

# 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 Rattendi

The end of this academic year marks the end of the first of my two years as President of ATMIM. It's the perfect time to reflect on what has gone by and think about what is to come.

ATMIM had another year with two successful conferences. Both the Winter and the Spring conferences had a wonderful line-up of presenters which left participants feeling refreshed with new thoughts and ideas to bring to their classrooms. Registration numbers are still not at the levels we would like. Our goal remains to increase awareness of and attendance at



our conferences.

We also brought some updates to our website including: access to PayPal – a wonderful feature that most of you have taken full advantage of when paying for membership and conference registrations; expanded use of social media with an active Twitter and Facebook presence; and “ATMIM Updates” via email to provide our membership with a nice taste of what is happening in the mathematics education world.

President’s message continued on page 2

## New Board Members Elected!

submitted by Steve Rattendi

In addition to all the great learning by all who attended the Spring Conference, ATMIM also held elections to its Board of Directors. Those not present at the conference were able to send in votes via email. There were three positions up for election: Secretary and two director positions.

Katie Aspel, currently the ATMIM Hospitality Chair and conference registrar, ran uncontested for the position of Secretary. Despite being in her first year of teaching at Canton High School, Katie has been involved with ATMIM for the past six years. Over those years, Katie has helped organize both the Winter and Spring Conferences playing a vital role with registration and logistics.

Joan Martin was re-elected as a Director.

Joan has served as the Membership Chair for ATMIM for the past three years, and will continue in this role into her next term. Joan retired from the Newton Public Schools earlier this year after an outstanding career as a mathematics teacher at the high school and elementary levels, and as an elementary mathematics coach and specialist. Joan has presented numerous times at ATMIM and ATMNE conferences sharing her expertise with many.

Michele Lippens was elected to the second Director Position. Michele is currently a Special Education teacher in the Cambridge Public Schools working with elementary school students in grades 3-5. She has a passion for helping elementary school students understand mathematics, and assisting all teachers in meeting the diverse needs of their students.

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### Dates to Remember

Look for ATMIM Dine and Discuss dates when you receive the August edition of ATMIM Murmurs”

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



### Problems to Ponder

Answers:

1. D
2. D
3. E
4. A
5. C
6. A
7. A
8. A
9. D

## Technology News

submitted by Susan Weiss

After attending NCTM in New Orleans, I looked at several apps for math instruction. NCTM continues to improve and revise their apps so that many can be used now on an iPad. There are five apps for mobile devices that can be downloaded at <illuminations.nctm.org/mobile>. All are free and easy to download.

Concentration is matching whole numbers, shapes, fractions and multiplication facts. I have tried it and have found it fun. You cannot save it from one sitting to another.

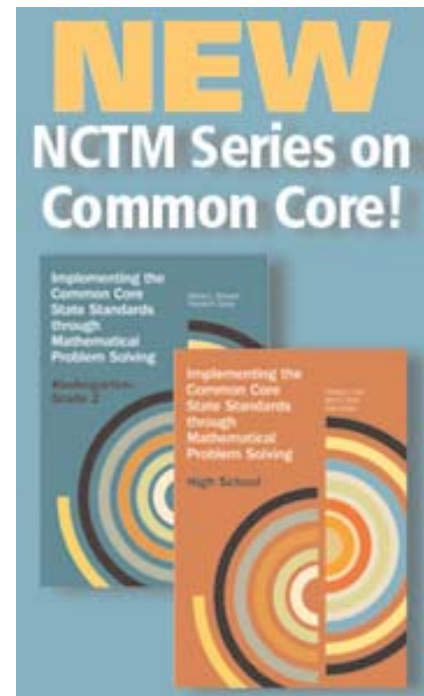
Deep Sea Duel is a digital version of 3x3 magic squares. There are lots of levels and deep thinking is needed. I have used this in

class as a way to show how to organize answers for best results. Also, my classes have looked at the patterns that are formed. A challenge is to use 4x4 magic squares.

Equivalent Fractions is a way to practice using fractions.

Okta's Rescue is for lower primary grades for counting.

Pick-a-Path is a logic game with different levels many variations of type of numbers a child can use. My students enjoy these games and I can send home the links so that the children can use them on either their computers or iPads.



**TOY THEATER**

Interactive Early Learning Activities

Visit [toytheater.com](http://toytheater.com) and see if it can help in your classroom.

### President's message continued from page 1

The ATMIM Board has been quite cognizant of the need to involve the newer teachers in our events. Not only do we believe that our activities can be particularly beneficial to them, but they are also the future leaders in mathematics education in our state. Offering free registration at events and reduced cost memberships for newer teachers proved quite successful this year. We had 23 educators in their first three years of teaching in Massachusetts take advantage of free registration for the Spring Conference!

Looking ahead, the NCTM Annual Conference will be in Boston next year. That event will be huge and will bring nationally recognized experts here for an awesome

conference. It will also preempt both the ATMNE Fall Conference and our own Spring Conference. This is the perfect opportunity for ATMIM to plan and organize a greater number of smaller workshops at locations around the state. Expect more information about these offerings in the early fall.

There you have it, my brief reflections on the year and a quick look ahead at what is to come. As the academic year comes to an end, I will reflect on my own teaching practice and look ahead to what I will work on improving for next year. I hope you and your colleagues will let us know how to make ATMIM an even better resource to help you grow professionally.

## How to Answer the Question, “Why Common Core?”

submitted by Mark Healy

The Common Core State Standards continue to be a subject of conversation for parents and community members. To help you in your discussions, read the following statement from NCTM entitled “Supporting the Common Core State Standards for Mathematics.”

The widespread adoption of the Common Core State Standards for Mathematics (CCSSM) presents an unprecedented opportunity for systemic improvement in mathematics education in the United States. The Common Core State Standards offer a foundation for the development of more rigorous, focused, and coherent mathematics curricula, instruction, and assessments that promote conceptual understanding and reasoning as well as skill fluency. This foundation will help to ensure that all students are ready for college and careers when they graduate from high school and that they are prepared to take their place as productive, full participants in society.

The National Council of Teachers of Mathematics (NCTM) is committed to helping educators interpret and understand the Common Core State Standards. The Council supports educators’ efforts to develop and put in place the associated comprehensive and coherent school, district, and state systems of instruction and assessment. Instruction and assessment that are aligned with

these standards must be rooted in and promote principles of access and equity. When properly implemented, the Common State Standards will support all students’ access to, and success in, high-quality mathematics programs. Such programs lead to knowledge of mathematics content and reasoning skills that enable students to apply mathematics effectively in a myriad of careers and in everyday life.

The Common Core State Standards are a significant component of systemic improvement in mathematics learning, but on their own they are not sufficient to produce the mathematics achievement that our country needs to be competitive in the global economy of the 21st century. Other factors are critical to realizing the potential of the Common Core:

- Substantial opportunities for ongoing professional development to ensure that all teachers understand and are prepared to implement the Common Core State Standards for Mathematics and that all administrators and policymakers understand teachers’ needs
- Accommodations in teacher evaluation systems to allow time for the profession and institutions to adjust and adapt to the Common Core State Standards before evaluation systems include accountability for student achievement as one element of a valid, multifaceted teacher evaluation
- Ample funding for education, including funding for preschool

education, to ensure that all students enter kindergarten with basic knowledge essential for school success

- Funding for research and implementation of Common Core assessments to ensure that these assessments meet the goal of measuring conceptual understanding and reasoning, as well as procedural fluency
- Adequate state funding to ensure that all students have access to Common Core assessments in formats that allow them to demonstrate their proficiency in all aspects of mathematics

Most important, all stakeholders must acknowledge that systemic improvement takes a number of years, and a long-term commitment to supporting the Common Core State Standards is necessary, even if initial assessment results do not show substantial improvements in student achievement.

Finally, for the Common Core State Standards to have long-term, positive effects on mathematics education, they must be dynamic. They must be updated periodically to reflect both emerging research on students’ learning and practitioners’ experiences with the current standards. NCTM is committed to working with other stakeholders to develop and implement a transparent, research-based process and realistic timetable for CCSSM’s improvement over short, medium, and long terms to best support high levels of mathematics learning by all students.

## Fr. Bezuska Mathematics Award Recipients

submitted by Steven Rattendi

Last year there were no nominees for the Fr. B Mathematics Award. This year, we had two highly deserving nominees so the Board decided to award the prize to both individuals. This year's recipients are Anne Collins and Ellen Metzger. Below are excerpts from nomination letters written on behalf of the awardees.

### Dr. Anne Collins, Lesley University

Excerpts from the Nomination letter written by Judith Zaino, retired Principal, Haverhill, MA

Anne has taught and been involved in mathematics professional development for over 40 years. She was the Statewide Mathematics Coordinator for the State of Massachusetts, worked for the Boston College Mathematics Institute, was the Director of the Achievement Center for Mathematics, and is currently the Director of Mathematics at Lesley University. She served for many years on the ATMIM Board and as its president. She was elected to the NCTM Board.

Anne's greatest gift is the inspiration for mathematics that she has instilled in countless numbers of educators in the state of Massachusetts. She knows how to teach math and to teach educators the skills and concepts that they need to teach our students. Anne empowers those around her to think about math in different ways and her real world approach helps make concepts understandable. At the same time, Anne provides activities that engage educators and their students, and actually make math fun.

Anne Collins has been awarded too many grants to mention. Her grants have allowed educators to receive training at a reduced cost. She plans workshop and courses on a schedule and in places that make them appealing to teachers.

Anne is a member of the Massachusetts Math Educators Hall of Fame and was a state finalist for the Presidential Award of Excellence. She received the ETA/CUISENAIRE Distinguished Service Award given to one national leader a year to recognize on-going commitment to mathematics teaching and learning.

Anne has made numerous presentations, at local, state and national workshops and conventions. She has a long list of publications and professional activities too numerous to

mention. Anne holds professional memberships in just about every council of teachers of mathematics, from Massachusetts, to Maine, to New England, and the National Council of Teachers of Mathematics.



This is a fitting award to recognize Anne's commitment to mathematics and her contribution to the community.

### Ellen Metzger, Lincoln Public Schools

Excerpts from the nomination letter written by Joan Martin.

Ellen is currently Math Specialist and District Mathematics Curriculum Leader in the Lincoln Public Schools, Lincoln, MA. She had been an exemplary classroom teacher at The Learning Center for the Deaf in Framingham, MA, before focusing her energy in 1998 on mathematics education exclusively, and then moving to the Lincoln school system in 2008.

Ellen's dedication to the teaching of mathematics to school age students is stellar. She has provided useful and thought-provoking workshops for teachers, administrators, and other math educators for the Association of Teachers of Mathematics in Massachusetts (ATMIM), Boston Area Mathematics Specialists (BAMS), and the National Council of Teachers of Mathematics (NCTM). She offers alternative approaches to instill enthusiasm for mathematics and speaks with authority on teaching children mathematics without being condescending. Her unassuming nature is refreshing.

Ellen has served on the ATMIM board and willingly took on any responsibility to further the works of the organization. Ellen always completed her tasks, such as scholarship chair, competently and efficiently. Being a team player, Ellen would work often behind the scenes at an ATMIM event and then present a well-planned workshop.

Ellen is a humble individual, who cares deeply for her students and for the teachers with whom she works so closely to improve their practice of teaching mathematics. Ellen embodies the essence of the math educator that Fr. B was.



NATIONAL COUNCIL OF  
TEACHERS OF MATHEMATICS

THE NATION'S PREMIER MATH EDUCATION EVENT

# 2015 NCTM Annual Meeting & Exposition

## Save the Date

### April 15–18, 2015

Boston Convention  
& Exhibition Center **Boston, MA**

#### MARK YOUR CALENDAR

NCTM's Annual Meeting & Exposition brings together the most influential leaders and accomplished practitioners in mathematics education for three-and-a-half days of high-quality professional development that you can't afford to miss.

Conference sessions will focus on the latest trends, technologies, and topics facing the profession, and with access to more than 700 sessions, you will leave this conference with the information, strategies, and tools that you can immediately use to improve the quality of education for students in the classroom.

Conference topics addressed will include the following\*:

- Assessing the Common Core State Standards for Mathematics
- Problems Worth Solving
- Supporting Students as Learners
- Supporting Teachers as Learners
- Integrating Mathematics with Other Disciplines

#### WHO SHOULD ATTEND?

- Pre-K–12 teachers
- Math teacher educators
- New and soon-to-be-teachers
- Math coaches and specialists
- Math researchers
- School and district administrators

*Plan ahead to attend the 2015 NCTM Annual Meeting & Exposition.*

Learn more at [www.nctm.org/boston](http://www.nctm.org/boston) and follow us on



\*Topics subject to change.

## ATMIM Board of Directors

For contact information please visit <https://atmim.wildapricot.org/>

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## Spring Conference Report

submitted by Nancy Johnson & Steve Yurek - Conference co-chairs

The 111th Annual ATMIM Spring Conference was held on Saturday March 29, 2014 at Hopedale Jr-Sr HS. Our Keynote Speaker was Anne Marie Condikey, from the STEM division of the Department of Elementary and Secondary Education, who spoke about the PARCC assessment and its effect on Curriculum and Instruction in the Commonwealth. Her luncheon remarks were preceded by the awarding of the Fr. Stanley J. Bezuska awards for excellence in Mathematics Education. This year's winners were Ellen Metzger from the Lincoln Public Schools and Dr. Anne M. Collins from Lesley University.

This year's Saturday all-day event saw over 100 math teachers from throughout Massachusetts attend over 30 sessions and workshops that ranged from topics as timely as the Common Core, as current as the latest technology, as innovative as Stories and Games in Math, and as thought provoking as Rethinking Mathematics Education in the New Era. Thanks to the presenters who traveled from Colorado, Maine, Massachusetts, New York, Rhode Island and Vermont to help make our event so successful.

There were two new facets to our conference this year. ATMIM offered free registration to all 1st, 2nd and 3rd year teachers and held three separate sessions that invited new teachers to share stories of their first few months in the classroom - to learn from seasoned teachers and their young colleagues alike. It was encouraging to see that over 20% of our attendees took advantage of these offerings. An endeavor like this does not happen unless many people contribute and a great deal of thanks goes out to ATMIM Board members: Katie Aspell, John Bookston, Donald Cameron, Sheri Flecca, Mark Healy, Neelia Jackson, Joan Martin, Alison Mello, Lisa Mikus, Steven Rattendi, Katherine Richard & Susan Weiss. Also a great deal of thanks goes to the folks at Hopedale Jr-Sr HS - the administration, the food services department, all the maintenance staff, as well as the technicians who serviced all the electronics equipment.

Since the NCTM Annual Conference will be held in Boston during April 2015, our next ATMIM Spring Conference will take place two years from now in 2016. But be on the lookout for Dine and Discuss workshops that will be offered periodically throughout next year.

# Problems to Ponder

Submitted by Polina Sabinin

Questions are from 2014 Math Kangaroo International Competition in Mathematics ([www.mathkangaroo.org](http://www.mathkangaroo.org))  
Math Kangaroo 2015 will be held on March 19, 2015

### Elementary School

1. Jacky wants to place the digit 3 somewhere in the number 2014. Where should she place the digit 3 to make the resulting five-digit number as small as possible?

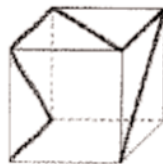
- A. In front of 2014
- B. Between the 2 and the 0
- C. Between the 0 and the 1
- D. Between the 1 and the 4
- E. behind 2014

2. Write each of the numbers 0, 1, 2, 3, 4, 5, and 6 in the squares to make the addition on the right correct. Which digit will be in the square with the question mark?

$$\begin{array}{r} \square \ \square \\ + \ \square \ \square \\ \hline \square \ \square \ ? \end{array}$$

- A. 2
- B. 3
- C. 4
- D. 5
- E. 6

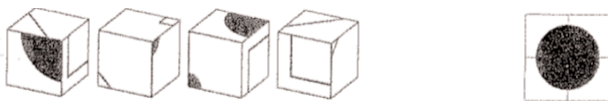
3. A thin, colorful ribbon is glued on a transparent plastic cube (see the picture). Which of the following pictures doesn't show the cube from any perspective?



- A.
- B.
- C.
- D.
- E.

### Middle School

4. We have four identical cubes (see picture). They are arranged so that a big black circle appears on one face, as shown in the last picture. What can be seen on the opposite face?



- A.
- B.
- C.
- D.
- E.

5. Several different positive integers are written on the board. Exactly two of them are divisible by 2 and exactly 13 of them are divisible by 13. Let M be the greatest of these numbers. What is the smallest possible value of M?

- A. 169
- B. 260
- C. 273
- D. 299
- E. 325

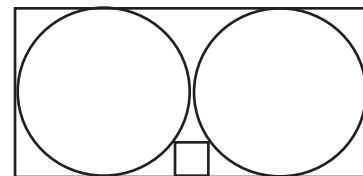
6. On a pond there are 16 water lily leaves in a 4 by 4 pattern as shown. A frog sits on a leaf in one of the corners. It then jumps from one leaf to another either horizontally or vertically. The frog always jumps over at least one leaf and never lands on the same leaf twice. What is the greatest number of leaves (including the one it is sitting on) that the frog can reach?



- A. 16
- B. 15
- C. 14
- D. 13
- E. 12

### High School

7. A square fits snugly between the horizontal line and two touching circles with a radius of 1. What is the length of its side? (picture used)



- A. 2/5
- B. 1/4
- C. 1/√2
- D. 1/5
- E. 1/2

8. Two regular polygons with a side length of 1 lie on opposite sides of their common side AB. One of them is a 15-gon ABCD... and the other is an n-gon ABZY... What value of n makes the distance CZ equal to 1?

- A. 10
- B. 12
- C. 15
- D. 16
- E. 18

9. In the forest of a magical island three kinds of animals roam: lions, wolves, and goats. Wolves can eat goats, and lions can eat both wolves and goats. However, because this is a magical island, if a wolf eats a goat, the wolf turns into a lion. If a lion eats a goat, the lion turns into a wolf. If a lion eats a wolf, the lion turns into a goat. Originally, there were 17 goats, 55 wolves, and 6 lions on the island. What is the highest possible number of animals remaining on the island after it is no longer possible for any animal to eat another?

- A. 1
- B. 6
- C. 17
- D. 23
- E. 35

## **Update on ATMIM Membership**

Submitted by Joan Martin

We now have 223 active ATMIM members with over 70 more pending. In the last month we have five new elementary building bundles added to our membership. It is encouraging to see the increase in the elementary teacher membership as well as a rise in new teacher involvement.