



Please volunteer to help at the OCTM Conference in Cincinnati. Click [here](#) for the volunteer form, or contact Debora Kuchey at kuchey@xavier.edu for more information.

The Ohio Council of Teachers of Mathematics

Newsletter

Volume 98 + n



September, 2009

Mathematics: A Bridge to Your Future

2009 OCTM Conference November 12 - 14

Don't miss the 59th annual meeting of the Ohio Council of Teachers of Mathematics in Cincinnati, Ohio, November 12 - 14, 2009. Former NCTM President, [Cathy Seeley](#) is the keynote speaker on Thursday. She will also have a book signing on Thursday afternoon. Then you will enjoy the Games Extravaganza from 4:00 - 6:00 pm where you can learn about a variety of mathematical games and puzzles for your classroom. You might even win one to take with you!

Mathematics consultants from the [Ohio Department of Education](#) will make several presentations throughout the conference. This is a great opportunity to hear the latest updates on the new initiatives in Ohio that will impact all of our students. Refer to the [ODE Update](#) on page 5 of this newsletter for more information.

Make reservations now for the annual OCTM Awards Reception where educators from all regions of the state will be honored for their outstanding service. The reception will be Friday evening in the Hyatt Regency Ballroom A at 6 pm. Just before the Awards Reception pre-service and new teachers are invited to network with colleagues and mingle with OCTM Leaders and university faculty while enjoying food and beverages in the Hyatt Sungarden from 4:30 to 6:00.

The closing session of the conference will be a performance of "[Calculus, the Musical](#)," a comic musical review of the concepts and history of calculus that has caused a sensation across the country. In fact, it has been selling out theaters with audiences whose mathematical interest ranges from experts to phobics. You don't need to know anything at all about calculus to enjoy this hilarious performance. Theater goes might pay \$15, but your registration for the full conference (or one day registration for Saturday) includes a ticket this performance on Saturday, November 14th at 1:00 PM. Please pick up your ticket at the hospitality table in the Duke Convention Center. See an advertisement later in this newsletter to find out how to get tickets for students or others who are not attending the conference.

Click [here](#) for Registration and more information.

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Important Dates:

[OCTM Conference
Cincinnati, OH
November 12-14, 2009](#)

[NCTM Conference
San Diego, CA
April 21 - 24, 2010](#)

****How will YOU be active in helping to shape the future of our profession this year?**

President's Message

- Kim Yoak, OCTM President

YOU can help to shape the future of mathematics education in Ohio!



As this school year begins, I would like to share with you a few of the opportunities that you, as an OCTM member, have had or will have to be an active participant in changes in mathematics education leadership and policy during the next year and beyond.

First, I would like to thank each of you who voted in the 2009 OCTM election, which continues to draw more and more votes each year now that we are able to cast votes online. I would also like to offer heartfelt thanks to Laura Anfang, our District Director At-Large, who once again coordinated the nominations process. I am pleased to announce the election results ([see page 4](#)). These officers will be officially inducted at the state conference in November. I truly look forward to working with each of these leaders, and I know that they will serve our state community very well.

Second, the Ohio Department of Education and specifically, the ODE mathematics team, has been hard at work for several months as the mathematics standards revision process has begun. When public drafts of the standards are released later this fall, YOU will have the opportunity to provide feedback, both as an individual and also through forums around the state, some of which will be sponsored by OCTM. Please watch for your chance to provide input, as the window will necessarily be brief to allow ODE to maintain the schedule set by the legislature. I am serving as the OCTM representative on the Mathematics Standards Advisory Committee, and I must commend our state consultants and the writing groups for their tremendous work completed to date.

Finally, I am glad to announce that OCTM has appointed Katie Hendrickson of Ohio University as our first Advocacy Coordinator. Katie has included a legislative [update](#) in this newsletter, and I encourage you to read this and to stay tuned for future communication from Katie as well as possible requests to provide feedback on issues affecting OCTM and mathematics education in Ohio. Katie will also be seeking small groups of educators to write letters and position statements on behalf of OCTM. We are pleased to have her as a new member of the board.

Important Notice to all OCTM Members: Proposed Constitutional Changes

- Mark Jaffee, Constitution Committee Chair

The following proposed Constitution changes will be presented to the general membership at the OCTM Business Meeting at 4:00 pm in Convention Center Room 262 on Friday, November 13, 2009, as part of the [Annual Conference in Cincinnati](#):

The first recommendation is to amend Article V, Paragraph 3 to read: At all meetings of the Board a quorum shall consist of not less than three-fifths of the statewide elected officers. Any presidents of active local affiliates (or their designees) in attendance at board meetings may also vote.

Article II, Section B of the bylaws currently begins with the following. "The local council, in order to become and remain an affiliate of the OCTM, shall:" The second recommendation which applies to Bylaws Article II, Section B, Paragraph 2 states: "file, with the Affiliate Services Committee a copy of the OCTM Local Affiliate Annual Report."

The contents of the OCTM Local Affiliate Annual Report, by the way, will be determined by the Affiliate Services Committee and will include such information as the names of the officers, the constitution, and activities of the affiliate during the year and any other information that the committee feels is necessary to know.

OCTM Activities Update

Regional events will be planned for 2009-2010

Have you ever wanted to attend an OCTM state conference but were unable to do so because of difficulties with travel, funding, finding a substitute, or other issues? This year, we hope that you will be able to participate in an OCTM regional professional development event, as these events will be scheduled in each of the seven districts other than the Southwest District, which is sponsoring the state conference in Cincinnati in November. Watch for further information about these opportunities soon.

Special Interest Groups new for 2009-2010

Because OCTM would like to provide members with additional opportunities to network and collaborate with colleagues around the state on topics of mutual interest, the organization will begin to create Special Interest Groups during the upcoming school year. These groups will meet at conferences but will also have the ability to talk online and via phone conference. Two of our Vice Presidents, Anne Hambrick and Caroline Borrow, are coordinating this new project, and they will be working to organize and publicize the groups at the annual conference and as the year progresses.

Website redevelopment progresses

The work on our new secure, interactive website continues and will allow members to join OCTM and register for events online, as well as allowing OCTM to offer many new online activities and services. The website committee, excellently led by OCTM treasurer Ruth Hubbard, expects to see a trial version of the site in the next few weeks, and we hope that the full site will be launched in mid-autumn. Watch for more information in future communications!

New Website Editor sought

With the advent of the new website this fall, OCTM will be appointing a new Website Editor. Dan Brahier has graciously and tirelessly served in this role during the last year, but his role as co-chair for the OCTM 2011 conference and his ongoing university work have created a need for him to tender his resignation from this position. The new website, once online, will still be updated as needed by an OCTM volunteer, and the developers assure us that this task will be relatively routine for someone who is accustomed to such work. If you are interested or know someone who might be, please contact Kim Yoak at kjyoak@gmail.com.


Would you like an OCTM board member to speak to your group?

OCTM board members would love to share our enthusiasm about our professional community with mathematics teachers and pre-service teachers around the state. If you would like to schedule such a visit, please contact Kim Yoak at kjyoak@gmail.com.

Manuscripts sought for Ohio Journal of School Mathematics

This peer-reviewed journal, edited by Ed Laughbaum of The Ohio State University and Todd Edwards of Miami University, is published twice a year and is a wonderful medium for Ohio educators to share ideas and beliefs about the teaching and learning of mathematics with others. Visit <http://www.ohioctm.org/ojsm.htm> to find out how to submit a potential article.

The 2010 OCTM State Mathematics Tournament will take place on Saturday, February 27th. Grading will again be held at Lakota West High School on March 6th. If interested in volunteering to help grade next year's test, please visit the OCTM tournament website at www.OCTMtournament.org and click on "Graders" in the left hand column to sign-up as a volunteer.



1-800-449-OCTM
www.ohioctm.org

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Click [here](#) to become an OCTM member.

Click [here](#) for a complete directory of OCTM Officers

OCTM 2009 Election Results!

- Kim Yoak, OCTM President

Our new President-Elect, with whom I will be very pleased to collaborate during the next year, is **Mark Jaffee**. Mark is highly respected among the board and currently serves as our Constitution Committee chair. He has also chaired the Equipment Committee for several state conferences. Mark teaches at Lorain Admiral King High School and will be an excellent leader for the organization.

Our new Vice-President for the College level will be **Patti Brosnan**, of The Ohio State University. Patti brings a great deal of experience in working with teachers and schools to this position, having directed the successful Ohio State Mathematics Coaching Program during the past several years.

Ruth Hubbard will continue to serve as our Treasurer, having done so with a high degree of professionalism and exactness during the last eight years. Ruth is highly regarded on the board. She is a retired high school mathematics teacher and is also currently chairing our Website Committee.

Our new Northwest District Director (greater Toledo) will be **Karma Vince**. Karma has served the Ohio mathematics education community and her local colleagues in numerous ways for many years, and she teaches eighth-grade mathematics in Sylvania, having taught grades 4-7 also.

Annemarie Mockler will assume the role of Northeast District Director (greater Cleveland). Annemarie has been very active in the Cleveland-area mathematics education community, and she now serves as a mathematics specialist in South Euclid-Lyndhurst.

The position of Central District Director (greater Columbus) will be held by **Jodie Bailey**. Jodie has been involved with several OCTM projects as well as other statewide mathematics professional development programs, and she is currently an elementary teacher in Hilliard.

OMELC Annual Fall Meeting

- Anne Mikesell, OMELC President

The Ohio Mathematics Education Leadership Council announces its fall meeting will be held in conjunction with the OCTM Annual Conference in Cincinnati. Mark your calendars and make plans to attend the OMELC meeting on Thursday, November 12 from 6:30 to 8:30 pm in Hyatt Bluegrass A & B. The meeting will focus on challenges facing Ohio's mathematics leaders and sharing session. Detailed information and registration form for the OMELC meeting will be available in late September.

Also plan to participate in an OMELC session during the OCTM conference. OMELC is sponsoring two regular sessions:

For K-12 Mathematics Education Leaders: "Meeting K-12 Mathematics Program Leadership Challenges in Uncertain Times" on Thursday November 12th, 9:00 - 9:50 a.m., Convention Center 251: An interactive session addressing current state and national issues impacting K-12 mathematics programs and teachers.

For College and University Mathematics Education Leaders: "Surviving and Thriving in Uncertain Times" on Friday November 13th, 10:30-11:20 a.m., Hyatt Buckeye A: A forum for teacher educators to discuss current state and national issues impacting pre-service and continuing education programs.

Please direct any questions to Anne Mikesell at amikesell@mac.com.

OMELC
Thursday, November 12
6:30 to 8:30 pm
Hyatt Bluegrass A & B

Advocacy Coordinator Report

- Katie Hendrickson, Advocacy Coordinator

On July 17, Governor Ted Strickland signed the budget for 2010-2011, also known as House Bill 1. Many aspects of this budget will affect teachers and schools. A few notable items are included below.

The State Board of Education must revise state academic standards for the core subjects (math, English language arts, social studies, and science) by next June. These new standards must address 21st century skills, which includes critical thinking and problem solving. Standards must be revised every five years. You can read more about the Ohio Department of Education's proposed timeline here: <http://www.ode.state.oh.us/GD/Templates/Pages/ODE/ODEDetail.aspx?page=3&TopicRelationID=1706&ContentID=66295>

Funding for STEM (Science, Technology, Engineering and Mathematics) initiatives was reduced from over 7 million per year to 5 million per year. STEM high schools in Ohio will continue to receive state funding.

School funding will now be calculated using the Ohio Evidence Based model, reviewed by a School Funding Advisory Council.

Calamity days allowed for each school have been changed from five to three, effectively adding two days onto the school year.

The Ohio Graduation Test is to be replaced with the ACT, end of course exams, and senior projects.

School districts are now required to offer all-day kindergarten.

New teachers must now complete a 4 year residency program, and teachers may seek tenure after 7 years.

The National Board Certification program, including funding and stipends, have been eliminated (Teachers will now have to pay for National Board Certification on their own).

You can read more about the budget here: <http://www.lsc.state.oh.us/>

ODE Update

- Vicky Kirschner, ODE Mathematics Consultant

The mathematics team at the Ohio Department of Education has been working with an Advisory Committee and four Working Groups in our efforts to revise the Pre-K-12 mathematics standards. Information about the revision process can be found on our Web site, www.education.ohio.gov, using revision for a keyword search from our homepage. A draft of the revised standards will be available at this location for public viewing and feedback in early November.

Mathematics team members will discuss the draft standards revisions during two presentations at the November 12-14 Annual OCTM Conference in Cincinnati. The first session is Ohio Mathematics Standards Revision: Grades K-5 on Thursday from 10:30-12:00 in the Hyatt Regency Room A. The second session, Ohio Mathematics Standards Revision: Grades 6-12 will be on Saturday from 9:30 – 11:00 in the Hyatt Regency Room B.

The Ohio Performance Assessment Pilot Project (OPAPP) is designed to support the initial research, development and pilot testing of a standards-based, balanced assessment approach. Ten school districts participating in this project will pilot mathematics performance tasks this fall and spring. Use performance assessment for a keyword search from our homepage to find more information about OPAPP.

House Bill 1, passed by the legislature in July, includes several changes to Ohio's assessment system. The only change for grades 3-8 mathematics Ohio Achievement Tests (OAT) is the name. The new name will be the Ohio Achievement Assessments (OAA). The Ohio Graduation Test (OGT) is continuing with the same name; however, future test forms will not be released to the public. The annotations for the released 2009 OAT and OGT items are only on the Statewide Testing Web Site, which appears as a link at the bottom of our homepage in the Families

Mathematics team members will discuss the draft standards revisions during two presentations at the November 12-14 Annual OCTM Conference in Cincinnati.

section. The ODE Instructional Management System (IMS) site does not include annotations for 2009 released items. Representatives from ODE will host a session at the annual OCTM conference, Friday morning at 9:30 on Assessment in the Hyatt Regency Room B to address these and other assessment issues.

There will be a Request for Proposal (RFP) for new Ohio Mathematics and Science Partnership (MSP) projects released in mid-September. To find out more about this program, search our Web site using msp as keyword.

Puzzle Corner

LEVEL ONE

If today is the 13th of the month and today is Tuesday, on what day of the week will the 24th fall?

LEVEL TWO

All the sides of an isosceles triangle are natural (counting) numbers. The perimeter of the triangle is 20 inches. List the lengths of the sides of all such possible isosceles triangles.

LEVEL THREE

$$242_{10} - 121_5 = N_8. \text{ Find } N.$$

Click [here](#) for answers

Member Services and Outreach Committee formed

The board feels that it is very important to communicate with members and non-members on an ongoing basis in order to work toward our goal of Building an Energetic Community of Ohio Mathematics Educators (BECOME OCTM). For this purpose, a new committee has been formed, and the members of this committee will be sending e-mails to new members and veteran members as well as working with the District Directors to reach out to non-members in each region. The committee will also seek out new and creative ways to serve the members in each region on behalf of OCTM. Committee members will be announced in the December newsletter, but the committee will begin its work with the advent of the new website.

Executive Director search will begin this fall

At the September board meeting, the board will set forth a process by which we will conduct a search for a new Executive Director, to be hired in May 2010. The position will require the ability to lead a large board and communicate with people across the state and nation, as well as a working knowledge of finance. There is a minimal stipend attached to the position, and it is suggested that applicants not be employed full-time elsewhere. Please watch upcoming communications for more information, and contact Kim Yoak at kjyoak@gmail.com if you are interested in applying for this position.

Who Put the x in Algebra?

- David Kullman

For many students, a major stumbling block to learning algebra is the transition from numbers to letters. In particular, the use of x , y , and z for unknowns remains a mystery to them. Algebraic methods and notation evolved over a period of 3500 years, with our modern symbols not appearing until the 17th century. It's a long story, but here are a few highlights.

Around 1700 BC the Mesopotamians, who lived in what is now Iraq, used what we might call **numerical algebra**. Here is a sample problem: *Find the sides of a rectangle whose length and width add up to 10 and whose area is 16.* Putting this into modern notation, we have $x + y = 10$ and $xy = 16$, which leads to the quadratic equation $x^2 + 16 = 10x$. The Mesopotamians solved this problem by a strictly numerical procedure: *Halve 10 to get 5; 5 times 5 is 25; subtract 16, leaving 9; the square root of 9 is 3; the sides are 2 and 8.*

Euclid's *Elements* (300 BC) contains results that have been described as **geometric algebra**. Proposition 4 in Book II states: *If a straight line is cut at random, the square on the whole is equal to the squares on the segments and twice the rectangle contained by the segments.* If we denote the lengths of the two segments by a and b , this is equivalent to the algebraic identity: $(a+b)^2 = a^2 + b^2 + 2ab$.

The beginnings of **literal algebra** can be found in the *Arithmetica* of Diophantus (ca. 250AD). Diophantus used abbreviations of Greek words, such as Δ^Y (dynamis) for the square of the unknown, K^Y (kubos) for the cube, and $\Delta^Y\Delta$ (square square) for the fourth power. He solved problems such as: *Divide a given square number into two squares*, which we would write as $x^2 = y^2 + z^2$. Today equations like these are called Diophantine equations.

The ancient Chinese were able to solve systems of linear equations by a numerical method much like row-reducing a matrix. In the 7th century the Indian mathematician, Brahmagupta, stated a verbal rule for solving quadratic equations that is equivalent to the quadratic formula.

The name **algebra** comes from a book written in 825 by the Islamic mathematician, al-Khwarizmi. Its title, *Kitab al-jabr w'al muqābala*, means completion and reduction (today we would say transposing and cancelling). When the book was translated into Latin, *al-jabr* became *algebra*. Al-Khwarizmi treated six cases of linear and quadratic equations (keeping all the coefficients positive). His solution of *a square and six things are equal to thirty-nine* is found by a numerical procedure, reminiscent of the Mesopotamians, and justified by completing the square geometrically. No symbols appear – everything is written out in words.

At the beginning of the 13th century Leonardo of Pisa, better known as Fibonacci, introduced algebra to Western Europe in his book *Liber abbaci*. The unknown or “thing” was called the *cosa* in Italian, and algebra was sometimes referred to as

...by the end of the 17th century, x became a universal symbol for an unknown value in an equation.

the “cossic art.” European mathematicians began to use abbreviations for arithmetic operations, powers, and roots. The *Ars Magna*, published by Girolamo Cardano in 1545, includes algebraic solutions of cubic equations. Cardano wrote $x^3 + 6x = 20$ in the form: *cub p 6 reb æqulis 20*.

In the late 16th century Francois Viète made a significant improvement in notation by using letters for unknowns as well as for constants, thereby introducing the concept of an **algebraic formula**. Viète used vowels for variables and consonants for constants. He also retained the Greek notion of homogeneity – only magnitudes of the same dimension can be added or subtracted. For example, the equation $a^3 + 3ba^2 + 4b^2a = d^3$ appears as *A cubus + B in A quadratus 3 + B plano 4 in A æqubitur D cubus*. (Note that every term is 3-dimensional.)

Finally, in 1637 Rene Descartes began to write algebraic notation that that looks familiar today. In his famous work on analytic geometry, *La Geometrie*, Descartes wrote equations in the form $y^3 - 2ayy - aay + 2a^3 æ 0$. He initiated the use of x , y and z for variables and letters at the beginning of the alphabet for constants. He also invented our modern exponential notation, although he typically wrote yy in place of y^2 . The only thing missing is the equal sign, which had been invented eighty years earlier by the English mathematician, Robert Recorde. Descartes' work was widely studied by mathematicians throughout Europe so that, by the end of the 17th century, x became a universal symbol for an unknown value in an equation.

For further reading:

The Beginnings and Evolution of Algebra. I. G. Bashmakova and G. S. Smirnova, Mathematical Association of America, 2000.

A History of Mathematical Notations. Florian Cajori, Open Court Publishing Co., 1928. (Reprinted by Dover Publications in 1993.)

Historical Topics for the Mathematics Classroom. NCTM 31st Yearbook, 1969.

2010 OCTM Mathematics Tournament

- Cathy Stoffer, OCTM Contest Director

The 37th annual OCTM state mathematics tournament will be held Saturday, February 27, 2010. The tournament is sponsored by the Ohio Council of Teachers of Mathematics for the purpose of promoting student interest in mathematics, and to recognize outstanding students and high school math programs with monetary and achievement awards. Tournament testing will be administered at 25 sites strategically located throughout Ohio.

Students in grades 9 through 12 are eligible to participate in the tournament. High Schools may register up to 40 students, with the top 4 student scores making up the school team score. Math students can register for the tournament as independent students and be eligible for individual student awards if their school is not sponsoring a team. The test registration fee this year is \$4.00 per student. To avoid a \$25 late fee, registration fees must be postmarked by February 1, 2010. Please note that with the change in directors, the tournament P.O. Box has changed to P.O. Box 705, Ashland, OH 44805.

The tournament announcement letter will be mailed in early October to all public and private high schools in Ohio. Complete information will also be available at the official tournament website www.octmtournament.org. If you have any questions, please contact us by email via the website. We look forward to your participation at the 2010 OCTM State Mathematics Tournament.



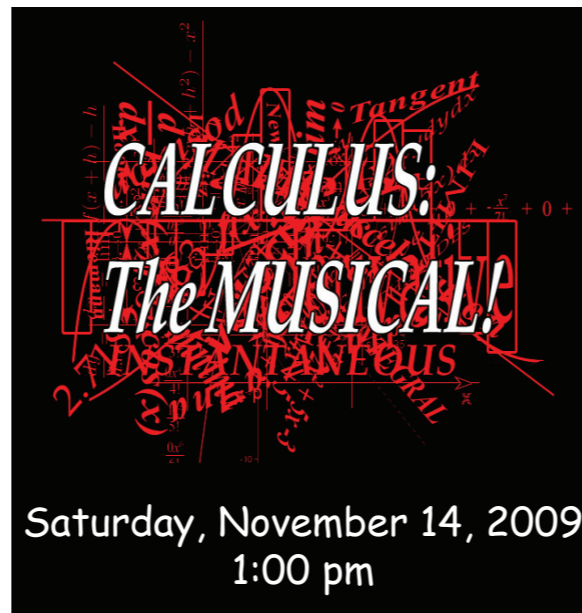
Save the Date

The Ohio Council of Teachers of Mathematics Annual Conference

Polygons to Polymers –

Making Mathematical Connections in Akron

October 14 - 15, 2010



CORRECTION OF PLACEMENT IN OCTM TOURNAMENT FOR WESTERN RESERVE ACADEMY SCHOOL

- Duane Bollenbacher

Due to an error by yours truly in the confusion of the Western Reserves in the state, the placement of Western Reserve Academy School of Hudson is incorrect in the OCTM 2009 Tournament Results by Level. Western Reserve Academy School, due to the size of its enrollment, should be in LEVEL TWO, not LEVEL FOUR as reported in the tournament results. With its score of 99, WESTERN RESERVE ACADEMY earned 2ND place in LEVEL TWO. I sincerely apologize to teacher/coach Sherry Chlysta, to the school and the community, and most of all to the students who performed so well on this contest. Congratulations to you!!

Puzzle Corner Answers

LEVEL ONE:

Saturday

LEVEL TWO:

6-6-8; 7-7-6; 8-8-4; 9-9-2

LEVEL THREE:

$$N = 316_8$$

$$121_5 = 1 \times 25 + 2 \times 5 + 1 \times 1 = 36_{10}$$

$$\text{Thus } 242_{10} - 121_5 = 242_{10} - 36_{10} = 206_{10} = 3 \times 8^2 + 1 \times 8 + 6 \times 1 = 316_8.$$

Calculus: the Musical tickets are available to the general public! It has been selling out audiences across the country. Mathematicians and non-mathematicians alike find it hilarious! Teachers, invite your high school and college students.

Tickets are \$15, or \$5 for high school and undergraduate college students. For more information, click [here](#) or email Anne Hambrick at hambricka@olv-school.org.

ARML Report

The Ohio Know Nothings competed in the A Division and finished nationally 17th out of 44 teams and 8th out of 19 teams at the Penn State site. Both Ohio Bull Moose and Ohio Progressives competed in the B Division. Respectively, they finished nationally 16th and 41st out of 83 teams, and 12th and 24th out of 52 teams at the Penn State site.

All three teams' rankings have improved; especially the Know Nothings; its Team Round & Power Questions would rank 3rd nationally. This year we welcomed our new coach Prof. Elizabeth Wilmer of Oberlin College. Other coaches are Gary Gutman, Jon Graetz, Mark Musetti, Sherry Crawford-Eyen, and Tim Cardinal. Bravo to our coaches; they did a great job!

Special thanks to Karen Rohde! Although she could not go to Penn State with us because of other commitment, she still helped pick up the team t-shirts, provided transportation for a member, and took charge of the Lodi stop! All of these assistances were very much needed, and her effort was greatly appreciated!

The high scorers of Ohio Know Nothings were Carlos Dominguez, Henry Liu, Dennis Tseng, and Tong Zhan. They each scored an 8.

The high scorer of Ohio Bull Moose was Matthew Tan. He scored a 7. The high scorer of Ohio Progressives was Jason Troutner. He scored a 6. They both were first year participants. More impressively, Matthew was only in 8th grade, and Jason was only in 9th grade.

Extras! Extras! Laszlo Seress performed a solo and won the 'Song Contest'! He sang to the tune of 'Somewhere over the Rainbow from the Wizard of Oz.

The lyrics were:

*Somewhere in Pennsylvania,
math teams come,
to American Regions Math League Competition*

*They're all hoping for glory,
honor, and fame
Here from all the regions from Ohio to Maine*

3.14159265358979323
2.71828182845904523

*Power, Individual
Team, Relay
I just hope that my team can win here today.*

Every year, each team elects the Most Inspirational Team Member. This year's MITMs were: Ian Copley for Know Nothings, Wesley Lee for Bull Moose and Cherylyn Geers for Progressives.

There were 12 seniors on this year's team. They were: Carlos Dominguez, David Berger, Enoch Kuo, Henry Liu, Jeff Graetz, Matthew Gerberich, Michael O'Brien, Peter Mannion, Tong Zhan, Vivian Chang, Xiang Zhou and Yen-Chun Chen. Many thanks to these seniors for their participation, and for the mentorship and leadership they provided during their most hectic stretch of time. Special thanks go to Ian Copely; he has been an Ohio ARML member since 2005. Ohio ARML will always remember them!

We reluctantly say "goodbye" to these seniors, and sincerely wish them successful college careers.

'09 Know Nothings

Names

Chang, Vivian
Coley, Ian
Cyr, Britt
Deng, Angela
Dominguez, Carlos
Graetz, Jeff
Kuo, Enoch
Liu, Dylan
Liu, Henry
O'Brien, Michael
*Seress, Laszlo
Srivasta, Ashvin
Tischer, Matthew
Tseng, Dennis

Zhan, Tong

'09 Ohio Progressives

Names

Berger, David
Chen, Yen-Chun
Fogg, Michael

Forcier, Rebecca
Geers, Cherylyn
Hu, Shijia
King, Christopher
*Lin, James
Ma, Yuzhan
Ma, Xiao
Mannion, Peter
Shen, Daniel
Shin, Albert
Troutner, Jason

Zhao, Aaron

'09 Ohio Bull Moose

Names

Chun, Ji Hoon
Dasarathy Anirudh
Fang, Billy
Gerberich, Matthew
Huo, Jack
Johnson, Lindsey
*Lee, Wesley
Mercer, Matthew
Peters, Corinne
Sood, Ayush
Tan, Matthew
Tseng, Kuanwei
Waidyaratne, Kasun
Wang, Joshua
Zhou, Xiang

Alternates: David Kim of Beaver Creek and Samuel Kuo of Revere

* Team captains

Schools

Worthington Kilbourne
Village Academy
Seven Hills
Dublin Scioto
North Ridgeville
Miami Valley
Revere
Dublin Jerome
Thomas Worthington
Strongsville
Dublin Scioto
Sycamore
Thomas Worthington
Mason
Mason

Schools

St Xavier
Dublin Scioto
Cincinnati Hills Christian
Academy
Hathaway Brown
home school
Hoover
Sycamore
Lakota West
Shaker Heights
Athens
Seven Hills
Lakota West
Dublin Jerome
Worthington Kilbourne
Centerville

Schools

Gahanna Lincoln
Hawken
Centerville
Revere
Dublin Scioto
Sycamore
Columbus Academy
St. Xavier
Sycamore
Shaker Heights
Mason
Thomas Worthington
Dublin Coffman
Seven Hills
Maumee Valley Country Day

All three teams' rankings have improved; especially the Know Nothings; its Team Round & Power Questions would rank 3rd nationally.

Ohio Early College Mathematics Placement Testing Program (EMPT) for High School Students

- Ed Laughbaum

The Ohio Early Math Placement Testing Program based at The Ohio State University has been providing free college readiness testing service to Ohio high school students since 1978. EMPT offers tools you can use to keep track of student progress toward college level mathematics, and they are available on-line where your students may access the tools anytime, any place, and on their own time! Paper tests are also available for sophomores, juniors, and seniors. Armed with EMPT testing data and EMPT reports, schools can help students take action to correct math readiness issues before they graduate. Sign up for testing at www.empt.org.

New at EMPT:

- Using a statistical model, we can now predict a student's ACT score based on their EMPT score! This feature will become part of the student report effective in late fall.
- Also available in late fall, each EMPT student report will include a breakout of percent correct scored on the 10 pre-algebra items, the 10 beginning algebra items, and the 12 intermediate algebra items.
- We have expanded our school-based on-line testing service to include an individual student (or adult) on-line testing option (while still maintaining the school-based on-line test). Anyone in the state may take the EMPT Test. We ask that you tell your students about this option if you will not be participating in the school-based testing program. And there is more...
- We have added four new tests to the individual EMPT testing site. They are: Pre-algebra/Beginning Algebra, Data Analysis, Geometry, and Intermediate Algebra. The number of items per test is 15, 8, 8, and 15 respectively. For each item missed, the immediate electronic report will direct students to an on-line lesson (when lessons exist) at the Ohio Resource Center for self remediation on the concept.
- The EMPT website <www.empt.org> will soon have a new look, and it will include a link to the individual testing site. On-line school-based testing will remain the same (we send the on-line school testing URL and password upon sign-up for one of the tests).

Please keep in mind that there is no need to take class time to prepare your students for the EMPT tests – unlike other tests you may administer. Also, we offer the tests on-line! The intent of the on-line school testing is to remove the time needed to test during a class and make the student responsible for the hour needed to complete the test. This approach to testing will minimize your time and the consumption of class time. Colleges have moved to on-line placement tests; so prepare your students for the experience by using the EMPT on-line tests.

For further information, please contact Ed Laughbaum at elaughba@math.ohio-state.edu.

Ohio Mathematics and Science Coalition

- George Viebranz, Executive Director

SAVE THE DATE: OCTOBER 9, 2009

The third Quantitative Literacy Conference will be held on October 9, 2009, from 10a - 4p at the NorthPointe Conference Center in Columbus. The theme of the conference is, "What Should Quantitative Literacy Look Like In Our Classrooms?" This special Ohio Mathematics and Science Coalition meeting is open to all interested parties and organizations on a first-come, first-served registration format. The conference will feature a keynote address and three concurrent ½-day workshops to allow educators to personalize their understanding of quantitative literacy at the elementary, middle, or high school grade bands, and how it might be integrated through problem contexts that can arise in language arts, social sciences, science and mathematics. QL problem scenarios from contexts across the curriculum will be presented, along with the opportunity for you, the participant, to deepen your personal understanding of thinking, reasoning, and using problems of a quantitative nature that occur daily. Each workshop facilitation team includes several experienced P-16 educators who have used quantitative literacy instruction in their classrooms and teacher preparation programs. They are looking forward to working with you and answering your questions throughout the day. It's not all about math; it's about teaching students to reason critically and make sense of the importance of quantitative thinking.

Conference registration is only \$35, which includes workshop materials and hospitality for the day. Register online at https://www.wviz.org/index.php/education/workshop_register/15950/.

A preliminary agenda and a link to the registration page are also available at the OMSC home page: <http://www.OhioMSC.org>. Registrations will close on October 2nd, and attendance will be limited to the first 100 participants. Payment can be made by credit card, organizational check or personal check. You can also reserve your place and be billed later by entering a school purchase order number, so register quickly to save your spot in this informative and highly interactive workshop.

District teams are encouraged to attend. A certificate for 4.5 hours of professional learning will be issued as documentation for Individual Professional Development Plans. Classroom teachers, curriculum supervisors, teacher educators, and all others interested in increasing Ohio students' ability to reason within quantitative contexts are welcomed to join this important conversation about essential literacy skills for Ohio's students.

Please help OMSC get the word out. Share this information today with your colleagues and within your professional networks.