President, Steve Yurek

We are all teachers. While it's true that most of our teaching takes place in our mathematics classroom, we are very much aware that the influence we have on our students extends far beyond those walls. It would be impossible for me to enumerate all the ways in which this influence is exerted, but one fact remains: we do it because we are their teachers, they are our students,



and we care about them. While caring about our students is a tremendously important part of what we do, we, as

sometimes neglect to consider the
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Dates to Remember:

Wednesday, December 14, 2011
Dine and Discuss
More details enclosed and at www.atmim.net

Thursday, January 12, 2012
Winter Conference
Boston College
Boston, MA

March 28, 2012 (Tentative)
ATMIM Spring Conference
Marlborough, MA

April 25-28, 2012
NCTM Annual Meeting
Philadelphia, Pennsylvania

October 24 - 26, 2012
NCTM Regional Conference
Hartford, CT

PreK-8 – What are we accountable for and when? The New Common Core Mathematics Frameworks

from the Dpmt.of Elementary and Secondary Education

School systems across the Commonwealth and across the country are gearing up to implement the Common Core State Standards in Mathematics. While the new standards won't need to be fully implemented until 2014, there are steps along the way. The first question that teachers ask about the new framework is, "How will the MCAS change during the transition years?"

The spring 2012 and 2013 MCAS tests for grades 3-8 will be built primarily around the standards that appear, in some form, in both the old and new frameworks. DESE has published a specific list of the standards that will be assessed for those MCAS administrations. These lists can be found at

(continued on page 2)

Dine & Discuss!

Getting Up and Running
with the Common Core

This is a co-sponsored networking event with ATMIM (Association of Teachers of Mathematics in Massachusetts) and Salem State Collaborative Project.

The goal of this event is to provide PreK - 12 teachers in Massachusetts with the opportunity to learn more about the Common Core State Standards, how they are incorporated in the Massachusetts Curriculum Framework and how their impact will be felt in the classroom. In addition, teachers will gain firsthand knowledge of the next phase of implementation. Participants will have the opportunity to network with each other over dinner and throughout the event.

(continued on page 3)

ATMIM Awards to High Achieving Students Nominations are Open

submitted by Ellen Metzger

In the spring of 2012, the Association of Teachers of Mathematics in Massachusetts will award a \$500 United States Savings Bond to several members of the graduating class from Massachusetts' schools, including one to a student from a vocational, technical, or agricultural highschool.

The awards will be determined on the basis of outstanding achievement or service in the field of mathematics. Each student must be nominated by a member of the mathematics department of his or her school. One of the awards will be presented to a high-achieving high school girl in memory of Anne Elliott Smith, a mathematics teacher at Buckingham, Browne, and Nichols School in Cambridge, a former member of the ATMIM Board, and a 1985 Presidential Award winner.

Each secondary school in Massachusetts is strongly encouraged to nominate a student. More information and official forms can be downloaded at www.ATMIM.net . Awards will be given in May.

Please note that the nominations must be received by **February 5, 2012**.

Membership report

Wildapricot.com – a plum of a site

Try out our new membership site wildapricot.org It allows you to register or renew your membership and even register on line for an ATMIM conference. We look forward to other ATMIM pages being moved to this improved site. We hope the transition will make it easier for ATMIM members and visitors to the web site to find the information that they need. As soon as the transition of all files to their new home is complete, www.atmim.net will automatically take you to wildapricot.org.

Welcome to the twenty-seven new members who were among those at the October 19 Dine and Discuss event at Lesley University. Please encourage first-year teachers and student teachers to join ATMIM at the special introductory rate.

(Common Core continued from page1)

<http://www.doe.mass.edu/mcas/transition/2012mathstandards.html> and

<http://www.doe.mass.edu/mcas/transition/2013mathstandards.html>

For spring 2013 MCAS, all the new third grade standards are assessable. For other grades, full implementation is delayed until spring of 2014. Our curriculum changes can't wait until 2013 or 2014, nor are the changes limited to the current MCAS grades. For example, if third grade is to meet the new standards by the end of the next school year, second grade needs to step up to the plate this year. For fifth grade to meet the new fraction standards in 2014, third and fourth grade need to focus on their new fraction standards this year and next.

For more information about the standards, see:

- Massachusetts framework (2011) <http://www.doe.mass.edu/frameworks/current.html>
- old/new framework crosswalk <http://www.doe.mass.edu/candi/commoncore/?section=comparison>
- assessment transition <http://www.doe.mass.edu/mcas/transition/?section=math>
- presentations and activities to introduce the new framework <http://www.doe.mass.edu/candi/commoncore/?section=resources>
- There are many projects under way related to the Common Core Standards. Information about some of them is available at <http://commoncoretools.wordpress.com/>. This site also has a description of the progressions for Counting & Cardinality, Operations & Algebraic Thinking (grades K-5) and Ratio and Proportional Relationships (grades 6-7).

Andover High Math Dept. -- an Intel Finalist

The Andover High School Mathematics Department was honored in September at an awards reception in Washington, D.C., as a finalist for the Intel Schools of Distinction Award. Eighteen finalists nationwide were presented with a \$5,000 award -- three each in elementary, middle and high school for math and for science.

"It is essential that U.S. schools invest in quality math and science education ... because such investment is critical to maintain U.S. competitiveness in a global economy" said Shelly Esque, vice president of Intel's Corporate Affairs Group and president of the Intel Foundation.

ATMIM extends its congratulations and is proud of the recognized excellence of ATMIM members.

ATMNE Does It Again

submitted by Steve Yurek

Warwick, Rhode Island was the place to be on November 9 & 10 as over 600 math educators from New England and throughout the eastern and central regions of the United States, converged on the Crowne Plaza Hotel for the ATMNE Annual Fall Conference. Attendees were treated to over 130 sessions/workshops, of which 6 were presented by Mike Shaughnessy (NCTM President), Hank Kepner and Johnny Lott (both NCTM past-Presidents). Speakers from Queensland, Australia and 16 states treated our conference-goers with presentations about Assessment, Technology, Pedagogy, Diversity, Math and Literature, numerous Content Areas, and much more. On Wednesday the conference offered a special strand on Math Coaching. On both days it provided a significant area in which attendees could participate any time in a "Make It / Take It" workshop. Exhibitors from over 40 educational companies/institutions displayed their wares and participated in 12 sessions that demonstrated their latest materials. Exhibitors, local merchants, restaurateurs, and the Discovery Channel donated hundreds of items that were used as door prizes and raffle items.

(Dine and Discuss continued from page 1)

Where: Lynnfield Middle School, 505 Main Street,
Lynnfield MA 01940

When: Wednesday, December 14, 2011 from 3:00pm to 6:30pm
Snow Date: Thursday December 15, 2011 (lets hope it is not needed, but you never know...)

Cost: FREE to ATMIM members, \$20 for non-members (which includes a 1-year membership to ATMIM)

James Bierdan, of Rhode Island College, was selected to present the Richard Balomenos Memorial Lecture, Views from the Back of the Classroom.

Jackie Mitchell from Portland Maine was chosen as this year's recipient of the Fr. Stanley J. Bezuszka, SJ award for excellence in Mathematics Education.

Thanks go to all the many attendees who donated 2 hours of their time to volunteer throughout the conference, and also to the many students (and advisors) from Rhode Island College, the University of Rhode Island and Keene State College (NH) for their invaluable assistance. Special thanks go to the dozens of committee chairs and co-chairs, and committee members who spent many months contributing to the planning of this conference.

Next year's conference will be held in conjunction with the NCTM Regional in Hartford CT, October 24-26, 2012

Schedule for the Evening

- 3:00pm - 3:15 pm - Check In
- 3:15pm - 4:00 pm - Overview of the Common Core
- 4:00 pm - 4:30 pm - Breakout Sessions (PreK-5, 6-8, 9-12)
- 4:45pm - 5:30 pm - Dinner
- 5:30pm - 6:30 pm - Breakout Sessions (PreK-5, 6-8, 9-12)

To register, click on the link below and fill out the form. You will receive a confirmation screen when your registration is complete. Please keep in mind that there are limited spots available, so register early!

Treasurer's Report

ATMIM Income and Expense
July 1, 2010 - June 30, 2011

Income	
Winter Conference	2,520
Spring Conference	9,800
Membership Dues	5,680
Other	121
Total Income	18,121

Expense	
Affiliate Dues	1,278
Board Expenses	2,199
Winter Conference	2,392
Spring Conference	12,867
Hall of Fame	293
Membership	879
Newsletter	2,073
Outreach	695
Scholarship	2,496
Other	129
Total Expense	25,301
Net Income	-7,181

In the fiscal year ending June 30, 2011, ATMIM spent a total of \$25,301, offset by income of \$18,121.

Our budget for the year called for expenses of \$36,500 and income of \$25,500. The difference of \$11,000 was a budgeted draw down of surplus generated by the NCTM Regional conference in October 2009.

Income was lower than budget, primarily due to a shortfall of \$6,600 in conference registration fees.

Expenses were also lower than budgeted, with conference expenses \$2,500 under projections. Other savings came from smaller than expected costs in nearly every category, resulting in a smaller than expected draw down of our previous year's surplus.

We know that we can expect substantial income once every three or four years from either an NCTM conference or an ATMNE conference. We use the surplus generated by these conferences to fund our ongoing work in the years in between. Our budgeting reflects the Board's commitment to providing good service to our members, and to maintaining a financially healthy organization at the same time.

Dine and Discuss

submitted by Steve Yurek

On Wednesday, October 19, 2011, ATMIM hosted its first-ever Dine and Discuss forum at Lesley University in Cambridge. The event was co-hosted by Lesley University and The Department of Elementary and Secondary Education (DESE), and the discussion focused on the 2011 Massachusetts Curriculum Framework (MCF) and its relationship to the Common Core of State Standards. The keynote was delivered by Life LeGeros, from the DESE, and Neelia Jackson from the Boston Public Schools, who gave an overview how the implementation of the MCF will be conducted. Life cited the responsibilities of the DESE, the individual school districts, and the classroom teachers, according to the timetable that will lead to complete adherence in regards to implementation and MCAC testing. The 70 attendees were treated to a substantial dinner (courtesy of McGraw-Hill Education), where the talking points of the keynote were discussed.

Following dinner, breakout sessions were facilitated by Joan Martin and Nancy Buell (Elementary School), Neelia Jackson and Mary Eich (Middle School), and Mark Healy and Steven Rattendi (High School). Lively conversation and interesting discussion all contributed to an increased awareness and knowledge of the MCF, and how it will impact the lives of our students and our teachers.

Other Dine and Discuss events are planned throughout the Commonwealth, with the next event scheduled for the middle of December. Check our website www.atmim.net for periodic updates.

Easy to use Statistics Software

submitted by Susan Weiss

TinkerPlots is produced by Keypress, Inc. I had tested TinkerPlots because I wanted a program that would enhance my students experience in graphing statistics in several different ways. During the summer, I took an online workshop to learn better ways of using TinkerPlots. It was a wonderful six weeks. In the spring the program was upgraded to include many new features. With this software, you can import data from the Internet, copy from a spreadsheet, or just enter the information manually. Once the information is entered, you can create dot plots, pie charts, amp graphs, histograms, and scatter plots by ordering, stacking, and separating data icons. I was impressed the ease of finding the mean, median, or box plot. It is easy to draw on the plot to find patterns and analyze the data. In addition, you can take the data and design and run probability simulations using the sampler engine.

This year I will be using the program with my fifth graders to analyze a survey that different children designed as fourth graders. Our goal is for children to investigate data and deepen their understanding of data analysis.

I highly recommend the program. Even you can only afford to purchase one copy, the program is a great resource to illustrate the meaning of experimental data analysis by using data from either the Internet or information the children developed.

(President's Message continued from page 1)

importance of caring for each other. This caring can manifest itself in many ways: an encouraging word to a colleague after a tough class, a word of congratulations for a great class, offering a shoulder when it's needed, etc. But there are other, less reactive ways to nurture growth in our colleagues. As classroom teachers, we are always alert to recognizing the potential greatness of our students. You know the ones: those who see things just a bit differently than their classmates, those who are not merely satisfied with a correct answer, those who look to take their math to the next level, those who are willing to help their classmates, and the list continues. Are we just as alert to our colleagues, especially our younger ones, who seem to have that special quality that sets them apart? My challenge to you is to notice them, and to tap them on the shoulder and sow the seeds of self-confidence in them. Does your Department Chair or Principal know what you know about them? Many people are so busy doing what they love to do, that they don't take the time to recognize the other talents that lie within them. Does your school have a math team that could use an additional coach? Is there a committee that would benefit from an alternative viewpoint? Does this person demonstrate the leadership skills that would make him/her a great choice to serve as a leader in a professional organization? Does your colleague have a special classroom project or talent that you feel would benefit other teachers in your district or beyond? In many cases, that tap on the shoulder may be just the thing to have that colleague take a step in a direction that allows them to continue being an influence on students by also becoming an influence on teachers.

ATMIM has a Mentor/Mentee Program that allows teachers to prepare for a future in such an endeavor. When you attend an ATMIM conference or an ATMNE conference or an NCTM conference, attendees always learn "pearls of wisdom" from the presenters. What you may not know is that many of these presenters are young teachers who have a great deal to offer. One of the great parts about the future is that it is unknown. What you do or say or recommend; whose shoulder you may tap, may have great impact on the future of that person, but more importantly, upon the future of the people that this person will ultimately touch. Every organization, including ours, is always welcome to new ideas and fresh approaches---is there any reason why you can't have a hand in that?

Aligned to STATE STANDARDS and the COMMON CORE!



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ATMIM Winter Conference: Motivating Mathematics!

Submitted by Steven Rattendi

Mark your calendars – January 12, 2012 – is the date of this year’s ATMIM Winter Conference. As in past years, the conference will take place at Boston College. The theme for this year is “Motivating Mathematics”.

Join us for an evening of formal talks by our presenters and informal discussions with colleagues over dinner. More information about this conference will be posted to our website in the near future and sent out via our email list. If you are interested in speaking at the conference, please contact Steven Rattendi or Steve Yurek. Contact information is available at www.atmim.net.

We hope you will join us and leave the conference with many ways to Motivate Mathematics!

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The Massachusetts Hall of Fame for Mathematics Educators Nominations are Open

submitted by Joe Caruso

During the 2000-01 academic year, the Board of Directors of the Association of Teacher of Mathematics in Massachusetts voted to create the Massachusetts Hall of Fame for Mathematics Educators to honor outstanding colleagues in their midst. Charter members were inducted in 2001. New members are selected from a group of nominees by members of the Hall of Fame.

Requisites

1. The educator has been involved in mathematics education in Massachusetts for a minimum of 20 years.
2. The educator has a distinguished record as a teacher of mathematics in Massachusetts.
3. The educator has made an extraordinary contribution to the advancement of mathematics education.

Criteria for Evaluating Nominees

Describe the impact the nominee has had on schools, school systems, or universities by:

- A. Introducing or participating in the development of new programs, or modifying existing programs in mathematics education.
- B. Conducting workshops and giving presentations locally, regionally or nationally...
- C. Authoring published mathematics or mathematics education articles, books or programs.
- D. Providing services to professional organizations.
- E. Demonstrating leadership in mathematics education at the state, regional, or national level.
(Previous mathematics education awards or citations received by the nominee should be listed here.)
- F. Demonstrating a continual search for knowledge.

Note that to be eligible for nomination, a nominee need not have achieved outstanding work in all of the above categories.

Nomination Requirements

Nominations are encouraged and should come from mathematics educators across the state. Nomination materials must include the following:

- Name, address, phone, and email address of the nominee.
- A two-page detailed description (provided by the nominator) of the ways in which the nominee meets the criteria cited above.
- The nominee's detailed, annotated resume.
- Two reference letters in addition to the detailed nomination.
- Posthumous and emeritus nominees are accepted.

Nomination and reference letters should be sent to the Hall of Fame Committee via email to Joseph Caruso at jcaruso@framingham.edu by Friday, February 10, 2012.

Hall of Fame Committee
c/o Joseph Caruso
Framingham State University
100 State Street
Framingham, MA 01701

Problems to	4.	C
Ponder answers:	5.	\$1056
1. 8 triangles	6.	4 numbers
2. 30¢ more	7.	$x = -2$ or 3
3. 87¢	8.	60

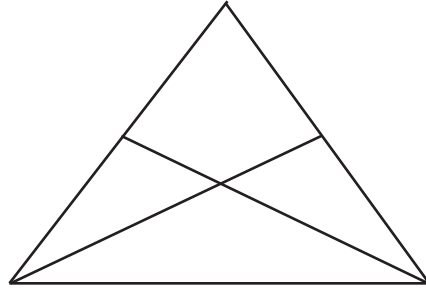
Problems to Ponder

Submitted by Polina Sabinin

Sample questions from Continental Mathematics League <http://www.continentalmathematicsleague.com>

Elementary School

1. How many triangles are there in the figure below?



2. Apples cost 25¢ each, oranges cost 35¢ each, and peaches cost 30¢ each. How much more does 3 peaches cost than one apple and one orange?
3. Kathleen needs 85¢ in stamps to mail a package. She only has 32¢ and 23¢ stamps. She has to put on more than 85¢. She puts on the lowest amount of postage possible over 85¢. How much does she put on the package?

Middle School

4. While working on his car, Carl tried the 1/2" wrench and it was too large. He then tried the 3/8" wrench and it was too small. Which of the following wrench sizes should Carl try next?
a) 3/4" b) 2/3" c) 7/16" d) 1/4"
5. Twenty-two 8th grade students chartered a bus for their trip to Denver. Just before they left 10 more students decided to go. This resulted in each of the original 22 students getting \$15 back. What was the charge for the use of the bus?
6. The sum of the digits in the number 994 is 22 ($9 + 9 + 4 = 22$). How many 3-digit even numbers are there that have 24 as the sum of their digits?

High School

7. If $(X + 3)^{(x-3)} = 1$, find the 2 values of x that satisfy the equation.
8. The number of square units of the surface area of a cube is greater than the number of cubic units of the volume until the side of the cube reaches a length of _____ units.
9. If $ab = 10$, $bc = 12$, and $ac = 30$, express the value of abc in simplest form.

Answers may be found at the bottom of page 7.