

# Math Murmurs



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*The Official Newsletter of the Association of Teachers of Mathematics in Massachusetts  
an affiliate of the National Council of Teachers of Mathematics*

## A Message from the President, Steve Yurek

I read an article the other day that told the story of a group of overseas students who came to Massachusetts for their high school education. These were not exchange students, here for a semester; they were to be here for their entire high school career. Why?



Because their parents believe that Massachusetts high schools are worth the sacrifice. Across America, and even the world, we are recognized as a symbol of educational excellence. Yet, the fact remains that Massachusetts acknowledges there is still room for improvement. In joining 45 other states in the adoption of the Common Core State Standards (CCSS), there is strong hope that the new frameworks can be a force for further improvement. Hopefully, the years ahead will bring answers to question such as:

- Will CCSS close many of the learning gaps that currently exist?
- Will CCSS provide a consistently implemented curriculum between districts

and states?

• Will CCSS achieve a level of mathematical understanding that each child needs?

• Will CCSS inspire our students to pursue further studies or careers in STEM?

These questions and others are important. It is our hope that CCSS will prove to benefit our children, but there is at least one thing that we must not allow to get lost in the shuffle. No program, no initiative, no referendum, no matter how well conceived it may be, will be successful unless there are qualified, dedicated, prepared and inspiring teachers standing before our students.

I urge you to take the time to review the activities that are listed within the Dates to Remember section of this newsletter, to make an effort to take advantage of the professional improvement that is offered, and to attend the offerings with your colleagues.

Best wishes for a healthy and happy holiday season.

## ATMIM Director Nominations Sought

Submitted by Neelia Jackson

Are you interested in being part of group of teachers and administrators that help to set the direction for the math community in the future? The Association of Teachers of Mathematics is now seeking the names of mathematics teachers interested in serving on the Board. The Board meets every other month to plan conferences and presentations. We discuss ways to support students through our Scholarship Program and math team, recognize teachers through the Mathematics Teacher Hall of Fame and train teachers through the Speaker Mentor Program. We also publish Murmurs and occasional notices to keep the membership well informed. We will be electing two board members and the president-elect at our Spring Conference in March. The nomination deadline is Feb. 1.

If you are interested or know a colleague who would like to become involved, please email me at [neelijackson@aol.com](mailto:neelijackson@aol.com)

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### Dates to Remember:

**January 10, 2013**  
ATMIM Winter Conference  
Boston College

**March 23, 2013**  
ATMIM Spring Conference  
Assabet Valley Reg Tech HS  
Marlborough, MA

**May 23, 2013**  
MassMATE Symposium  
Bridgewater State University

**April 17 - 20, 2013**  
NCTM Regional Conference  
Denver, Colorado

**October 24 - 25, 2013**  
ATMNE Regional Conference  
Killington, VT

**“Like us on Facebook to stay updated on upcoming ATMIM events!”**



# Recognition of Anne Collins' Outstanding Work

submitted by John Bookstone

ATMIM Board Member, Anne M. Collins, will be awarded the Nadine Bezak Award for Excellent Leadership and Service on Jan 24, 2013 in Orlando, FLA. The award is sponsored by the Association of Mathematics Teacher Educators (AMTE)

and is given every two years to a teacher educator who has made a significant impact on the teaching and learning of mathematics. Congratulations Anne. Way to go!!

## Massachusetts Hall of Fame for Mathematics Educators Nominations are Open

submitted by Joe Caruso

In 2001, the Board of Directors of the Association of Teacher of Mathematics in Massachusetts created 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 by members of the Hall of Fame.

### Prerequisites for Membership

1. Involvement in mathematics education in Massachusetts for a minimum of 20 years.
2. A distinguished record as a teacher of mathematics or math education.
3. An extraordinary contribution to the advancement of mathematics education.

### To Nominate a Colleague

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 or nationally;
- C. Authoring published mathematics or mathematics education articles or books;
- D. Providing services to professional organizations;
- E. Demonstrating leadership in mathematics education at the state or national level including mathematics education awards or citations received by the nominee;
- 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.)

### Please submit

- Name, address, phone, and email address of the nominee.
- Your two-page detailed description 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 nomination.

(Posthumous and emeritus nominations are accepted.)

Nomination and reference letters should be sent via email to Joseph Caruso, chairperson of the Hall of Fame Committee at [jcaruso@framingham.edu](mailto:jcaruso@framingham.edu)

**The deadline for submission is February 1, 2013.**

## Nominate a High School Senior for an ATMIM Award

submitted by Nancy Johnson

In the spring of 2013, the Association of Teachers of Mathematics in Massachusetts will award \$250 and a plaque to several graduating seniors from Massachusetts high schools.

The awards will be determined on the basis of outstanding achievement and/or service in the field of mathematics. Each student must be nominated by a member of the mathematics department of his or her school. Most of the awards are open to any member of the class of 2013. One of the awards will be presented 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) to a high-achieving high school girl. At least one award will be presented to a vocational school senior.

Each secondary school in Massachusetts is strongly encouraged to nominate a student. More information and official forms can be downloaded at [www.atmim.net](http://www.atmim.net). The deadline for nominations is February 8, 2013.

## Announcing ATMIM's Winter Conference

submitted by Steve Yurek

On Thursday January 10, 2013 ATMIM's Winter Conference will again be held at Boston College in Chestnut Hill. We will focus our attention on the mathematical practices outlined in the Common Core, and how these may be implemented in your classroom. There will be 12 sessions, equally divided to be of interest to elementary, middle, and high school mathematics teachers. We are fortunate to have Dr. Solange Lira (Program Director TESOL) and Dr. Sharyn Boornazian (Certification Director), from Lesley University as our keynote speakers who will inform us about the mandate from the Federal Department of Justice regarding the achievement gap in mathematics education. This mandate will affect all of us in our math classrooms, and will also play a role in future teacher certification, and re-certification, in Massachusetts.

This conference, with its intimate setting, is a great place to connect with your colleagues while keeping informed about current issues in Massachusetts Mathematics Education.

Registration is now open --- visit [www.atmim.net](http://www.atmim.net)

## NCTM Update

Submitted by Anne Collins, NCTM Director

The two regional conferences in Dallas and Hartford were great successes! NCTM is thankful for the tireless work of the program committee as well as the many volunteers. (The last regional conference of 2012 will have been held in Chicago by the time you read this.)

The Affiliate Services Committee (ASC) is busy planning the 2013 caucuses and delegate assembly. In response to suggestions from many of the regions, all regions will meet in one large conference room. The chair of the ASC, Chris Moody, will introduce all members of the committee, give an update and open for discussion the one resolution received by the November 1 deadline. The caucuses will then separate into their regions to discuss regional issues.

A major issue for NCTM right now is the fact that the Washington Metro is scheduled to take our Association Drive location. Over the past 40 years NCTM has outgrown this facility and had to lease space in the abutting building

to house our publications. It is time for a larger home.

In the most recent election in which Diana Briars was chosen as the president-elect, less than 10% of our membership voted. NCTM needs the affiliates' help to excite members to participate in voting.

President Linda Gojak has involved NCTM in one of the most exciting projects since Principles and Standards in School Mathematics that was updated in 2000. In conjunction with our work on the Common Core State Standards for mathematics, PROJECT 2014 will focus on instructional practices since what goes on in classroom is what impacts student learning and achievement. Steven Leinwand is the lead writer and has a wonderful, hand-picked writing team. To support the writing team there is a review team charged with reading and reacting to the drafts as they are produced. As the name indicates the publication date for release is April, 2014 in New Orleans.

## Dine and Discuss Update

submitted by Mark Healy

ATMIM started the year off with two Dine and Discuss sessions this Fall focused on the new PARCC assessment. The first one was held in Hopedale in October at Hopedale Junior-Senior High School, and the second one was held in Cambridge in November at Cambridge Rindge and Latin School. The total attendance exceeded 150 people.

The sessions discussed the new Partnership for Assessment of Readiness for College and Careers (PARCC) assessment that is planned to replace the MCAS assessment in the 2014-2015 school year. Educators from the Department of Elementary and Secondary Education's newly developed PARCC Educator Leader Fellows group facilitated the workshop. As the assessment is halfway through the development phase, educators got to understand the thinking behind the assessment and

understand the current development stage of the assessment. Presenters discussed the PARCC Model Content Framework, and how it can help teachers think about their implementation of the new 2011 Massachusetts Mathematics Curriculum Frameworks. Presenters also discussed the recently released Item and Task Prototypes to give participants a sense of the types of questions that will be used on the assessment. At the end of the session, participants walked away with talking points and helpful websites they could use with their schools to think about their next steps of implementation.

ATMIM will continue to reach out to communities across the state with the Dine and Discuss sessions. We welcome any suggestions on topics to ensure that we are helping to meet the professional development needs of our members!

## Nominations Sought for the Father Bezuska, S.J. Achievement Award

submitted by Steven Rattendi

ATMIM is seeking nominations for the the Rev. Stanley J. Bezuska, S.J. Achievement Award for Mathematics Teaching and Learning award. This is an award to honor the commitment and excellence of teachers of mathematics in levels PreK – 16. The nominee should be an outstanding teacher of mathematics or mathematics education both within their school, district, or institution of higher education and the ATMIM community of members.

### Award Criteria:

- 15 years of teaching mathematics PreK – 16
- demonstrated excellence in stimulating students in their mathematics learning
- history of presentations at ATMIM events
- current ATMIM board members are ineligible

**The deadline for nominations is February 15, 2013.** For details on nominating individuals for this award and for a listing of past recipients, visit [www.atmim.net](http://www.atmim.net) and click “Educator Awards.”

## Membership Report

Submitted by Joan Martin

As of November 20, 2012 ATMIM proudly has 352 active members. Representation across the grade spans is impressive. One hundred seventy-two members checked that their interest level is at the PreK-5; 106 members checked the 6-8; 124 members indicated the high school level while 31 members checked post secondary. This broad spectrum enriches our association. This was evident at our Dine and Discuss events. Members across the grades had the opportunity to engage in lively discussions related to the

teaching and learning of mathematics.

The interest in the Dine and Discuss events also helped spike the number of building memberships. ATMIM now has 11 elementary schools building memberships that include 99 members. We hope to increase this number. With the cost of the elementary building membership being \$25, it is a wise professional investment for elementary schools and their teachers.

## Problems to Ponder

submitted by Polina Sabinin

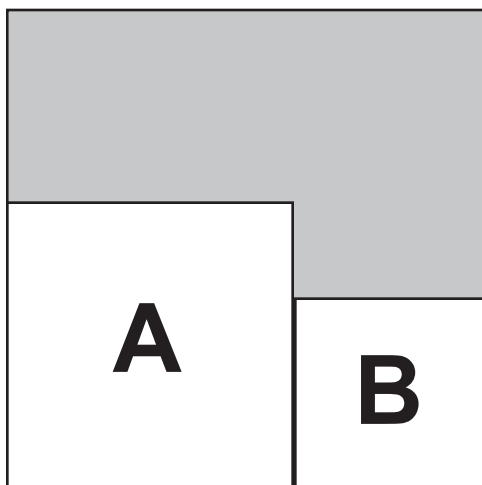
The Elementary and Middle School problems are from Math Olympiad Contest Problems, Volume 2 by Richard Kalman.

The High School problems are from Math League, High School Math Contests at <http://www.mathleague.com>

### Elementary School

1. Bob collects stamps. Each day he adds 4 stamps to his collection. At the end of 3 days he has 50 stamps. How many stamps does he have at the end of 10 days?

2. A square contains two squares, A and B, with areas of 16 square meters and 9 square meters, as shown. Find the number of meters in the perimeter of the shaded region.



3. The four-digit number  $A7A8$  is divisible by 9. What digit does A represent?

### Middle School

4. How many two-digit counting numbers exist such that the tens digit is larger than the ones digit?

5. A jar has exactly 10 blue marbles, 10 gray marbles, and 10 red marbles, and 10 green marbles. If I cannot see the marbles, what is the fewest number of marbles I must pick without replacement in order to guarantee that three of the marbles I pick are red?

6. The sum of 7 consecutive integers is 105. What is the sum of the least and the greatest of these integers?

### High School

7. For how many positive integers  $n$  does the square root of  $n$  differ from the square root of 100 by less than 1?

8. The four numbers  $a < b < c < d$  can be paired in six different ways. If each pair has a different sum, and if the four smallest sums are 1, 2, 3, and 4, what are the possible values of  $d$ ?

9. If  $a < b$ , then  $3^2 + 4^2 + 5^2 + 12^2 = a^2 + b^2$  is satisfied by only one pair of positive integers  $a$  and  $b$ . What is the value of  $a + b$ ?

Answers can be found on page 8

## ATMIM Presenter Training Program

submitted by Don Cameron

ATMIM provides a program to help interested teachers become proficient providers of professional development to their peers. For teachers who have little to no experience in making presentations, ATMIM will provide those wishing to become presenters with training and a mentor to help develop and deliver excellent workshops at conferences.

For teachers who have significant experience in making presentations, ATMIM will suggest or provide opportunities for those who wish to make future presentations. In recent years, we have had presenters go on to make presentations at ATMIM and ATMNE conferences and ATMIM's Dine and Discuss Meetings. One person has a pending application for presenting at an NCTM conference and one has made visits to several schools to train the

respective mathematics departments in the use of computer software in the classroom.

Last month, ATMIM reached out to the Independent School teachers in Massachusetts with the hope of expanding its network of members, presenters and mentors. Adding this group of teachers will continue to enhance ATMIM's growing resources and will continue to strengthen its contributions to the teaching of mathematics in Massachusetts.

For further information on the ATMIM Presenter Program, please visit the ATMIM website or contact ATMIM Board Member, Don Cameron [dcameron@brooksschool.org](mailto:dcameron@brooksschool.org)



## Problem Solving Skill Development—Helpful website

submitted by Susan Weiss

I am always looking for technology tools that enhance any math program and encourage problem solving skills for all students. Greg Tang has developed a website <http://gregtangmath.com> which fits those objectives. He offers puzzles for elementary students that encourage understanding place value and decomposition of numbers. There are puzzles for all ability levels. The puzzles use sensible strategies to build from one activity to another. For example there is a set of puzzles which help students to make 10s and 100s; puzzles that help students multiply by any number 1 to 10; puzzles unlocking ways to decompose numbers leading to a better understanding of the use of place value in our number system; and of course puzzles which encourage logical thinking. Each puzzle engages students in learning while having fun. There are activities that do not require any registration for the teacher that help you get started. I think once you start using the activities, you will get addicted and will want to purchase a class subscription well worth the \$20 cost. In addition to the learning games, you get amazing resources to download any time.

### Any News, Views or Advertising for the Next Issue of Murmurs

submitted by John Bookston

If you have appropriate news, an Op. Ed, a creative lesson or an Ad you would like to appear in the next issue of Murmurs (end of April), submit it to [jbookston@arlington.k12.ma.us](mailto:jbookston@arlington.k12.ma.us)

For advertising rates go to [atmim.net](http://atmim.net) and click on publications.

#### Answers to Problems to Ponder from page 5

- |    |            |    |             |
|----|------------|----|-------------|
| 1. | 78 stamps  | 6. | 30          |
| 2. | 22 meters  | 7. | 39 integers |
| 3. | 6          | 8. | $7/2$ or 4  |
| 4. | 45 numbers | 9. | 18          |
| 5. | 33 marbles |    |             |

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