



AMTNJ News

Association of Mathematics Teachers of New Jersey

Volume XXXVII, Number 3

Winter 2011-2012



Mary Mitchell is the 2011 Max Sobel Award Winner

Inside this issue:

- Model Curriculum pg 1
- President’s Message... pg 1
- Calendar of Events ... pg 2
- Algebra I Assessment Returns pg 3
- Special Education Corner pg 4
- PAEMST Award pg 5
- Net Works pg 6
- PARCC Testing and Frameworks pg 7
- AMTNJ December Conference pg 8
- NCTM Regional Conference pg 9
- AMTNJ PD pg 9
- Tips for New Teachers pg 11
- Back Page Contest ...pg 12

NJ DOE to Develop Statewide “Model Curriculum”

In a letter dated December 19, 2011 to all District Superintendents and Charter School Leaders, Chief Academic Officer, Penny MacCormack described the New Jersey initiative and requested nominations for volunteers to work on curriculum development.

Excerpts from MacCormack’s letter:

“In order to most effectively support school and district level implementation of the CCSS, the NJDOE will develop a “model” curriculum (1.0) beginning with unit-based student learning objectives and formative unit assessments. This “model” curriculum will serve as an exemplar for districts and schools as they work to design the curriculum that will best meet the

needs of the students they serve.

“The plan for developing a quality “model” curriculum involves the engagement of state-wide experts as well as the national expertise available as a result of the adoption of CCSS by 46 states and the District of Columbia. In order to have the curriculum available for the 2012-2013 school year, we will need to begin work as soon as possible.

“The “model” curriculum will be developed for: ELA (K-12), Mathematics (K-12), Science (Biology, Chemistry, Physics), Social Studies (High School), Health/Physical Education (K-8), Visual/

continued on page 3

President’s Message, by Dianna M. Sopala

Mathematics Teachers—Top Priority

At the moment when the ball lit up in Times Square, my heart filled with anticipation, fear, and excitement all at the same time. I knew I was ready for my new position as AMTNJ president. The path that prepared me for this new position was simple. Twenty-one years experience teaching mathematics in urban and suburban high schools in both Southern and Northern New Jersey provide a perspective on how students learn. My



own education, especially taking courses at Montclair State University towards my MS degree, help me grow professionally. The support and opportunities I receive from the administrators at my school district, Northern Valley Regional High

School in Demarest, help develop my leadership abilities. And finally, working with wonderful people who volunteer their time to this organization help me understand different, successful

continued on page 10

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New Jersey

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*AMTNJ wants its
newsletter to be fair
and correct in every
way. If you have a
question or comment
about information in this
newsletter contact any of
the co-editors.*

NJ Colleges Offer FREE Workshops



The College of New Jersey

Sonya Kovalevsky Day

Dr. Kovalevsky was the first woman to receive her PhD in mathematics. Her accomplishments paved the way for future women mathematicians. Join us on

9 AM to 2 PM, Friday, March 9th, 2012

as we honor and celebrate her life and lasting influence through a series of workshops, panel discussions and presentations. We invite teachers to register themselves and one to six young women. Registration deadline: February 14 or until full. Call (609) 771-2019 or email Karen Clark: kclark@tcnj.edu



New Jersey Institute
of Technology

Math and Science Teachers

Free Hands-On Professional Development for STEM Teachers
Using Technology: Probes, Sensors, Simulations and More to Enhance
Understanding of Math and Science.

March 21 8:30 AM to 1 PM

Limited to 40 STEM Teachers, reserve your seat, now.

Contact: Chichi Ofoma at c2prism@njit.edu

AMTNJ Calendar of Events

Various Dates

Outreach and WebPD (see p. 9)

February 14

AMTNJ Winter Conference (see p. 6)

March 30

Deadline for Scholarship Nominations (see p. 10)

March 31

Teaching with Technology Conference (see p. 11)

April 25-28

NCTM Conference, Philadelphia, PA (see p. 6)

May 15

Deadline for 20th Annual Button Contest

June 29

Deadline for Max Sobel Award Nominations

October (TBA)

AMTNJ Two-day Conference

January 9, 2013

AMTNJ Special Education Conference

For updated information go to amtnj.org

continued from page 1

Performing Arts (K-12) and World Languages (Novice-Mid, Novice-High). Work will be done to effectively integrate Technology Standards and 21st Century Skills.

“It is important to note that we are not expecting or mandating the adoption of this “model” curriculum, but rather hoping that educators find the documents useful to develop and inform their own work. We will, in turn, inform the improvement of the “model” curriculum

through a web site system that allows teachers, curriculum specialists, and administrators to send feedback on all components of the curriculum, thus supporting the continuous improvement of the model and resulting in version 2.0.”

The complete letter is available on our website at amtnj.org under “Resources”.

Additional information from DOE reported more information and a tentative timeline for curriculum development:

- What a Model Curriculum Looks Like:
- CCSS aligned unit-based learning objectives (SLOs)
 - Quality unit assessments
 - Model lessons accessible through video (developed in year 2)
 - Model formative assessments and item bank (year 2)
 - Platform for continuous learning and sharing (year 2)

<i>January</i>	<i>February</i>	<i>March</i>	<i>April</i>	<i>May</i>	<i>June</i>
Teams finalized and contacted.	All standards aligned to Curriculum Units.	Units 1 and 2 developed and SLOs approved.	Units 1 and 2 Assessments completed and approved. Units 3 and 4 SLOs approved.	Unit 3 Assessments completed. Unit 5 SLOs completed.	Unit 4 Assessments completed/ approved. Unit 5 Assessments completed/ approved.

Algebra I Assessment Available

In a letter to all Chief School Administrators and Charter School Lead Persons dated January 9, 2012, Assistant Commissioner, Division of Standards, Assessments and Curriculum Penny MacCormack wrote:

“Last April, a memo was sent notifying districts that the consortium of states involved in the development and administration of the American Diploma Project (ADP) Algebra I and Algebra II assessments let the contract expire and, as such, New Jersey would no longer administer the Algebra I and Algebra II assessments.

“Since that memo was released, the department received inquiries from districts interested in administering the ADP Algebra I assessment and wanted the state to procure a contract directly with Pearson. After working on securing a contract over the last few months, the Algebra I assessment will be available for districts

to administer this spring. Since it is already halfway through the school year, **the Algebra I assessment will be OPTIONAL** to any district that wants to administer the assessment and the cost of the test booklets will be paid for by the state since the contract is through the state. NJDOE will also cover the cost of all scoring and score reporting. The testing window will be from May 21 through May 25, 2012. This is a flexible window so you will have the option to administer the assessment anytime during that week.

“Districts interested in administering the Algebra I assessment should contact Pearson at 1-866-688-9555 or ADP@support.pearson.com

The complete letter is available on our website at amtnj.org under “Resources”.

Special Education Corner

by Dr. Julie Norflus-Good

The Buzz in Special Education Common Core State Standards—Part 1



Once again there is a curriculum buzz in New Jersey education. The New Jersey Core Curriculum Standards, commonly referred to as the (NJCCS), are now infused with the National Common Core State Standards (CCSS) that were released in June 2010. New Jersey is one of many states that voted to adopt these standards.

The Common Core State Standards were created to uniformly prepare 21st century global citizens with relevant and real world preparation so that they can be successful in the workforce and in higher education. Ideally, these standards allow for consistency when students from across the United States learn the same concepts and skills. They are aimed at providing administrators, teachers and parents with clear and concise information that is needed to assist students in excelling academically. Ultimately these standards are aimed to provide equity for American Education so all children will obtain a consistent and quality education. A cadre of specialists including content professionals, state representatives, teachers, administrators and parents labored over the creation of K-12 English/language arts and mathematics common core standards. Ultimately the Council of Chief State School Officers (CCSSO) and the National Governors Association Center for Best Practices (NGA Center) coordinated the efforts and disseminated the information about the standards. Although the United States Department of Education did not fully participate in the preparation of the standards, Education Secretary Arne Duncan has adopted the Common Core State Standards as a requirement for the Race to the Top Competition. In addition, The Council for Exceptional Children (CEC) as well as other disability organizations assisted in and contributed to the development of the implementation

of the CCSS (CEC <http://www.cec.sped.org/Content/NavigationMenu/ProfessionalDevelopment/CommonCoreStandardsforStudents/default.htm>). With this in mind, the stakes are high for all students and even higher for children with special needs.

There appears to be a direct parallel between the philosophy of the CCSS and the Individuals with Disabilities Education Act (IDEA). Free and Appropriate Public Education, the cornerstone of IDEA, ensures equality and provides curriculum accessibility for all students, regardless of their disabilities. This standards initiative is similar to the cornerstone philosophy of CCSS.

The question now becomes the following: How do educators successfully implement these standards for students with special needs?

By now you guessed it - there is controversy. Primarily, this controversy revolves around the who's and the how's of implementing the standards. Who is taking responsibility? Who is modifying the curriculum? Who is taking ownership of the assessment models? Who is identifying the accommodations? How do you get the students to be on grade level? How is the teacher going to be trained? How are they going to be implanting from? How is the school/district affording the costs? While numerous advocacy groups, including the CEC, are working collaboratively with CCSSO and NGA, teachers still need to have some answers.

Part 2 will be continued in next month's edition of the AMTNJ Newsletter.

References:

Council for Exceptional Children (retrieved on December 28, 2011). K-12 Common Core State Standards (CCS) for the Instruction of Students <http://www.cec.sped.org/Content/NavigationMenu/ProfessionalDevelopment/CommonCoreStandardsforStudents/default.htm> Arlington, VA.

CEC Today (May, 2011). [Common Core Standards: What Special Educators Need to Know](#). Council for Exceptional Children. Arlington VA (retrieved on December 27, 2011).

Council of Chief School State Officers & National Governors Association. (2010). Application to students with disabilities. Retrieved from www.corestandards.org. (retrieved on December 5, 2011).

Council of Chief School State Officers & National Governors Association. (2011). Common Core State Standards Initiative. Retrieved from www.corestandards.org. (retrieved on December 10, 2011).

Presidential Awards for Excellence in Mathematics and Science Teaching

Nominations Still Open for 2012 PAEMST



President Barack Obama greets teachers in the East Room of the White House, before the Presidential Awards for Excellence in Mathematics and Science Teaching group photo, May 20, 2011 (Official White House Photo by Pete Souza).

The Presidential Award for Excellence in Mathematics and Science Teaching (PAEMST) is the highest recognition that a kindergarten through 12th-grade mathematics or science teacher may receive for outstanding teaching in the United States. Established by Congress in 1983, the PAEMST program authorizes the President of the United States to bestow up to 108 awards each year.

Awardees serve as models for their colleagues, inspiration to their communities, and leaders in the improvement of mathematics and science education. The National Science Foundation administers PAEMST on behalf of The White House Office of Science and Technology Policy.

Recipients of the award receive the following:

- A certificate signed by the President of the United States.
- A paid trip for two to Washington, D.C., to attend a series of recognition events and professional development opportunities.
- A \$10,000 award from the National Science Foundation.

Awards alternate between elementary and secondary teachers, as shown below.

The 2012 Awards will honor math and science teachers working in grades K-6. The deadline to submit applications is May 1, 2012. Complete information is available online at <http://www.paemst.org>. The New Jersey coordinator for PAEMST is Shirley Cooper, NJ DOE, shirley.cooper@doe.state.nj.us

Kathy Burgin Pleasant Valley School Mullica Hill, New Jersey, received the 2010 Award, which was announced in April 2011. To read about Kathy, please visit the NJDOE PAEMST Recognition page. (<http://www.state.nj.us/education/clear/pae/0910/burgin.htm>)

PAEMST winners are announced and honored the year following the receipt of the application. Each awardee receives a certificate signed by the President of the United States and a \$10,000 award from NSF. Awardees and their guests are honored during events that take place in Washington, DC. These events include an award ceremony, celebratory receptions, professional development programs, and discussions with policy-makers on how to improve mathematics and science education. The 2011 Awardee will be announced before April 2012.

	Application Open	Nomination Deadline	Application Deadline
Elementary Teachers (K-6)	Fall 2011	04/01/12	05/01/12
Secondary Teachers (7-12)	Fall 2012	04/01/13	05/01/13

AMTNJ “Net Works”

by Brian Rawlins

As many of us are approaching the halfway point in the year, I hope you are hitting your strides in your classroom. I find that during this time I have identified where each of my students are in their mathematical understandings, started to meet their parents, and am working diligently to facilitate everyone through the curriculum. If the time on tasks is starting wear on the students,

or there are students that need extra support, or want an extra challenge, this is a great time to share with them online sites that will support and propel them through different concepts. I wish you all the best as we continue to keep our kids on the math train!

Figure This!: www.figurethis.org

Figure This! challenges families to provide interesting math challenges that middle-school students can do at home with their families. Each challenge features a description of the important math involved, a note on where the math is used in the real world, a hint to get started, complete solutions, a “Try This” section, additional related problems with answers, questions to think about, fun facts related to the math, resources for further exploration. Cartoon characters named Polygon, Tessellation, Exponent, Tangent, and Axis illustrate the challenge features. They think math is great!



The Singapore Math:

www.thesingaporemaths.com

The main objective of this site is to provide students with an effective learning tool to assist them in mastering the art of problem solving. It covers a wide range of topics and methods so that every lesson is a journey of discovery. This also provides teachers with ready-to-run math lessons for the classroom.

Khan Academy: www.khanacademy.org

Students can make use of an extensive video library, practice exercises, and assessments from any computer with access to the web. Coaches, parents, and teachers can have visibility into what their students are learning and doing on the Khan Academy. With a library of over 2700 videos, students can get a visual tutorial on K-12 mathematics.

Do you have a favorite website you use and would like to share with other mathematics teachers in NJ? Send us the url with a short paragraph explaining how you use the site. Send your name, school address, and email to Brian Rawlins, Wietecha, AMTNJ Member at Large, brawlins@spfk.org. AMTNJ will publish your best ideas in upcoming editions of the Newsletter. Please let us know if we may publish your contact information.

NCTM Annual Meeting and Exposition

April 25-28, 2012

Philadelphia, PA

Register by March 16 and save 36%

www.nctm.org/philly

Preparing for Assessments Under the Common Core

AMTNJ Winter Conference—Keynote: J. Michael Shaughnessy, NCTM President

Tuesday, February 14, 2012

Crown Plaza, Monroe Township

For Session Details and Registration go to: amtnj.org

PARCC Prepares for 2014-2015 Test Administration

The following is an excerpt from a PARCC Press release. The complete article can be found on our website amtnj.org under "Resources".

WASHINGTON, D.C. December 30, 2011 – The Partnership for Assessment of Readiness for College and Careers (PARCC), a 24-state consortium working together to create next generation assessments in English language arts and mathematics, today released through the Florida Department of Education, PARCC's fiscal agent, the Item Development Invitation to Negotiate (ITN). The ITN lays the foundation for the major components of the PARCC assessment system as it will procure the development of English language arts/literacy and mathematics items, tasks and related materials for the mid-year, performance-based, and end-of-year assessments.

The procurement will generate a large bank of items to support the construction of assessments for grades

3-11, which will be given in PARCC states beginning in the 2014-15 school year.

Both the design of the assessments and the procurement strategy are designed to reduce operational costs for states. The large bank of items developed will allow the consortium to measure the full range of the CCSS and reduce costs for multiple administrations of the assessments.

Vendors will have until January 17, 2012 to submit questions about the ITN through Florida's procurement office. PARCC's evaluation committee will begin evaluating the proposals in February 2012 to determine which proposals move to the negotiation phase. A negotiation team will meet with those vendors in March 2012. Contracts will be awarded in April/May with work commencing immediately.

PARCC Model Content Frameworks

Frameworks provide guidance for common assessments in English, mathematics

The following is an excerpt from a PARCC Press release. The complete article can be found on our website at amtnj.org under "Resources".

WASHINGTON, D.C. November 9, 2011 – The state-led Partnership for Assessment of Readiness for College and Careers (PARCC) today released Model Content Frameworks that will be used to inform the development of item specifications and blueprints for K-12 assessments in English and math. The frameworks also provide support and guidance for implementation of the Common Core State Standards.

The frameworks were created through a collaborative process that included state experts and writers of the Common Core State Standards. Nearly 1,000 individual

comments were submitted from K-12 educators, principals, superintendents, higher education faculty, school board members, parents and students. The writing teams took that feedback into account when revising the model content frameworks. Tamara Reavis, chair of the 14-state PARCC working group on implementation of the Common Core State Standards and the Director of Assessment and Accountability for the D.C. Office of the State Superintendent of Education, said the frameworks will support states and districts in their own curriculum development efforts.

"The frameworks build a bridge between the Common Core State Standards and the PARCC assessment system that will be a valuable tool for states as they implement the standards in the coming years," said Reavis.

December 6, 2011— AMTNJ 4th Annual

Special Education—Mathematics—Language Arts—Science Conference



Top: L-R Dianne Burns, math; Mary Iovacchini, Special Ed; Clearview High School

Right: L-R Sayreville teachers Jackie Dobas, Andrea Latz

There are a lot of shared strategies between LA and Math. . . like graphic organizers

— Kelly Marino



L-R Pemberton teachers Vicki Haba, Special Ed math; Kelly Marino, Special Ed LA; Barbara Flanagan, Special Ed math



L-R Dianna Sopala; Stephanie Smallstey (iPad 2 drawing winner) Special Ed & math, Rutherford High School; John Hammett. Comcast donated the iPad 2 to AMTNJ through St. Peter's College.

It's been great to gather new ideas and collaborate with other math teachers — Vicki Haba



Above: Conference organizer Joan Vas

Right: L-R Plainfield teachers Zena D. Young, 4th grade math & science; Latonya Jones, 6th grade math (Zena was her mentor)

I won an entire class set of problem solving materials — Latonya Jones



L-R North Plainfield: Kourtney Karl, 1st grade; Michele Motichka, 3rd grade

All three of the workshops I went to have been great. The first was hands-on; the second was technology; and the third was a discussion of the CCSS — Michele Motchicka



Left:
L-R: Margie Kling, Annapolis, MD,
grade 6 St. Mary's Elementary
School, Mike Edwards, Godwin MS,
grade 7 Prince William County, VA



Above:
L-R Jenifer Rohrberger, The River School in
Washington DC, Lindsay Burris, VA School
for the Deaf and Blind, Staunton, VA

Right:
Bergenfield, NJ teachers presented at
the Regional Conference.



Above Center Picture: Examining the IMPACT of UDL in Special Education Mathematics Instruction: The NIDOE Improving Partnerships and Active Collaboration for Teaching (IMPACT) grant has provided Universal Design for Learning (UDL) training, coaching, and 21st century tools to enhance classroom instruction: **Bergenfield** IMPACT teachers Leselie Malara, Lovely Samuel and Lauren Rogers described their invaluable experiences at the NCTM Regional Conference.

REMINDER

AMTNJ Memberships Expired on December 31

You can renew at any time

For details, visit our website amtnj.org

AMTNJ Professional Development

There are four ways to receive Professional Development through AMTNJ

Conferences

Online through our WebPD

Outreach — face-to-face PD in various locations

PD on Demand — Our PD comes to your location

We have a Speaker's Bureau with excellent, qualified math professionals who cover all grade bands,
Pre-K through college

Visit our website for details: amtnj.org

*President's Message***Mathematics Teachers—Top Priority***continued from page 1*

approaches to reaching the same goals. I am honored to serve as your 2012 president. I welcome your thoughts, concerns, and ideas.

During the past 21 years, the teaching profession has changed drastically. When I first started teaching, most students, teachers, and schools had no connection to the Internet. Now, our iGeneration students can't live without their computers, iPods, iPhones, and iPads. How are we going to prepare these students for our highly technological and communicative world? As we move forward using these devices in the classroom, many teachers are going to need help creating new lessons integrated with the technology. Currently, AMTNJ offers online learning communities, conferences, and professional development through our Outreach programs. In March, we will hold a technology conference focused on using interactive whiteboards.

One of the AMTNJ's goals this year is to help teachers prepare for the Common Core assessments through professional development, technology, and resources on our new website at www.amtnj.org.

Another AMTNJ goal is to be a resource for all mathematics teachers—to provide teachers with the best resources, methodology and professional development to effectively teach mathematics to ALL New Jersey students. This year we plan to offer:

- website improvements
- resources and lesson plans for the classroom teacher

- conferences such as our two-day conference in October, our winter conference, and our popular Special Education conference
- summer institutes—an Algebra I Summer Institute and a Statistics Summer Institute, which will be multi-sessions for both middle and high school teachers who have never taught the in-depth statistics required on the Common Core Assessments
- WebPD sessions, Outreach, and online Learning Communities
- a new, December, middle school math contest allowing students to compete against each other

Since the focus this year is you, the mathematics teacher and your growth in the profession, I welcome any suggestions on how AMTNJ can facilitate in your evolution to being the best 21st century teacher. Additionally, I am open for suggestions on how to improve AMTNJ's services. To find out more, go to our new website, www.amtnj.org, our Facebook page, www.facebook.com/amtnj.org and follow amtnjorg on twitter. AMTNJ is always rethinking and improving services for our members. New Jersey's mathematics teachers are AMTNJ's top priority this year.

Dianna M. Sopala, President, AMTNJ

The AMTNJ Annual Scholarship Awards Drive

Each year AMTNJ encourages members to sponsor a scholarship applicant. Scholarship applications are accepted from December through March and the committee makes its final decisions early in the spring.

***Applications are available at amtnj.org/scholarships
and must be submitted by March 30, 2012.***

Requirements:

- Each applicant must have a current AMTNJ Member as his/her sponsor and
- Applicants must also be applying to a college with Math Education as their career goal.

Please note: AMTNJ Scholarships are supported by membership donations, which are fully tax deductible.

Tips for New Teachers

by James Clayton

This month's teaching hint comes from Sera Clayton, a teacher in Red Oaks School in Morristown

Don't forget the concrete – at every grade!

Sera writes:

Think about all those stacked tupperware® bins filled with base 10 blocks, unifix cubes®, and other manipulatives taking up space on every math teacher's shelf. They grow dusty each day because in a time pinch, teachers do not feel the need to “waste” precious minutes in the taking out, distributing, and collecting of these materials. What they forget, though, is how valuable these can be to the learning process.

For an elementary student of any age, learning an abstract concept such as a mathematical operation requires careful scaffolding. It may not be necessary to have every student in a class use the manipulatives (depending on how much each student has mastered a concept already), but it is crucial to have every student who is *beginning* to learn a concept using manipulatives. There is a journey to abstraction (Singapore math proposes a third, “pictorial” step in which students try an operation concretely, pictorially, then abstractly). For instance,



when learning addition with carrying over for the first time, the teacher should demonstrate how to combine two numbers together using base ten blocks. After the child has had guided practice and has mastered the process, the teacher can demonstrate how to draw the process on grid paper. Once the child can comfortably perform the operation drawing pictures, the teacher can begin to demonstrate the abstract algorithm while drawing connections to how the child added using blocks and drawings.

Most lower elementary teachers utilize manipulatives for addition and subtraction, though upper elementary teachers tend to rely on demonstrating a variety of abstract algorithms for multiplication or division, rather than modeling it out concretely. There are several concrete materials, from base ten blocks, an abacus, or value discs, that a teacher can use to model multiplication (use base ten blocks to make an area model, for instance!). Almost every mathematical algorithm can be broken down into a manipulative activity—and should be! Not a second is wasted when children are using manipulatives to build real understanding of an abstract idea.

AMTNJ Conference: Teaching with Technology
Interactive Whiteboards, SMART Boards and More

Schalick High School, Pittsgrove, NJ

Saturday, March 31, 2012

9:00 AM–2:30 PM

For Session Details and Registration: amtnj.org



Association of Mathematics
Teachers of New Jersey
PO Box 829
Red Bank, NJ 07701

Non Profit Org
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Bellmawr, NJ

Back Page Problem Contest

The Farmer and the Squares

A farmer decided to partition a rectangular part of her field that is 1135 feet by 352 feet into a set of square pieces in the following manner. (All the sides of the squares must be whole numbers of feet). She makes as many of the largest possible squares she can (that is she starts by sectioning off three 352 feet by 352 feet squares). Then with the remaining rectangular piece she uses the same process over and over (sectioning off the largest possible squares) until she must make 1 foot by 1 foot squares. How many one foot by one foot squares does she end up with?

Note: one way to do this is by drawing a picture and cutting off the appropriate squares while another way is to write $1135/352$ as a continued fraction. The denominator of the last fraction is the answer.

The Solution to the Fall 2011 Backpage Contest is: It would take Bob 40 minutes.

The winner, randomly selected from all correct entries is: Mike Ehrlich, Teacher of Mathematics, Franklin HS, Somerset, NJ. Mike will receive a one-year free AMTNJ membership.

To enter the Backpage Contest, submit your answer by March 31, to Dr. Bruce Bukiet, Associate Professor of Mathematical Sciences, New Jersey Institute of Technology, Newark, NJ 07102 or email him: bukiet@admin.njit.edu

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