

Toledo prepares for Prime Time OCTM Conference!

- Daniel Brahier, General Conference Chair

Do you have plans to hang out with more than 1,000 other math teachers in October? Are you ready to hit the Common Core State Standards and the new Ohio Model Curriculum head on? The planning committee in Toledo has been hard at work to prepare another outstanding professional development opportunity at this year's annual conference of the [OCTM: Prime Time in Toledo](#). The conference will take place on Thursday and Friday, October 13-14, at the [SeaGate Convention Center](#) and Park Inn Hotel in downtown Toledo. [The Park Inn](#) is conveniently located in the same building as the Convention Center, so once you park your car, there is no need to go outside during the conference except to walk to one of the local restaurants for dinner.

A brand new feature this year is called the Primetime Special. For only \$20, a teacher can attend the conference on Thursday afternoon/evening from 4:00 to 8:00 p.m. This special offer allows an individual to go to the reception, visit the exhibit hall, and attend some special evening workshops and presentations, particularly if you live close to Toledo and cannot leave your school for a full day. Regular conference attendees also have the option of going to evening sessions on Thursday to get the most out of the conference.

The keynote speakers for this year's event include Dr. Phil Daro who is one of the primary writers of the [Common Core State Standards for Mathematics](#), as well as internationally-known story-teller Brian "Fox" Ellis who will share classroom tested ideas for using stories and humor to engage mathematics students. The conference features more than 150 workshops and regular sessions, including another round of the popular Flash Dance sessions focusing on creative uses of technology in teaching mathematics.

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Newsletter

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September, 2011

The exhibit hall will include dozens of displays of the latest books, materials, and technology, as well as the popular "money machine" that several lucky teachers will enter to grab dollars and prizes. A free reception will take place in the exhibit hall on Thursday afternoon for all participants featuring food and time to browse the exhibits while catching up with old friends (and making new ones!).

Thursday evening will also feature the annual Awards Reception for teachers receiving OCTM recognition. The low price of only \$15 to attend the reception makes it an attractive option for all participants, with plenty of time to wander to local restaurants afterwards.

Don't miss out on this opportunity ... to get informed about the Common Core State Standards, to interact with other math teachers, to explore the latest in teaching ideas and materials, to relax and reflect on your practice, and to get the professional development you need and deserve. Registration can be done anytime, including at the conference. Details, including the full program, registration form, and hotel reservation form, can be found at the [OCTM website](#). We hope to see you there!

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"The more our state association and our members make use of the resources of NCTM, the stronger our organization will become."

Have you joined a SIG yet? [Click here](#) for more information.

President's Message

- Mark Jaffee, OCTM President

Affiliate Leaders Conference

I attended the Affiliate Leaders Conference in Denver the last few days in July. This was an opportunity to meet with the leadership of NCTM (President Mike Shaughnessy spoke to us the last day about a number of issues) and I also met and renewed acquaintances with many of the representatives from other affiliates across the country. We shared ideas about what we were doing in our individual associations, we brainstormed about how to solve the problems that many of our groups are facing, and we had a lot of fun doing math together.

The stated purposes of the conference according to the flyer we received was to strengthen each Affiliate's leadership by understanding our own personal leadership style and how we can transform our leadership style to adapt to different situations, transforming our Affiliate's leadership and effectiveness through self study, constructing a strategic plan for our Affiliate by integrating ideas gathered through discussions with other

Affiliate leaders, and constructing an understanding of the work of NCTM; its organization, leadership, resources, initiatives and involvement with the Common Core State Standards for Mathematics.

One of the major lessons that became clear to me at this conference is that the more that our state association and our members make use of the resources of NCTM, the stronger our organization will become, the more our teachers will benefit, and ultimately the more mathematics education in our state will improve. The Ohio Council of Teachers of Mathematics is taking a number of steps to achieve these goals. First, we have invited Bethany Noblitt, the Affiliate Services Committee chairperson for this year to attend the September Board meeting of OCTM and share ideas with us how NCTM can serve our needs and what we can do to support NCTM. We will work collaboratively with NCTM to encourage our members to become members of the national organization and for members of NCTM who are not members of the state association to join us. Furthermore, we will be encouraging our members to become more aware of the benefits on the NCTM website: the messages from President Shaughnessy concerning the initiative on Reasoning and Sense-Making including the monthly "Problem to Ponder" a challenging opportunity for your students to engage in reasoning and sense making in the classroom. The website has a section on lessons for elementary, middle school, and high school students, as well as pages that provide information about professional development and upcoming regional and national conferences.

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Midwest Regional GeoGebra Conference Huge Success!

- Todd Edwards, Journal Editor

The First Annual Midwest Regional GeoGebra conference was held June 9 and 10 on the campus of Miami University in Oxford, Ohio. More than one hundred teachers, pre-service teachers, teacher educators, mathematics faculty and high school students from across North America (including speakers and participants from Ohio, Indiana, Kentucky, Illinois, Michigan, New Jersey, Colorado, Maine, Texas, and Canada) came together to learn about the free dynamic mathematics software [GeoGebra](#) and to share tips, tricks, lessons and activities.

Participant comments about the FREE conference were overwhelmingly positive:

“I feel the conference was well organized and thought out - you all did a great job on this First Annual conference! I would highly recommend it to others!!! I feel confident in creating lessons and units now that I have been taught the basic skills and even more than basic skills.”

-Trisha Murray, Northville Public Schools, Wayne, Michigan

“This conference introduced me to free software that will most definitely impact what my . . . math students will be able to do with their mathematical investigation and mathematical modeling internal assessments. It will impact what I do in terms of posting applets for student learning.”

-Teresa Henderly, Dublin City Schools, Dublin, Ohio

“I learned . . . that GeoGebra can be used in ALL classes. It will help ALL students. I was very excited to discover the new probability & statistics elements in Geogebra 4 (and was) reminded about all of the things beyond producing geometric drawings that GeoGebra can do. The session on producing html files was especially helpful. The session showing us how to place pictures in the GeoGebra files was also quite helpful.”

-Kristen Rigby, Loveland City Schools, Loveland, Ohio

“The most helpful information that I gained was the session on statistics. I like being able to have other options for the students to analyze data.”

-Melissa Kincaid, Pleasant Run Middle School, Cincinnati, Ohio

Conference handouts can be downloaded from the [conference website](#) (click on the “Talk Handouts” link on the Navigation bar on the left side of the page).

Steve Phelps and Todd Edwards, co-directors of the GeoGebra Institute of Ohio, are currently planning the 2012 follow-up conference to be held at Miami University in early June. It will be a FREE conference (no registration fees). Talks next year will focus on the presentation of classroom-ready teaching materials (including student handouts, lesson plans, and ready-made applets) at both novice and advanced levels. Preparations to publish peer-reviewed conference proceedings are also in the works. Questions and comments regarding the upcoming 2012 conference may be directed by email to either Steve Phelps, sphelps@madeiracityschools.org, or Todd Edwards, m.todd.edwards@gmail.com.



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[President's Message continued]

Furthermore, President Shaughnessy made it clear to all of us in Denver that NCTM is doing everything possible to assist teachers in understanding and implementing the Common Core State Standards in Mathematics.

Be alert to future newsletter articles, postings on the OCTM page of Facebook, and postings on our website about continued benefits from being a member of your local, state, and national mathematics organizations.

Welcome back to school and I hope everyone has a successful year.



OCTM President Mark Jaffee and NCTM President Mark Shaughnessy in Denver.

OCTM membership opportunities

***OCTM membership makes a great gift – especially for new graduates!** Visit http://www.ohioctm.org/join_octm.htm to learn how to join or to obtain a membership form to give someone the gift of the OCTM community. Regular memberships are still only \$25, and first-year teachers can join for \$10! Full-time college students pay only \$5!

Reminder: **all K-6 teachers can join OCTM and SECO** (the Science Education Council of Ohio) together for a **25% discount** off the membership rate of each organization. Visit http://www.ohioctm.org/join_octm.htm to download this application.

Puzzle Corner

by Duane Bollenbacher

RIDDLE:

WHAT PART OF YOUR BODY WORKS OUT MATH PROBLEMS?

LEVEL ONE:

WHICH ONE OF THESE NUMBERS IS CLOSEST TO 0?

1, 0.99, $\frac{3}{7}$, $\frac{3}{8}$, 1.01, 0.501

LEVEL TWO:

FIND: (4 YDS, 1 FT, 5 IN) – (1 YD, 2 FT, 10 IN). EXPRESS YOUR ANSWER IN YDS, FT, IN.

LEVEL THREE:

THE SQUARE OF AN INTEGER IS CALLED A PERFECT SQUARE. IF N IS A PERFECT SQUARE, FIND THE VALUE OF THE NEXT LARGER PERFECT SQUARE IN TERMS OF N.

If you are a Twitter user, please follow the Ohio Council of Teachers of Mathematics on Twitter
<http://twitter.com/ohioctm>

[Click here for answers](#)

2011-2012 OCTM Scholarships

- Bonnie Beach, co-chair

OCTM recently awarded \$6000 to pre-service teachers in both middle and high school mathematics education programs. Many applications were received and were reviewed by OCTM members Rena Allen, Laura Anfang, Chris Bolognese, Al Cote, Sandy Dobberstein, Katie Hendrickson, Ruth Hubbard, Peggy Kelly, David Kullman, Anne Mikesell and co-chairs Rebecca Maggard and Bonnie Beach.

The Sarah Greenholz Scholarship of \$1500 was awarded to **Megan Zapotosky**. Megan is a senior middle-childhood education major at Miami University with concentrations in math and science. She is currently student teaching and will graduate in May of 2012. Megan attended Central Catholic High School in her hometown of Toledo, Ohio. She has no definite plans for life after graduation yet, but all of her field experiences have shown that teaching is the right career. Outside of teaching, Megan enjoys baking, playing tennis, and spending time with family and friends.



Other OCTM scholarships for \$750 were awarded to the following students:

- Joseph Robert Czupryn (graduate student at Wright State)
- Ryan Davis (senior at Ohio University)
- Savannah Kiser (senior at Wittenberg University)
- Jennifer Krauss (senior at Ohio Northern University)
- Amber Pietro (junior at Bowling Green University)
- Emmalou Stevens (senior at Lake Erie College)

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

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

Joseph Czupryn is from Englewood, Ohio and graduated from Northmont High School. He completed his undergraduate degree in Mathematics with a concentration in education at Wright State University and is currently pursuing his Masters degree in education at Wright State. Currently, Joe is observing and will eventually be student teaching at Thurgood Marshall High School in Dayton, Ohio. After graduation, he is planning on teaching high school math somewhere in the Dayton area. In his free time, Joe enjoys playing and watching sports, football in particular. Joe also serves as the quiz bowl coach at Thurgood Marshall and as the assistant quiz bowl coach at Northmont.



Ryan D. Davis is from Pomeroy, Ohio, which is right along the Ohio River. She attended Eastern High School (Reedsville) where she graduated as the Salutatorian for the class of 2008. Ryan is currently a senior at Ohio University and plans to graduate this spring with a Bachelor's in Education-AYA: Integrated Mathematics and a minor in Business. Ryan serves as the 2011-2012 Treasurer for OUCTM on campus and loves to attend OCTM and NCTM events. Ryan is also a CAT scholar, which stands for Choose Appalachian Teaching, so her plan is to teach in one of Ohio's Appalachian counties after graduating. Aside from school, Ryan is a part time cashier at the local Kroger's and in her spare time she enjoys cooking, traveling, and sports. Go Bobcats!



Savannah Kiser was born and raised in Warren, PA to the parents of Michael and Amanda Kiser (although currently she lives with her mother and stepfather, Wayne Wilson). Stephanie has five siblings, soon to be six, and has always had a love for animals. She participated in soccer, track, and the

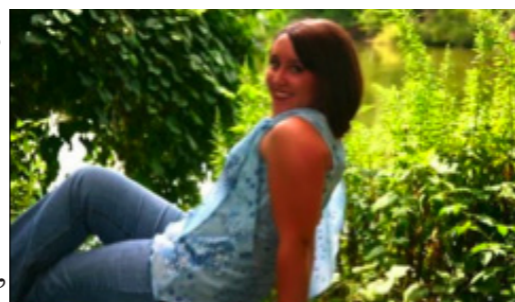


[Continued on Next Page]

[Scholarships Continued]

AP/honors program while in high school. Savannah decided to attend Wittenberg University in Springfield, OH for undergraduate degrees in both Mathematics and Physics where she found a passion for helping others, and decided to become a high school teacher. Outside of classes she is involved in the Mathematics Association of Wittenberg University (MAAWUC), Society of Physics Students, Fishing Club, and Peer Helpers. Savannah has also tutored in the University's Math Workshop for four years and has just begun working for Springfield Promise Neighborhood. Upon graduating in December 2012 Savannah plans to begin teaching high school, most likely in either Ohio or Pennsylvania.

Jennifer Krauss is from Pickerington, OH, where she attended Pickerington High School Central. She currently attends Ohio Northern University where, in addition to her mathematics major with a concentration in teacher licensure, she is pursuing a minor in psychology.



After graduation, Jennifer plans on finding a job in Ohio teaching high school math. After teaching for some years she will go back to school for her Masters degree in either education or school counseling as she has always enjoyed the idea of helping students outside the classroom. As a teacher Jennifer hopes to help students enjoy and understand math more and curb whatever fear it may bring. Outside of teaching, Jennifer is interested in American Sign Language, music, reading, and playing games of all kinds. She enjoys being social and loves to pursue opportunities to learn more about people. Jennifer is also involved in church and community service activities.

Amber Pietro is a graduate of Hudson High School from Hudson, OH. She is currently a junior at Bowling Green State University who inspires to become an ideal teacher like those she has had while attending school. She enjoys reading, listening to music, being involved in Bowling Greens Council of Teachers of Mathematics, and being involved in the supplemental instructor program at the university.



Emmalee Stevens was born in Orlando, Florida and grew up just north of there in a city called Lake Mary. She graduated from Lake Mary High School with a 3.9 GPA and is now attending Lake Erie College in Painesville. She will graduate in December with my major in math and education and will be certified for grades 7 to 12 in math. She plans on substitute teaching during the spring semester, but hopes to be able to obtain a long term sub position. Emmalee's goal is to have a full time teaching job in the fall of 2012. She plans on getting a Masters in math and has considered getting a PhD in math as well. In her spare time she likes to sew having made purses, dresses, pants, and quilts. She also enjoys outside activities like swimming, biking, and camping.



Summer Professional Development

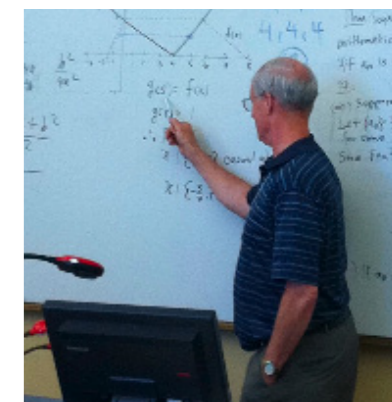
- *Chris Bolognese, Newsletter Editor*

I recently attended two rich professional development opportunities ran by OCTM members. Consider these for your upcoming summer!

The first activity, entitled "Using Rich Problems to Teach High School Mathematics," was ran by Professor Duane Bollenbacher. Here, participants worked through hundreds of past OCTM contest problems.

A second activity that I recommend is the QUANT workshop. Dr. Jeremy Strayer and Dr. Greg Foley engaged participants in activities promoting statistical reasoning. Participants also designed lessons to use in their classrooms this coming year.

Rick Petersen from Mansfield Christian High School explains his approach to solving a past OCTM problem at Bluffton University.



Puzzle Corner Answers

New Board Members

- David Kullman, OCTM Executive Director

The results are in! Thanks to everyone for voting for our new board members.

- Vice President - Secondary: Lynn Aring
- Treasurer: Ruth Hubbard
- South District Director: Mike Rhodes
- Southwest District Director: Christine Supinger
- West District Director: Becky Link

There was a tie vote in the race between Janet Herrelko and Debra Gallagher for President-Elect. Tentative plans are to hold another election for that office. Everyone is urged to revote for President-Elect once the voting system is determined. Check the [OCTM website](#) for updates on re-voting procedures.

RIDDLE:
Your Add' em's Apple!

LEVEL ONE:
3/8

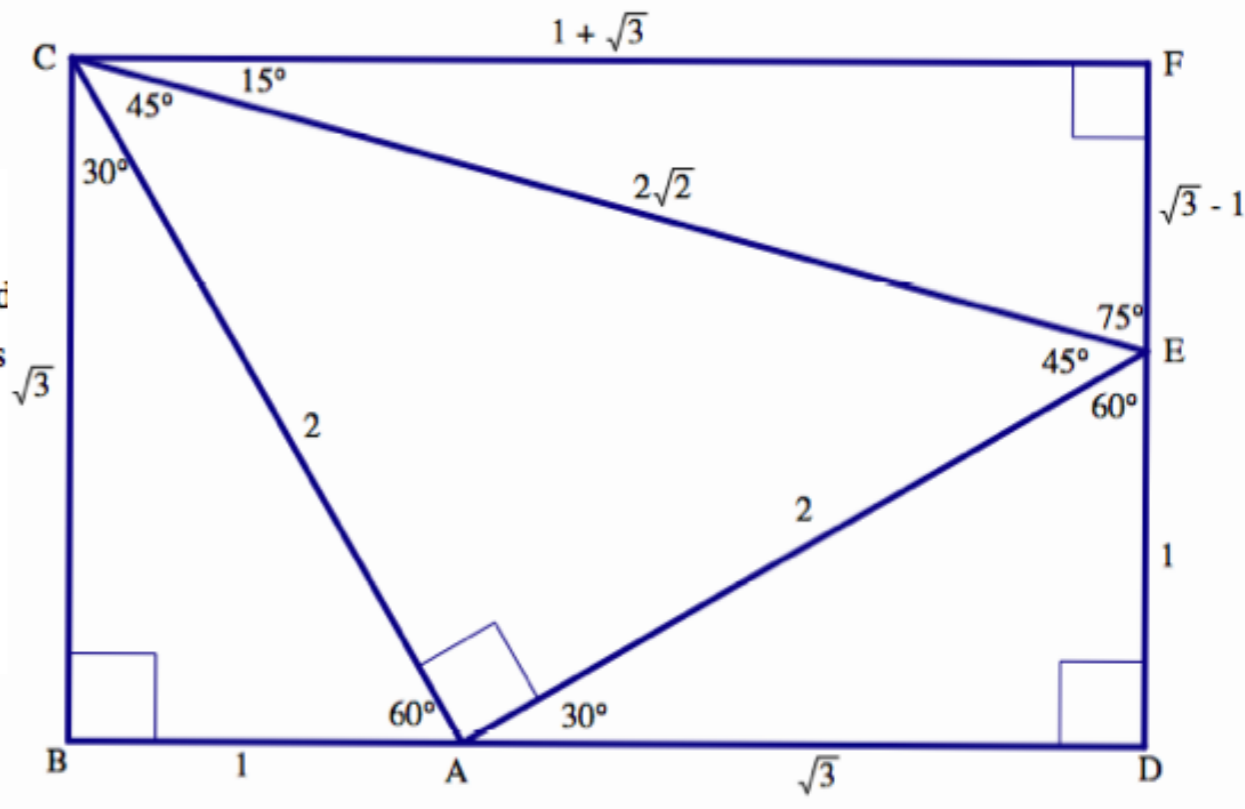
LEVEL TWO:
2 yrds, 1 ft, 7 in

LEVEL THREE:
 $N + 2\sqrt{N} + 1$

Trigonometric Delights

- Mark Jaffee, OCTM President

This is Ailles Rectangle, named after Canadian high school teacher, Doug Ailles, who observed its relationships approximately 15 years ago. The construction begins with two congruent 30-60 triangles ABC and EDA with $B, A,$ and D collinear. The lengths of the sides are $1, \sqrt{3}, 2$. Connecting C to E creates an isosceles right triangle with hypotenuse $2\sqrt{2}$. Constructing \overline{CF} parallel to \overline{BD} and \overline{EF} parallel to \overline{CB} creates right triangle CFE with acute angles 15° and 75° and legs with lengths $\sqrt{3} + 1$ and $\sqrt{3} - 1$. One can then determine the exact values of the trigonometric functions of 15° and 75° using simple right triangle trigonometric ratios.



Ohio Pioneers in Mathematics Education Part 4: 1910-1930

- David Kullman, OCTM Executive Director

This series continues with biographical sketches of some mathematicians who helped to shape mathematics education in Ohio and beyond in the early 20th century. During this period both the [Mathematical Association of America](#) and the [National Council of Teachers of Mathematics](#) were founded in Ohio.

WILLIAM D. CAIRNS was born in Troy, Ohio, on November 2, 1871. After graduating from Troy High School he earned an A. B. degree from Ohio Wesleyan University in 1892. He returned to his home town and taught high school physics for two years before going to Harvard University, where he received the A. M. degree in 1898.



Cairns began teaching at Oberlin College in 1899 and became professor and head of the Mathematics Department in 1920, after earning his Ph. D. degree at Göttingen University in Germany. In 1913 Cairns was appointed to serve on the editorial board of the *American Mathematical Monthly*. When the Mathematical Association of America was founded at Columbus, Ohio, on December 31, 1915, he was elected Secretary-Treasurer. He served in that office until 1942 when he was elected MAA President. At the conclusion of his term he was made Honorary President of the Association for life.

The MAA Ohio Section was formed on the same day as its parent organization and is recognized as the first section of the MAA. Cairns was a charter member of the Ohio Section and served as its Chairman in 1931-32. He was also active in the American Mathematical Society and the Ohio Association of Teachers of Mathematics and Science. He retired from Oberlin in 1939 and died in 1955.

CHARLES M. AUSTIN was born near Waynesville, Ohio, on December 13, 1874. He graduated from Waynesville High School in 1892 and began teaching in a country school. For the next ten years he alternated between teaching school and studying at Ohio Wesleyan University, graduating Phi Beta Kappa with an A. B. degree in June 1903. After studying law in the office of a Dayton lawyer for a year, Austin began



The series continues with biographical sketches of some mathematicians who helped to shape mathematics education in Ohio.

teaching mathematics at Milford High School. In 1912 he accepted an appointment as head of the mathematics department at the Oak Park and River Forest Township High School in Illinois where he remained for more than 30 years. He earned a M. A. degree from the University of Chicago in 1919 and co-authored several textbooks on plane and solid geometry in the early 1930's. He retired from high school teaching in 1944, but continued to teach classes at the Illinois Institute of Technology. He died in a convalescent home near Oak Park in 1967, at the age of 92.

In 1913 some mathematics teachers and professors from the greater Chicago area organized the Men's Mathematics Club of Chicago, and Austin was elected to a three-year term as the club's first president. The progressive education movement, which advocated replacing algebra and geometry with more social studies and civics in the high school curriculum, caused great concern among the Mathematics Club members. In March 1919 a committee made up of Austin and two other members began to correspond with mathematics teachers in other states with regard to forming a national organization. The favorable responses that they received resulted in a call to organize a National Council of Teachers of Mathematics during a meeting of the NEA at Cleveland, Ohio, on February 24, 1920. On that date 127 enthusiastic teachers of mathematics, representing twenty states and more than a dozen local associations, heard addresses by Austin, Marie Gugle of Columbus, C. N. Moore of the University of Cincinnati, and others. Austin was elected to a one-year term as the first NCTM president. He later served as NCTM vice president (1927-29) and four terms on the board of directors.

The *Mathematics Teacher* had been established in 1908 as a quarterly publication of the Association of Mathematics Teachers of the Middle States and Maryland, under the editorship of William H. Metzler of Syracuse University. Following negotiations between Austin and Professor Metzler in the summer of 1920, the first issue to be published as the official NCTM journal appeared in January 1921. Austin also chaired the editorial committee for the first NCTM Yearbook, *A General Survey of Progress in the Last 25 Years*, published in 1926.

[Continued on Next Page]

MARIE GUGLE was born in Columbus, Ohio, on November 17, 1876. She graduated from the Ohio State University and received her master's degree from Columbia University. While teaching mathematics at Scott High School in Toledo, she established the "Euclidean Club," and she would later write a chapter on mathematics clubs in the 1st NCTM Yearbook. Back in Columbus, she taught mathematics, served as an assistant superintendent of the Columbus Public Schools, and finished her career as principal of East High School. She died at her Columbus home in 1960, at age 83.

In 1916 Gugle became the first female president of the Central Association of Science and Mathematics Teachers (now called the School Science and Mathematics Association). At the NCTM organizational meeting in 1920 she chaired a session on junior high school mathematics and served on the committee to draft the NCTM constitution. When *The Mathematics Teacher* became an NCTM journal a year later, she was appointed to its editorial staff. In 1926 she was installed as the fourth NCTM President (and its first female president), and she also served three terms on the NCTM Board of Directors. Gugle became a charter member of the Ohio Council of Teachers of Mathematics in 1950.

Gugle's other professional accomplishments include: an article on "Dynamic Symmetry" in the 3rd NCTM Yearbook and an illustrated lecture on that topic at the 4th annual meeting of the Louisiana-Mississippi Section of the MAA; author of a textbook series titled *Modern Junior Mathematics*; a term as secretary of the NEA Department of Superintendence; founder and first president of the Columbus chapter of Delta Kappa Gamma; and co-author of a popular reading book, *Willie Fox's Diary*.

If you are a Facebook user, please follow the [Ohio Council of Teachers of Mathematics Facebook Page!](#)



JOHN WESLEY YOUNG was born in Columbus, Ohio, on November 17, 1879. His father, William Henry Young was at one time a professor of mathematics at Ohio University and later an American consul in Karlsruhe, Germany. His mother, Marie Louise Widenhorn, was a native of Paris, France. John attended schools in Columbus and Germany and graduated from the Baden-Baden gymnasium before returning to his hometown to attend the Ohio State University. He graduated with a Ph.B. degree in 1899 and went on to earn a doctorate in mathematics at Cornell University in 1903. His decision to pursue mathematics, rather than philosophy, may have been influenced by frequent contacts with his brother-in-law, E. H. Moore.



Between 1903 and 1911, Young held faculty positions at Northwestern, Princeton, the University of Illinois, the University of Kansas, and the University of Chicago. He spent the remainder of his career as a professor at Dartmouth College, where he was called "Cy" by his friends and colleagues. He chaired the Dartmouth mathematics department from 1923 to 1925. Young is well known for his research in geometry and group theory. In 1910 he and Oswald Veblen published *Projective Geometry*, based on set of postulates they had created for the subject.

In addition to being very active in the American Mathematical Society, Young was a charter member of the MAA in 1915 and served on its first executive council. He was the MAA Vice President in 1918 and 1926, and President in 1929-30. He chaired the National Committee on Mathematical Requirements (that also included Ohio natives E. H. Moore and C. N. Moore) from 1916 to 1923. Their report, *The Reorganization of Mathematics in Secondary Education*, is still referenced today. Young was a keynote speaker at the NCTM organizational meeting in 1920 and served on the editorial board of *The Mathematics Teacher*. He continued teaching until two days before he died of heart disease on February 17, 1932, at age 52.