PCTM Magazine

PCTM Magazine

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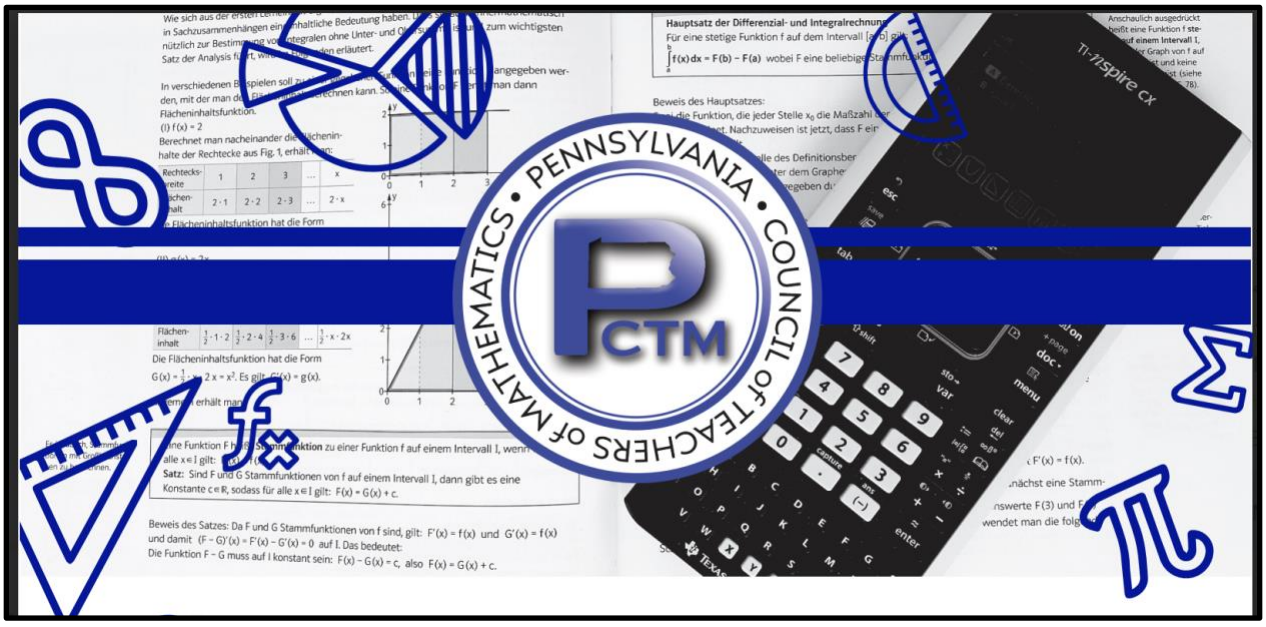

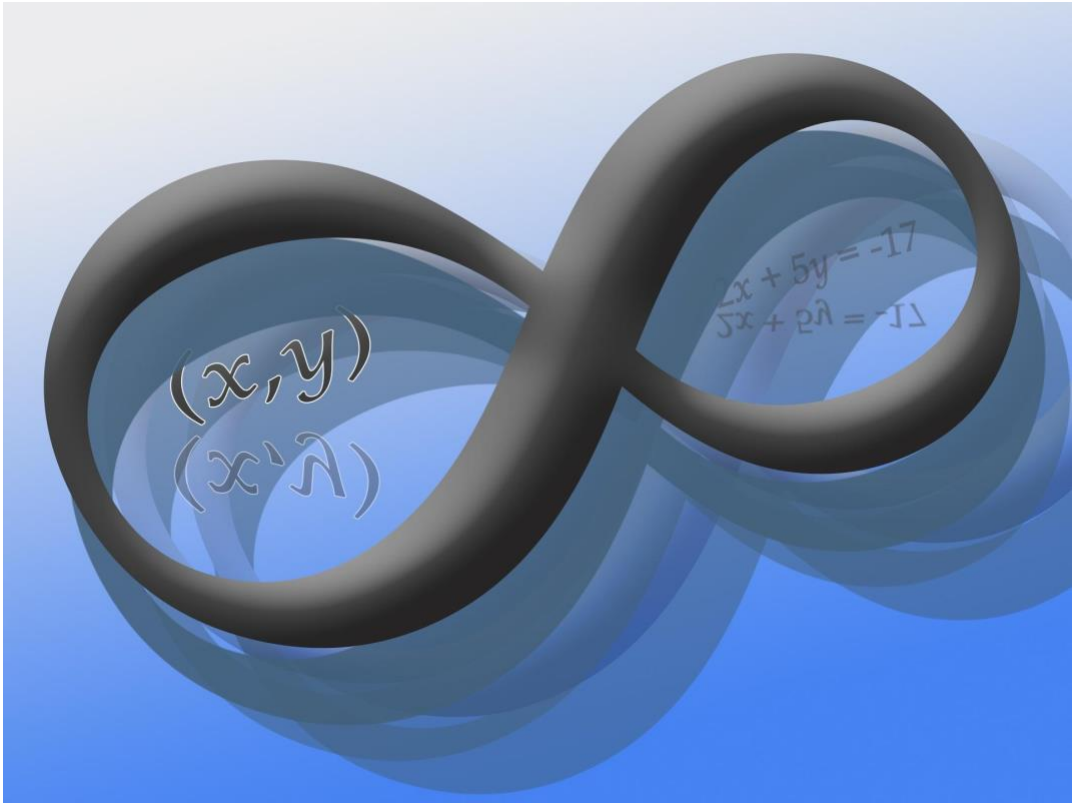

The Pennsylvania Council of Teachers of Mathematics

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The PCTM Magazine editor is:
Xiangquan (James) Yao

Penn State University

Hello from the Editor

Xiangquan “James” Yao

Dear Readers:

The Fall 2025 issue of the PCTM Magazine shares information gathered from around the state about mathematics education. This issue features President’s Welcome Letter Message and summaries of the PCTM annual conference, PCTM award winners, PA Mathematics Teaching Summit, Pennsylvania Statistical Poster Competition Winners, and election information. This magazine relies on the professionals this magazine serves to share what you are doing in the profession, how you are growing in your practice, and communicating about great experiences around the state. Please share what you are doing by checking out the call for manuscripts or sending an email to contribute to other sections of the magazine.

PCTM’s Annual Conference was held in July 2025. Check out the Happenings section to read about the event and see the PCTM award winners recognized at the conference.

Keep checking pctm.org for more information about 2026 events, including the 2026 annual conference on August 5-7 at DoubleTree by Hilton in Pittsburgh, PA. Speaker proposals are open from October 15th through December 15th.

Contribute to the “From the Classroom” section of the magazine. Please send images of your mathematicians at work or engaging in your own professional learning! Send images with caption information to pctm.editor@gmail.com.

Enjoy,

James

Please email your comments, suggestions, articles, etc. to pctm.editor@gmail.com. More information on submission guidelines may be found on the last page of this issue.

President's Welcome Letter Message **Fall 2025**

Welcome to the 2025-2026 School Year! May this year bring you much success and joy! In my welcome last fall, I mentioned substituting at the Academy near me and my story that I would share at a later time. Well, now is a later time and here is that story! I hope it brings encouragement to all of you, especially to those of you who teach kindergarten!

When I was asked to substitute for one of the kindergarten teachers at the Academy last year I hesitated for a brief moment before asking if I could come in and observe her teach one day. Being a high school teacher in Math and Science for 40 years I understood what to expect and had substituted at the Academy Upper School for the fourth quarter of the school year before. But kindergarten??? I wasn't sure I was up to the task of managing a classroom of 5- and 6-year-olds all day from 7:50 AM until 3:05 PM, nap time and bus duty included. The whole idea seemed a bit scary and overwhelming to me. Well, I did do both, observe for one day and then substituting for both of the kindergarten teachers several days each last year. It was one of the most challenging and yet rewarding experiences of my life. Some of those young children, now in first grade, greet me with a huge smile and a warm hug when they see me in the halls. I love that feeling of care that bubbles up inside of me, especially when I look into their faces with great love and joy!

In the early years of my mathematics career, I researched my district's curriculum guides K-9 for when students were introduced to and studied elements of geometry so that I could better review past information to make sure that the information had become knowledge, prior to laying the new material on the foundation that came prior to the course of Geometry. Incorporating the current educational methods of Learning Styles, Co-Operative Learning, Formative Assessment, Understanding by Design, and others, I was able to make sure students had a firm foundation of past information on which to build the new geometry material.

Having had an admiration and respect for the K-8 teachers that prepared my 9^{th} and 10^{th} grade students for Algebra 1 and Geometry, I gained much more over the years working with some of the elementary teachers and gaining insight and greater success with my students at the high school level. This awareness caused me to remember some of my physics teaching in the beginning of my career when I taught both math and science concurrently to high school students, before enrollment increased and I was asked to teach math full time. What follows is a brief summary of one of the most famous mathematicians/scientists of all time and a quote of his that I remember to this day.

Sir Isaac Newton was an English polymath active as a mathematician, physicist, astronomer, alchemist, theologian, author, and inventor who was a key figure in the Scientific Revolution and the enlightenment that followed. I needed to look up what a polymath is: "a polymath is a person with a deep and diverse expertise in several, unrelated fields of study or knowledge, such as science, art, and humanities. Polymaths are driven by intense curiosity, which leads them to acquire knowledge and skills across many disciplines, allowing them to innovate and solve problems by connecting ideas from different domains." Leonardo da Vinci and Benjamin Franklin are other examples of polymaths. The term polymath comes from the Greek word *polymathos*, meaning "one who knows many things". In the mathematical world Newton is known for his work in Calculus. Today, Leibniz and Newton are usually both given credit for independently inventing and developing calculus. Newton was the first to apply calculus to general physics.

Among the famous mathematics quotes is one by Sir Isaac Newton, "If I have seen farther than others it is because I have stood on the shoulders of giants." Sir Isaac Newton was influenced by many great mathematicians and scientists that came before him, like Galileo Galilei, Johannes Kepler, Nicolaus Copernicus, Rene Descartes, and more which prepared the way for Newton to develop Calculus and apply

it to Physics. But here is the important point I want to make about this quote and my kindergarten teachers, and elementary teachers in general, that I have held for many decades. The point is that I can only do great things with my students because they have come to me with the knowledge of how to read letters and work with numbers because of the tireless work of their kindergarten teachers instilling the basics of learning to them. Such is the teaching of mathematics to Algebra 1 students. If my students grasped the Theory of Algebra, it is because of good instruction yes, but more importantly they came to me knowing how to read words, numbers and mathematical symbols such as those for add, subtract, multiply, and divide. My students understood how to work with numbers from the earliest years like those of kindergarten where children learned letters, words, numbers, sums and differences.

Last week as I observed the same kindergarten teacher to familiarize myself with what to do when substituting for her next week, I was reminded of how much time and effort goes into helping young children to recognize the numbers 0-50. Her lesson began with having the children look at a numbers chart, 0-59, as she used a pointer to touch each number and have the children say the number in chorus. She talked about the "one's family" and the "tricky teens" (because they do not sound like the other number families, like twelve does not sound like teen-two or twenty-two and thirteen does not sound like teen-three or thirty-three) along with the other number families. She was focused on the numbers 1 and 3 that day, and how a 1 and a 3 side-by-side make 13, what they looked like, how many that was in pictures of things and how to write them. Her large laminated flash cards with numbers on one side and the picture of how many things that number looks like were wonderful visuals for the children to see. She talked about what number comes before as well as after a given number, that after gets bigger by one and before gets smaller by one. In a game setting the teacher asked the students to give the number before the flash card number and then again to give the number after the flash card number. Sitting in amazement I watched the teacher put her pointer finger in the air and heard her say, "Take your magic finger and trace the path to make a one. Straight line down and then we're done and that's the way we make a 1." The number three came next with, "Take your magic finger and trace the path to make a three. Around the tree, around the tree, that's the way to make a 3." All of this was done in about 20 minutes with great planning, thought, pacing, patience to help students learn, creative learning, and a passionate heart for teaching children! When I asked her how she came up with these illustrations she told me she googled them and found sayings for all the digits. There is such wealth of information on the internet now to access and utilize in the classroom. What a difference from when I was taught to recognize my numbers by rote memory and work with sums and differences using bottle caps, one of the original math manipulatives of the late 50's.

During those days I have substituted for the kindergarten teachers my appreciation for all they do just grew. They work non-stop, except for a short 20-ish minute lunch once the children are taken to the lunch room, covering all the basics like days of the week, months and seasons of the year, counting by ones, tens and hundreds, making sums and differences, recognizing letters and putting them into words and sentences as they learn to read, and much more! They are the *GIANTS* whose shoulders we stand on to see farther. As a high school teacher, I saw students connect math to science, literature and economics. One of my famous quotes to my Algebra 1 students, when they asked me when were they ever going to use what I was teaching them, was "I am showing you the parts to a car that you will build in Calculus someday." One of my colleagues that taught both Algebra 1 and Calculus wisely told me that Algebra 1 is the foundation for Calculus and not to forget that Algebra 1 is the most important math course at the high school level and to teach it well for student's future success. We must each look through our own lens and look both back and forward to increase the success of our students. When we look at our students at the end of the school year we want to see a depth of change from September to May.

Oh, and one last thing! Polymaths are lifelong learners with a commitment to continuous, self-directed learning and a growth mindset, embracing the belief that skills and intelligence can be developed. This characteristic resonated with me as I thought about what the teaching profession entails for each of us.

My best to each of you as you make this journey in teaching this year! Feel free to reach out to me anytime at marian@pctm.org . Information regarding any PCTM events as well as affiliate events and other local mathematics opportunities can be found on the PCTM website at www.pctm.org.

Have a wonderfully blessed year filled with good health and lots of joy!

Marian Avery, PCTM President

Happenings

2025 PCTM Conference

2025 PCTM Annual Conference Math in Motion

The 2025 PCTM annual conference, Math in Motion: Engaging Minds through Exploration and Discovery, was held in Harrisburg from July 23 to July 25. The conference was attended by over one hundred K-12 teachers, administrators, college professors, and pre-service teachers. Forty hour-long breakout sessions were held on a variety of topics spanning grades K-12. The annual PCTM awards and the general membership meeting for PCTM were also held during the conference.

Pre-conference speaker Dan Kaufmann delivered a very interactive talk entitled “Struggle is the Key to Success.” Dan began his talk by having attendees share ideas about the process of learning to ride a bicycle, recognizing that falling off the bike (failure) with a clear goal of being able to ride a bicycle can lead to eventual success. In the math classroom, productive failure happens when the desired outcome is not achieved initially, but learning happens from the mistakes leading to improving future attempts. Productive failure may seem counterintuitive, but it ultimately helps students to transfer their learning.

The conference began on Thursday morning with IGNITE talks from math educators Colleen Breen, Rob Baier, and Ryan Kinzler. Deborah Peart Crayton shared the Thursday keynote with "Readers Read. Writers Write. Mathers Math!". Her personal journey as a math student and the voices of other math students challenged the attendees to set high expectations for mathematics for all of their students. Just like all students can be readers, all students can be mathers. The keynote speaker on Friday was Desmos founder, Eli Luberoff. Eli's session was titled "Technology that thinks with you, not for you". During his speech, Eli talked about how technology can be a powerful tool as long as you are careful in the ways you are using it. He also highlighted many interesting ways technology can help everyone overcome barriers through his example of a person that is blind using the "hear my graph" function on Desmos.


The 75th anniversary of PCTM will be celebrated at the annual conference at the Doubletree Green Tree in Pittsburgh from August 5-7, 2026. The pre-conference speaker will be Bob Lochel and keynote speakers include Fawn Nguyen and NCTM President Latrenda Knighten. We would love to add your name to the list of speakers for 2026. Consider submitting your proposal for a one-hour session by completing the proposal form on the PCTM website. If you are interested in serving on one of the many committees to make the conference a success, email us at pctm@pctm.org.


Productive Failure

2025 PCTM Award Winners

The 2025 PCTM Awards were announced on July 24, 2025, at the Pennsylvania Council of Teachers of Mathematics annual conference that was held in Harrisburg.

From Left to Right: The Master of Mathematics Award (Grades K-2): Tina King, Tinicum School, The Master of Mathematics Award (Middle School): Amanda Bariana, Northern Lehigh School District
Not Pictured: Jena Foley, The Master of Mathematics Award (Grades 3-5), Marple Newtown School District

Master of Mathematics Award – Grades K–2
Tina King, a teacher at Tinicum School in Essington, has been honored with the 2025 Master of Mathematics Award for Grades K–2. King is recognized for her ability to blend high expectations with a nurturing approach, inspiring every student to succeed. A dedicated mentor and leader, she has supported two new grade-level partners over the past two years while maintaining exceptional math instruction in her own classroom. Her nominator shared, "[Tina] instills a love for mathematics, sparking curiosity and enthusiasm that extends beyond the classroom."

Master of Mathematics Award – Middle School
Amanda Bariana, a middle school math teacher in the Northern Lehigh School District, has been named the 2025 recipient of the Master of Mathematics Award for Middle School. With more than a decade of teaching experience, including seven years in her current district, Bariana also serves as Math Department Leader for grades 7–12. She was instrumental in redesigning the district's grades 5–8 math progression to ensure a smooth learning transition and co-leads weekly Teacher Collaboration Time to promote

engaging, problem-focused instruction. Her nominator described her as a leader whose "ability to lead, innovate, and inspire…makes her an ideal recipient" of this honor.

Master of Mathematics Award – Grades 3–5

Jena Foley, a fifth-grade math teacher at Loomis Elementary School in the Marple Newtown School District, has been named the 2025 recipient of the Master of Mathematics Award for Grades 3–5. Known for her professionalism, positive attitude, and commitment to making mathematics engaging for all students, Foley draws on her own early struggles with the subject to create a classroom grounded in conceptual understanding. By helping students grasp the "why" behind algorithms and computations, she fosters both confidence and curiosity. Her nominator described her as "a dedicated and reflective individual who embodies what it means to be a mathematician.

Nominate a Great Educator

Do you know an outstanding math educator or math education supporter? Do you know an excellent high school senior who plans to go into a math-related field? Nominate them for the annual PCTM awards. Nominations for all awards will **open on November 1st and close on March 30th the following year**. Nominations will be submitted via a google form found at pctm.org/awards. Nominations will require a link (or upload) of a letter of recommendation describing the candidate's qualifications for the award. The letter should outline the candidate's years of service and include specific examples that illustrate the nominee's impact and accomplishments. All nominators will be contacted about the status of the award on or around April 30th. Educator awards will be presented at the PCTM Annual conference and educator award winners receive a free conference registration.

The Outstanding Contribution to PCTM Award: This award will be presented to a member of PCTM who has demonstrated outstanding service and leadership to the organization over many years. The individual could have served in a variety of capacities or may have served in a single leadership role for many years.

The Outstanding Contribution to Mathematics Education Award: This award will be presented to a mathematician, or a mathematics educator from a public or private school, college or university, or industry, who has made an outstanding contribution to mathematics education in Pennsylvania. The person being nominated for the award must teach or work in Pennsylvania.

The Mathematics Hall of Fame Award: This award will be presented to the mathematics educator in Pennsylvania who is regarded by his/her peers as making the greatest impact on mathematics students and has continually exemplified excellence as a mathematics educator.

The Master of Mathematics Award: This award will recognize math educators at four different levels of education: Primary Master of Mathematics: Grades K-2, Intermediate Master of Mathematics: Grades 3-5, Middle School/Junior High School Master of Mathematics and High School Master of Mathematics. The new teacher must be nominated by a supervisor, an administrator or a colleague. To be nominated for this award a candidate must:

1. Be a teacher in a public/private school (at any level, K-12) who teaches mathematics in the state of Pennsylvania.
2. Have completed at *least* seven years of full-time teaching.
3. Exhibit contagious enthusiasm for students' learning of mathematics.
4. Demonstrate initiatives in developing innovative strategies in his/her teaching.

The PCTM New Teacher Award: The purpose of the award is to recognize promising, beginning teachers of mathematics so that they will be encouraged to remain in the profession. This award includes three years of free membership to PCTM. The new teacher must be nominated by a supervisor, an administrator or a colleague. To be eligible for this award the candidate must:

1. Be a teacher in a public or private school (at any level, K-12) who teaches mathematics in the state of Pennsylvania.
2. Have completed the first, second, or third year of his/her first full-time teaching experience.
3. Exhibit contagious enthusiasm for students' learning of mathematics.
4. Demonstrate initiatives in developing innovative strategies in his/her teaching.

The Distinguished Service Award: Upon the completion of the Annual conference, nominations will be accepted for the Distinguished Service award. The award may go to the General Chairperson of that Annual Conference, the Program Chairs of that Annual Conference or any PCTM Conference Committee Chairperson who has done an outstanding job in carrying out the function of his or her committee. The nominator must submit in writing to the Awards Committee, the person's name, the committee chaired and reasons the person is deserving of the award.

Annalee Henderson Award: The Annalee Henderson Outstanding Student Achievement Award is presented annually to a high school senior who has demonstrated excellence in mathematics and whose future plans include mathematics or a mathematics-related field. The student must have completed a variety of high-level mathematics courses which reflect a genuine interest in, and talent for, mathematics. High SAT scores and participation in mathematics contests and original work or research in mathematics presented for math and science fairs and clubs is required. The student must have a good overall academic record and be involved in other activities (inside or outside of school). This award includes a monetary amount of $1000.

2025 PA Mathematics Teaching Summit
September 20, 2025

The *first annual PA Mathematics Teaching Summit* was held on Saturday, September 20, 2025 from 8:00 AM – 3:00 PM at Spring-Ford Area School District 9th Grade Center in Royersford, PA. The PA Mathematics Teaching Summitt is a one-day conference for both Pre-Service Teachers and In-Service Teachers, sponsored by PCTM (Pennsylvania Council of Teachers of Mathematics) and PAMTE (Pennsylvania Association of Mathematics Teacher Educators).

Registration table at the PA Mathematics Teaching Summit. Shannon Wenger (Carlisle HS, Summit Program Co-Chair and Registration), Jennifer Rinehimer (Spring-Ford Area School District Curriculum Supervisor and host for the Summit), Melissa Boston (Duquesne University, presenter and Summit Conference Committee member), joined by three Summit attendees.

Among the 81 attendees were over 40 Pre-Service Teachers. Attendees had the opportunity to attend an assortment of 24 varied sessions presented in four different time slots in addition to a Keynote speaker. All sessions were open to both Pre-Service Teachers and In-Service Teachers, and were representative of all levels of education K-12. The sessions included a focus on the Pre-Service Teachers, specifically in things that will help them prepare for and navigate a job interview, and preparation for managing a classroom among many other topics. There were also sessions that both the Pre-Service Teacher and In-Service Teacher could find helpful in classroom instruction techniques and specific lesson examples that have been used by other teachers with success. A panel discussion was held for Pre-Service Teachers which included what to expect during student teaching and during the first few years of teaching, along with how to keep a work-life balance during both student teaching and those first years of teaching. The

panelists held a question-and-answer session with the Pre-Service Teachers which gave practical insight to help bridge the gap between theory and practice. The face-to-face networking between In-Service Teachers as well as Pre-Service Teachers was a priceless experience!

The day began with registration at 8 AM where each attendee was given a teacher swag bag filled with many mathematics educational items. The first session began at 8:30 AM, among which was a "Mock Interview" put on by Leigh Nataro and Bob Lochel filled with fun and a bit of laughter from the audience as they watched some of the things you shouldn't do in an interview. It was amazing!!! Following this first session was the Keynote held in the Media Center. PCTM President Marian Avery gave a warm welcome to the attendees, mentioning how wonderful it was to see so many people in attendance at this first annual Summit. PAMTE President Lara Dick also gave a welcome to the attendees. Dr. Melissa D. Boston, a member of the Summit Committee, Duquesne University Professor, National Science Foundation EDU/DRL Program Officer, and past NCTM Board of Directors, introduced the Keynote Speaker.

Keynote Speaker Dr. Ed Nolan gave an informative talk entitled, "How Do We Privilege Student Thinking Through Questioning?". As teachers we can prepare and use questions to encourage student thinking and improve student understanding. These questions should be made to honor and encourage student thinking and support students to do the sense making. The session also covered how to plan questions, anticipate responses, and develop the best teacher actions to engage students in success.

Pre-Service Teachers attend a panel discussion designed for preparing them to enter the classroom. Experienced educators shared what to expect during student teaching, expectations of first-year teachers, work-life balance during student teaching and those first years, and staying grounded in why you became a teacher. Questions were fielded from the attendees with wonderful responses that gave pre-service teachers practical insights to help bridge the gap between theory and practice.

After the Keynote, three session blocks followed along with a "Lunch and Learn" where attendees enjoyed a Panera Bread Lunch. At the end of the day attendees gathered back for closing remarks and grand door prizes. Door prizes included manipulatives, individual white boards, teacher supply baskets, gift cards, books and resource materials, math T-Shirts, and much more! Every attendee went home with something!

Many attendees made positive comments about the day; how much they enjoyed the day, how much they learned, the wonder of networking with others in a face-to-face setting, the high energy level of the day and how it encouraged them, and the desire of many to attend again, and the wonderful door prizes. The day was certainly filled with high energy and fun! If you weren't there you missed a great day of mathematics and good fellowship! Next year in the fall of 2026 we will be in the western part of the state. Information regarding the location and date of the *second annual PA Mathematics Teaching Summit* will be posted on the PCTM website in mid-November. Hope you will join us in 2026!!

Attendees learn how to use Algebra Tiles and Two-Colored Counters to provide students with a visual/tactile/kinesthetic way of understanding theoretical concepts in algebra while eliciting evidence of student thinking and empowering students with their own learning.

Pre-Service and In-Service Teachers learn how to engage students through code and a STEM experience, driving cars and flying drones from TI calculators with TI instructor Mr. Dana Morse.

Oh…and a ***special thank you*** to the Spring-Ford Area School Administration and School Board for hosting this event and to Jennifer Rinehimer, Curriculum Supervisor, and her Math Coaches who were instrumental in all the work at the 9th Grade Center to make this event possible!! The Summit Committee members were Marian Avery, Lara Dick, Shannon Wenger, Kelly Brent, Dave Kennedy, Melissa Boston, and Jennifer Rinehimer. A ***huge thank you*** to all of you for the work you did in planning and preparing for this event almost a year prior to its occurrence!

PCTM Spring 2026 Board Nominations and Elections

Dear Pennsylvania Mathematics Educators,

Please consider nominating yourself or a colleague for one of the PCTM Delegate at Large or Regional Representative positions on the PCTM Board for the PCTM Spring 2026 Elections. Each position has a two-year term and is a great way to become familiar with the organization.

A nominee for the ***Delegate at Large*** position must be a mathematics-based educator employed in the state of Pennsylvania, including the classroom at any level, Math Coaches/Supervisors, or Intermediate Unit. The Delegate at Large represents areas anywhere throughout the state.

A nominee for a ***Regional Representative*** position must be a full-time PreK-12 classroom teacher, employed by a school, having students in their classroom all day, and with a day-to-day interaction with students.
There are three positions open on the Board, one for each of the Regional Areas of Pennsylvania:
Eastern Regional Representative (IU's 13, 14, 18, 19-26 & 29)
Central Regional Representative (IU's 08-12, 15, 16 & 17)
Western Regional Representative (IU's 01-07, 27 & 28)

Responsibilities of these positions:

1. Attend the Board meetings as listed.
    - August 5, 2026 - 2:00-3:30 PM – Doubletree by Hilton Pittsburgh-Green Tree, 500 Mansfield Avenue, Pittsburgh, PA 15205- during the Annual Conference (Interstate Room)
    - November 2026 – 6:30-8:30 PM – Via Google Meet (a Thursday evening TBD)
    - February 2027 – 6:30-8:30 PM – Via Googe Meet (a Thursday evening TBD)
    - April 2027 – 6:30-8:30 PM - Via Google Meet (a Thursday evening TBD)
2. Use your voice and vote on all Board decisions and motions.
3. Provide input at the Board meetings concerning agenda items.
4. Bring forth new ideas and suggestions that PCTM might be able to enact to benefit the teachers of Pennsylvania.

If interested, please send the following information to PCTM Vice President Dave Kennedy at dikenn@ship.edu by 11:59 PM on Monday, January 26, 2026. In the subject line please type: "PCTM Nominations 2026".

- Headshot photo of yourself that can be posted online for the elections in early March
- One-paragraph bio that can be posted online for the elections in early March
- School District & School Building Name/Charter School/Academy School/Private School
- Grade level you teach (Elementary, Middle School, High School) if applicable
- IU number

Thank you,

Dave Kennedy
PCTM 2026 Nominations and Elections Chair

2025 Pennsylvania Statistical Poster Competition Winners

The Mathematics Department at Saint Francis University is pleased to announce the winners of the 2025 Pennsylvania Statistics Poster Competition. The annual state competition is in its twenty-ninth year overall and coordinated for the seventeenth year by Saint Francis University. Cash awards of $96 for first place, $72 for second place, $48 for third place, and $24 for fourth place in each of four grade levels are awarded to the students who submitted winning posters. External financial support is provided by several regional and state professional organizations, including the Pennsylvania Council of Teachers of Mathematics, Mathematics Council of Western Pennsylvania, Pittsburgh Chapter of the American Statistical Association, Harrisburg Chapter of the American Statistical Association, Philadelphia Chapter of the American Statistical Association, and Association of Teachers of Mathematics of Philadelphia and Vicinity. A statistics poster is a display containing two or more related graphics that summarize a set of data, looks at the data from different points of view, and answers specific questions about the data. The 251 posters submitted electronically included 71 in the K-3 grade category, 82 in the 4-6 grade category, 26 in the 7-9 grade category, and 72 in the 10-12 grade category. These 251 posters were submitted from a total of 396 students! Judging for the state competition was held in April 2025. Winning posters were then submitted to the Data Visualization Poster Competition, which is coordinated by the American Statistical Association. Congratulations to all the students who created and submitted the winning and honorable mention posters, and to the teachers, parents and mentors who guided the students.

Grades K-3 Winning Posters 2025

First Place: Jacob Bilbao, *The Growing Race,* Rydal Elementary School, Teacher: Pamela DaSilva

Second Place: Akshat Saxena, *Which Liquid Helps Plants Grow Best?* Great Valley Elementary School, Parent: Aashish Saxena

Third Place: Oren Wilson, *Bad Milk...Yuck!!!!,* Rydal Elementary School, Teacher: Pamela DaSilva

Fourth Place: Isla Thomas, *Which Melts Faster?* East Pike Elementary School, Teacher: Geri Nath

Top Honorable Mention: Leslie Kuo, *Mission in Vegetables,* Rydal Elementary School, Teacher: Pamela DaSilva

Honorable Mention: Emma Greenhalgh, *Rubber Band Rage,* Jacksonwald Elementary, Teacher: Kathy Walker

Honorable Mention: Ruth Bannon, *Sea Turtles and Their Eggs,* McKinley Elementary School, Teacher: Matthew Brenner

Honorable Mention: Greyson Miller, *Soap Battles,* Owatin Creek Elementary School, Teacher: Kathy Walker

Honorable Mention: Carter Minnich, *Protect the Ball,* Lorane Elementary School, Teacher: Kathy Walker

Grades 4-6 Winning Posters 2025

First Place: Gabe Zamborsky, *Dance…Sport or Activity?* Abington Middle School, Teacher: Pamela DaSilva

Second Place: Sadie Feeney, *Gluten-Free? Hardly.,* Rydal Elementary School, Teacher: Pamela DaSilva

Third Place: Thaddeus Reilly, *Vacation Inquiry,* Rydal Elementary School, Teacher: Pamela DaSilva

Fourth Place: Zachary Kossenkov, *Popular Crowd,* Rydal Elementary School, Teacher: Pamela DaSilva

Top Honorable Mention: Andres Colon, *Would you Rather…This Region or That?* Rydal Elementary School, Teacher: Pamela DaSilva

Honorable Mention: Maxina Banciu, *Hmmm? What Water Bottle Should I Get?* Rydal Elementary School, Teacher: Pamela DaSilva

Honorable Mention: Taylor Woodlin, *Tunes Through Time,* Abington Middle School, Teacher: Pamela DaSilva

Honorable Mention: Henry Bowman, Jacob Klingerman, Crue Flick, *Does Physical Activity Affect your Sleep?* Central Columbia Middle School*,* Teacher: Michelle Wells

Honorable Mention: Lucy Snyder, *Power Play,* McKinley Elementary School, Teacher: Matthew Brenner

Honorable Mention: Angela Xie, *Art Supplies,* Rydal Elementary School, Teacher: Pamela DaSilva

Grades 7-9 Winning Posters 2025

First Place: Danica Witmer, Jordyn Weller, Ellie Jackson, Madi Stine, *Flexible Instruction Day,* Shippensburg Area Middle School, Teacher: Amanda Kirkpatrick

Second Place: Jayne Draper, *Social Media vs Us,* Abington Middle School, Teacher: Pamela DaSilva

Third Place: Easton Glass, *Does Home vs. Away Affect Win Rate?* Fort LeBoeuf High School, Teacher: Cody Patton

Fourth Place: Isaac Freeman, *Red Fish or Blue Fish?* Abington Middle School, Teacher: Pamela DaSilva

Top Honorable Mention: Erik Wahus, *Breathing Room - Free Time Among Middle Schoolers,* Abington Middle School, Teacher: Pamela DaSilva

Honorable Mention: Dominic Ferrero, Raffi Garib2ian, *Get Ready to Gulp*, Abington Middle School, Teacher: Pamela DaSilva

Honorable Mention: Zia Ford, *Lead Takes the Lead,* Abington Middle School, Teacher: Pamela DaSilva

Honorable Mention: Aynslee Wilkins, *Electives in Middle School,* Abington Middle School, Teacher: Pamela DaSilva

Grades 10-12 Winning Posters 2025

First Place: Marie Meredith, Melinda Wu, Safa Ali, *Are We Sheep?* State College Area High School, Teacher: Eric Davy

Second Place: Levi Nicholas, *The Power of a Promised Cookie,* State College Area High School, Teacher: Jacob Smith

Third Place: Isabella Stewart, Braelie Krahe, Katelyn Junod, *Do Energy Drinks Increase Your Energy?* Burrell High School, Teacher: Meaghan Volek

Fourth Place: Lukas Gratzmiller, Ryan Bates, *Are Students More Efficient at Typing or Writing?* Burrell High School, Teacher: Meaghan Volek

Top Honorable Mention: Nathan Whetzel, William Martin, Brian Kriley, *Mayday! Mayday! We Need Your Help!* State College Area High School, Teacher: Eric Davy

Honorable Mention: Nicole Ziccarelli, *Too Many Paws, Too Many Problems?* Burrell High School, Teacher: Meaghan Volek

Honorable Mention: Morgan Roan, Jayson Lu, Sophia Scourtis, *Cowspiracy,* State College Area High School, Teacher: Eric Davy

Honorable Mention: Brooke Pablic, *Saddle Sense; Hot or Not?* Bishop Carroll Catholic High School, Teacher: Carol Carlisle

Honorable Mention: Adyson Speer, Cadence Guckert, *Does Caffeine Have an Effect on Sleep Times?* Burrell High School, Teacher: Meaghan Volek

Honorable Mention: Maggie Nesko, Dana Barczykowski, Leah Troiano, *On Brand vs. Off Brand,* Burrell High School, Meaghan Volek

Honorable Mention: Cecilia Keys, Sydney Richardson, Cecelia Corro, *Are Dogs Really High School Students' Best Friend?* State College Area High School, Teacher: Eric Davy

Honorable Mention: Jacob Bauman, *As Temps Drop, Do Grades Drop Too?* Mifflin County High School, Teacher: Kerry Clancy-Burns

Honorable Mention: Sierra Brown, Luke Boylan, *Does Time of Day Affect Your Test Score?* Burrell High School, Teacher: Meaghan Volek

Honorable Mention: Mateo Soto, Raymond Zhang, Lilia Sahoo, *Underclassmen vs. Upperclassmen: Who's More Stressed?* State College Area High School, Teacher: Eric Davy

Honorable Mention: Westin Lenkey, Ulysses Guillard, *Rock Paper Scissors,* State College Area High School, Teacher: Jacob Smith

Honorable Mention: Sabrina Hoover, Gianna Sever, *Shopping for Happiness: Is Retail Therapy Real?* Burrell High School, Teacher: Meaghan Volek

Honorable Mention: Tristan Rogers, Yulian Itskov-Curto, Claire Fox, *The US Economic Future: Gloomy or Great?* State College Area High School, Teacher: Eric Davy

Honorable Mention: Ishaan Singh, *Does Listening to Music While Studying Improve Student Focus?* Dowingtown West High School, Parent: Bharti Singh

ACT and Texas Instruments Collaborate to Enhance Student Success in Mathematics

Iowa City, Iowa and Dallas, Texas (November 12, 2025) – ACT, a leader in college and career readiness assessment, and Texas Instruments Education Technology (TI), a division of the global semiconductor company, today announced a comprehensive partnership aimed at empowering students to achieve their best performance on the ACT mathematics test.

This initiative brings together two education leaders to provide innovative resources and tools that maximize student potential. The partnership will start by providing:

- A new dedicated online resource center featuring co-branded instructional videos demonstrating optimal use of TI calculators during the ACT mathematics test.
- Additional study materials featuring TI calculators to help students build upon and apply their mathematical knowledge while maximizing their time on the ACT test.
- Professional development programs for teachers focused on effective calculator-based testing strategies.

"This partnership represents our commitment to providing students with the tools and resources they need to demonstrate their mathematical knowledge effectively," said Andrew Taylor, Senior Vice President of Educational Solutions and International, ACT, "By working with Texas Instruments, we're ensuring students have access to familiar, powerful technology tools during this important assessment."

"Texas Instruments is proud to partner with ACT to support student success," said Laura Chambers, President at Texas Instruments Education Technology. "Our calculator technology, combined with targeted instructional resources, will help students showcase their true mathematical abilities during the ACT test."
The new resources are available now to students and educators on the ACT website www.act.org under ACT Math Calculator Tips.

About ACT
ACT is transforming college and career readiness pathways so that everyone can discover and fulfill their potential. Grounded in more than 65 years of research, ACT's learning resources, assessments, research, and work-ready credentials are trusted by students, job seekers, educators, schools, government agencies, and employers in the U.S. and around the world to help people achieve their education and career goals at every stage of life. Visit us at https://www.act.org/.

About Texas Instruments
Texas Instruments Education Technology (TI) — the gold standard for excellence in math — provides exam-approved graphing calculators and interactive STEM technology. TI calculators and accessories drive student understanding and engagement without adding to online distractions. We are committed to empowering teachers, inspiring students and supporting real learning in classrooms everywhere. For more information, visit education.ti.com.
Texas Instruments Incorporated (Nasdaq: TXN) is a global semiconductor company that designs, manufactures and sells analog and embedded processing chips for markets such as industrial, automotive, personal electronics, enterprise systems and communications equipment. At our core, we have a passion to create a better world by making electronics more affordable through semiconductors. This passion is alive today as each generation of innovation builds upon the last to make our technology more reliable, more affordable and lower power, making it possible for semiconductors to go into electronics everywhere. Learn more at TI.com.

PCTM 75th Anniversary is 2026 in Pittsburg, where we had its 50th Anniversary. 2026 Conference August 5 - 7, DoubleTree by Hilton, 500 Mansfield Avenue, Pittsburgh, PA 15205	2027 Conference, Dates TBD Harrisburg, Pa

2026 Conference Speaker Proposals: October 15th - December 15th - See PCTM.org

Submissions Solicited For PCTM Magazine

Since the 1990's, the Pennsylvania Council of Teachers of Mathematics (PCTM) has produced the PCTM Magazine for our members. Our mission is to promote mathematics education in Pennsylvania. In the magazine we accomplish this by publishing edited articles by leading authors and local news from around the state. PCTM is committed to improving mathematics instruction at all levels. We place an emphasis on classroom activities that are aligned to the Pennsylvania Core State Standards and the NCTM Principles and Standards for School Mathematics.

You are invited to submit articles for consideration for publication in the PCTM Magazine. This publication provides an excellent opportunity for you to share your ideas with the ever-growing number of colleagues dedicated to improving mathematics education in Pennsylvania. Any topic of interest to teachers of mathematics, especially K-12 classroom teachers in Pennsylvania, is suitable subject material. All readers are encouraged to contribute articles and opinions for any section of the magazine. Teachers are encouraged to submit articles for Voices From the Classroom, including inspirational stories, exemplary lessons, or management tools.

Original artwork on the cover is another way teachers may contribute. We publish the magazine two times each school year, in the fall and spring. Our website has several archives of journals in PDF format. Please see https://pctm.org/magazines/ if you wish to view prior issues.

Deadline for submissions:
Spring, April 1
Fall, October 1

Author Guidelines:

Manuscript Format: Manuscripts should be double-spaced, with 1-inch margins on all sides, typed in 12-point font and follow the APA 7th Edition style guide. Manuscripts should be submitted in Microsoft Word. If you have a picture or graphic in the text, please include the original picture(s) in a separate file. A cover letter containing author's name, address, affiliations, phone, email address, and the article's intended audience should be included in the email.

Manuscript Submission: Manuscripts should be submitted electronically as an e-mail attachment to pctm.editor@gmail.com. Receipt of manuscripts will be acknowledged. After review by the editors, authors will be notified of a publication decision.

The current editor is Xiangquan (James) Yao who may be reached at pctm.editor@gmail.com.