

HCTM Newsletter

HAWAII COUNCIL OF TEACHERS OF MATHEMATICS

DECEMBER 2018

from your President . . .

Happy Holidays to all HCTM members!

I hope this newsletter finds you well. I hope all of you are enjoying your well deserved Winter Vacation. Soon, school will resume and we will be in the midst of the second semester in no time.

The Hawaii Council Teacher of Mathematics annual conference on Saturday, September 15, 2018 at 'Iolani School was a huge success. We had over 100 attendees, 15 breakout sessions, 8 poster sessions, and an inspiring keynote by Dewey Gottlieb. It was exciting to see educators from the public and private schools, pre-service teachers, and professors from the local universities network and share ideas with one another. I would like to thank HCTM's executive board for their hard work in planning the conference, Amy Yonashiro from Iolani School who helped with much of the logistics and coordination, and Iolani School for being gracious hosts for the conference.

We are ready to announce the Hawaii Council Teachers of Mathematics (HCTM) annual conference date for next school year! Next year, the HCTM annual conference will be held at Hawaii Baptist Academy on Saturday, September 14, 2019. It will be a full day conference. Mark it on your calendar! Please consider being a breakout session presenter, create a poster for a poster session, volunteer, and/or attending the conference. We look forward to seeing you! Bring a friend too! The more the merrier! We don't have many details for it yet but stay tuned...more information will be forthcoming!

This year, we also decided to put on a mini-elementary (Pre-K to Grade 5) conference. This half day mini-conference will be held on Saturday, February 23, 2019 from 8:00am-11:45am at Salt Lake Elementary School. This will include two 75-minute breakout sessions. Look for more information in this newsletter and on our website (hctm.org).

I have been thinking about New Year resolutions and I was thinking about ONE thing that I can change in my practice or in my classroom. In working with a dozen struggling sixth graders at my school, I tend to get caught up in my lessons and forget to leave time for me to close the lesson and allow my students time to reflect on their learning. The ONE thing that I will change is to set a 7-minute timer to allow me that time before the bell rings to close and have a lesson reflection. I am hoping that this will help improve student learning in my classroom. I challenge all of you to change just ONE thing in your classroom or practice. I would love to hear from you! Please share with me at stacie_kaichi@notes.k12.hi.us.

Please continue to enjoy your time with your family before school starts up again. Stay safe and have a Happy New Year!

Sincerely,

Stacie Kaichi-Imamura
HCTM President

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Big Island Students Compete in Oahu Math League

by Nathan Waters, Waiakea High School Math Team Coach and Big Island Math League Coordinator



At Waiakea, we have a variety of clubs available to students. Math League provides a unique opportunity for those who have an aptitude or interest in math to challenge themselves and socialize with like-minded students.

Even with all the talented students at Waiakea that join our math club, it has actually been difficult in the last few years to have a large team to bring to the competition. Many of our strongest members end up with obligations to sports or other academic engagements that conflict with the Saturday meet schedule. But we do have a strong team and enthusiastic club officers to lead them.

Here on the Big Island we have several schools that regularly attend the competitions along with Waiakea. This year we have hosted teams from Hilo, Kamehameha Hawaii, Keaau and Konawaena. The meets are usually held at the Waiakea High Library but we have also traveled to Kamehameha and are planning on holding the January meet at Konawaena.

Since we participate in the Oahu Math League competition remotely, procedures are in place to ensure that the meet goes smoothly. Before each meet I send out a reminder to the other schools with the time and place as well as a Google document where the coaches can record their team rosters.

My department head receives the competition problems a few days before and makes copies for the meet. This is to ensure problem security before the competition.

The competition is done in tandem, with the Big Island and Oahu teams competing in the same events at the same time. I am in communication with Edmar Ramos at the Oahu meet and he lets us know when to begin and end each event.

As the rounds conclude, several of the participating coaches help grade and input scores. These are then input into Word documents that are shared through Dropbox. These scores are compiled on Oahu and input with all the other schools. This is a good system that allows Big Island teams to participate, since attending the meets in person would be logistically and financially difficult.

It has been an interesting few years coordinating the meets and running the club here at Waiakea. The students this year have taken a lot more responsibility for their practice sessions and the logistics of running the club. I look forward to helping the Big Island schools in the upcoming New Year and beyond.

See page 3 for photos of Mathletes in action . . .

Best Wishes for a Happy 2019!

*Saturday morning, November 17, at
Kamehameha Hawaii for a Math Meet . . .*



Saturday morning — students arriving for math league competition.



Last minute preparations are fun too!



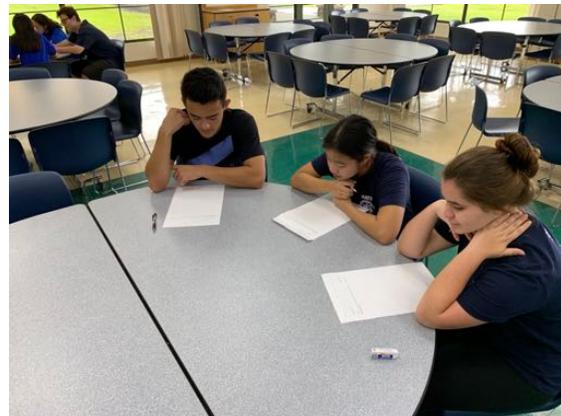
Students have 10 minutes to complete 3 problems.



Three students work together on the Team Question.



Even the teachers have fun grading, scoring, and catching up with each other.



And here is another threesome focused on a Team Question.

2016 Presidential Award for Excellence in Mathematics and Science Teaching



Hawai'i public school teachers honored with Presidential Award for Excellence in Mathematics and Science Teaching

Akeyo Garcia of Ewa Elementary and Masaru Uchino of Momilani Elementary have been awarded the Presidential Award of Excellence in Mathematics and Science Teaching, or PAEMST. It is the highest award K-12 mathematics and science (including computer science) teachers can receive from the U.S. government. Recipients receive \$10,000 from the National Science Foundation and will engage in education-centered discussions in Washington, D.C.



Akeyo is receiving her award from Michael Kratsios, Deputy Assistant to the President for Technology Policy and NSF Director, Dr. France A. Córdoba.

Akeyo Garcia, Ewa Beach, HI K-6, Mathematics, 2016

Akeyo Garcia has been an early childhood educator for more than 20 years, teaching children ranging from newborns to six-year-olds in both California and Hawaii. She taught kindergarten at Ewa Elementary School for eight years, and recently served as a prekindergarten Program Director and teacher at Kamalani Academy Charter School. Next year, Akeyo will be returning to Ewa Elementary School to launch a prekindergarten program. Akeyo increases student understanding using a play-based discovery approach, and shares her enthusiasm for mathematics by engaging students in hands-on activities, collaborative discussions, and projects. Akeyo's awards include the Educator of Excellence in Our Community Award, the Kōkua Hawaii Foundation Earth Action Projects Award, and over \$50,000 in grants. The most prominent of these awards is the National Education Association's Learning and Leadership grant, which allowed her to purchase STEM materials for seven classrooms. Akeyo earned a B.Ed., with distinction, in elementary education and a M.Ed. in curriculum studies with a concentration in prekindergarten to third grade from the University of Hawai'i at Mānoa. She recently completed a master's degree in early childhood education. She is certified to teach prekindergarten through sixth grade and is currently working to obtain a National Board Certification for Early Childhood Generalist.



and from Akeyo . . .

Aloha. My name is Akeyo Garcia and I teach Pre-K at Ewa Elementary School. It was my honor to have been recognized as the recipient of the Presidential Award for Excellence in Mathematics and Science Teaching (PAEMST) as a kindergarten teacher. This experience inspired me to do nothing other than continue to strive for my personal best as an educator, as well as to perpetuate my passion within the field of early childhood education. I am truly grateful to have been found worthy of such a prestigious award and priceless opportunity.

From this experience I have learned how invaluable communication and collaboration is in the field of education. In June of 2018, I was invited to Washington D.C. to receive this award. While I was in D.C., I discovered lifelong friends amongst the fellow PAEMST awardees. Meeting like-minded people with similar goals was inspiring. We exchanged ideas, and contemplated perspectives on effective teaching. The diversity within our niche group of STEM educators has strengthened our profession in ways that will be valuable for many years to come.

In addition to meeting other awardees in D.C., we were invited to attend The White House State-Federal STEM Summit at the National Science Foundation (NSF). At this summit, we discussed:

1. Impact of current Federal 5-year STEM Education Strategic Plan and State STEM programs and policies,
2. Trends and priorities in Federal STEM Education, and
3. The federal government's role in supporting State STEM Education.

Participants included STEM leaders from each state, as well as representatives from NASA, NSF, and the White House. To be honest, I was not aware that this 5-year STEM strategic plan existed and it was about to expire until this experience. This was a critical 8 hours of brainstorming, but it gave me a sense of empowerment.

While preparing my portfolio for this award, I learned about myself as an educator. I try to provide many hands-on experiences and applicable practices for my students to make their learning meaningful. The style of learning I foster for my students has to come from my own experiences as a child. Growing up in Northern Island of Japan, I spent countless hours exploring nature with my father. He taught me how to measure the distance using my fingers and read the time using the shadow of trees. We also built things around the house such as rain water-catchment, wind vanes and animal traps using recycling items. I learned how to measure, divide, add and subtract from these experiences at a very young age. For me, mathematics was something I use all the time outside of school. Needless to say, mathematics was my favorite subject in school!

Learning never ends. Working for this award gave me the courage to apply for the National Board teaching certification. I also joined the Teacher Leadership Institute cohort in order to collaborate with other educators from not only within our state, but from across the country.

Moving forward, I have a renewed enthusiasm to continue my passion to teach mathematics to young children and to collaborate with fellow early childhood educators. I will always remember this humbling experience and am sincerely grateful for the opportunity to perpetuate my passion and better serve our young learners.



Akeyo and her husband Wayne enjoying their time in Washington, D.C.

MathCounts

by Jean Okumura

MathCounts is a national math enrichment, club, and competition program for grades 6–8 that is currently in its 35th year. Founding sponsors are the National Society of Professional Engineers, National Council of Teachers of Mathematics, and CNA Insurance. National sponsors are National Society of Professional Engineers, 3M, Phillips66, Northrop Grumman Foundation, Department of Defense, CNA Insurance, Texas Instruments Inc., Art of Problem Solving, and Next Thought. The title sponsor of the MathCounts National competition is the Raytheon Company.

The MathCounts competition program is a national program that provides students in grades 6–8 the opportunity to compete in live, in-person contests against and alongside their peers.

The Competition Series has 4 levels of competition—school, chapter, state and national. Each level of competition is comprised of 4 rounds—Sprint, Target, Team and Countdown Round. Altogether, the rounds are designed to take about 3 hours to complete.

- **Sprint Round:** focuses on speed and accuracy. Students have 40 minutes to complete 30 math problems without a calculator.
- **Target Round:** focuses on problem-solving and mathematical reasoning. Students receive 4 pairs of problems and have 6 minutes to complete each pair, assuming the use of a calculator.
- **Team Round:** focuses on problem-solving and collaboration. Students have 20 minutes to complete 10 math problems, assuming the use of a calculator. *Only the 4 students on a school's team can take this round officially.*
- **Countdown Round:** focuses on speed and accuracy. Students have a maximum of 45 seconds per problem without a calculator. This round is optional at the school, chapter and state level.

Students compete in the Sprint and Target rounds as individuals, and participate in the Team round in 4-member teams.

The Oahu Chapter MathCounts Competition will be held on Feb. 9, 2019 at Kamehameha Schools, Kalama Dining Hall. The Hawaii State MathCounts Competition will be held on March 9, 2019 also at Kamehameha Schools.

Schools that wish to participate in the MathCounts Competition should register at <https://www.mathcounts.org/>. Late registration fees apply for applications postmarked after December 14, 2018.

Try these . . . Some sample questions from the 2018 competition.

from the Sprint Round . . .

If the first five terms of an arithmetic sequence are 26, 16, 6, -4 , and -14 , what is the sixth term of this sequence?

The least common multiple of 15 and 20 is k . What is the least common multiple of 12 and k ?

Danica started her trip at mile marker 66 and ended her trip at mile marker 194. She drove at a constant speed the entire trip. Which mile marker had she reached by 75% of her trip?

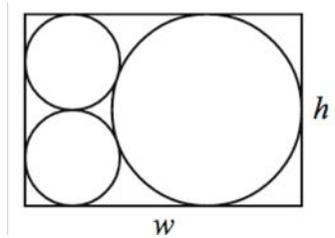
(see **Math Counts**, continued on page 7)

Math Counts, continued from page 6

from the Target Round . . .

Three dogs arrived at the dog park at three different times, with their three owners, using three different leash colors. The Dalmatian was next to arrive after the Schnauzer. The dog with the red leash is owned by the 7th grader. The Poodle was not the first to arrive. The Schnauzer does not use a green leash. If the 6th grader owns the Dalmatian, then the Poodle's leash is blue. The 8th grader arrived first. What is the product of the grade levels of the student who arrived second, the student who owns the Poodle and the student who uses the green leash?

Three circles are inscribed in a rectangle of width w and height h as shown. Two of the circles are congruent and are each tangent to two adjacent sides of the rectangle and to each other. The other circle is larger and is tangent to three sides of the rectangle and to the two smaller circles. What the ratio of h to w ? Express your answer as a decimal to the nearest hundredth.



from the Team Round. . .

There are three integer values of x that make the equation $x^3 + 6x^2 + 11x + 6 = 0$ true. What is the least of these values?

A dorm dining hall has three tables. Currently one student is seated at one table, two are seated at another and three are seated at the remaining table. Each student who enters the dining hall picks a table to join with probability proportional to the number of students already seated at the table. Terri enters the dining hall and sits at a table. Ursula then enters the dining hall and sits at a table. What is the probability that there is now a table at which at least four students are seated? Express your answer as a common fraction.

A list of numbers of the form $\frac{x}{2}$, for positive integers x , has a sum of 7. What is maximum product of the list of numbers? Express your answer as a common fraction.

from the Countdown Round . . .

If two distinct circles and an ellipse are drawn, what is the maximum possible number of points at which at least two of the three curves intersect?

A total of 32 softball teams play in a single-elimination tournament, meaning the losers of each round are eliminated and the winners of each round are matched up against each other in the next round, until one champion remains. How many total games are played in the tournament?

Valerie is exactly as much taller than Philip as Philip is taller than Janelle. If Valerie is 5 feet 6 inches tall, Philip is 4 feet 10 inches tall, and Janelle is 4 feet x inches tall, what is the value of x ?

What is the greatest five-digit multiple of 5 with five distinct odd digits?



Hawaiian Electric VP-power supply Bob Isler with the Hawai'i MATHCOUNTS 2018 team and Coach Sung Park, Taylor Ann Agena, Jared Lo, Felicity Zhou, Minjae Seo and Barry Nakamoto of HSPEEF.

Scenes from our Fall Conference...



Volunteers help with registration.



President Stacie Kaichi-Imamura welcomes conference goers.



Dewey gets things started.



So many "toys" to use in math class.



Browsing at one of the commercial exhibits.



Wrap-up session after a full morning!

More about our Fall Conference . . .

The HCTM annual conference was held on Saturday, September 15 at 'Iolani School. This change from spring to fall was made by request from previous conference attendees. Dewey Gottlieb, the *National Assessment of Educational Progress (NAEP) State Coordinator* for the DOE. His keynote titled, "*Curiosity. Exploration. Persistence. Play. Joy.*" was filled with entertaining and fun examples of mathematics in our daily lives.

Poster sessions have been a great opportunity for teachers to share projects, problems, or activities in an informal setting. The Board is seeking speakers and poster session presenters for the next conference on September 14, 2019 at Hawaii Baptist Academy.

Many thanks to the Board and volunteers who helped to plan and run this event, and a special thank you to Conference Chair Amy Yonashiro.

and looking forward to next year . . .

September 14, 2019
HCTM Annual Conference
at Hawaii Baptist Academy

MathAlive!

Pearl Harbor Aviation Museum has some exciting news for you and your students! From November 15, 2018, through August 18, 2019, the museum will host MathAlive!, an international traveling exhibit presented by Raytheon. MathAlive! offers interactive experiences showcasing the connection between math and the things kids love most, including sports, music, movies, games, and fashion. For more information about the exhibit, visit <http://mathalive.com>.

Sign up **now** for an unforgettable Field Trip experience, and the cost of your bus transportation will be covered by a generous grant from the Freeman Foundation. To register or find out more, go back to <http://mathalive.com> and choose

Plan a Field Trip

go down to **Explore Your Options**
and find the **Field Trip Request Form**

We look forward to seeing you soon!



is designed to *inspire*, to *spark the imagination*,
to reveal not only math at work, but the

Endless Possibilities Of Math
MathAlive.com



Your HCTM Board . . .

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Meet Phyllis Kawamoto . . .

Phyllis is serving her second term as HCTM's Elementary School Director. Her regular job is with the Executive Office on Early Learning—an agency attached to the DOE. She is a resource teacher and supports Pre-K teachers on public school campuses.

Q: Why did you become a math teacher or why do you like being involved with math/HCTM?

A: I became involved in math because of my "negative" experiences in learning math. The bulk of my learning math was based on memorization and not based on developing conceptual understanding. Because of these experiences, I was determined to support children in ways that developed their conceptual understanding. I'm very much interested in early mathematics and the ways that we can support our youngest learners to see math as an enjoyable and exciting subject.

Q: Do you have some goals for this year?

A: Tackle the stack of journals that's been accumulating next to my night stand, and provide a few professional development sessions for teachers.

Q: Anything else about you that might be interesting and/or quirky that you are willing to share?

A: I eat my cereal dry (no milk) and I don't like mayonnaise on my sandwiches, however, I do eat mac salad! Weird, huh? I like to tell people that I have a "discerning palate." My husband would say, "I'm a picky eater."

Elementary Mini-conference . . .

It's back! After several years of being on "hiatus," our mini-conference for preschool/elementary educators has returned. We have an exciting slate of presenters with a range of topics such as STEM, Math & Comprehension Strategies, Math Games Around the World and more!

Please join us . . .

Saturday, February 23, 2019

8:00 a.m. – 12 noon

Salt Lake Elementary School

\$10.00 for HCTM Members & Students

\$30.00 for Nonmembers

Late Registration (after 2/1/19):

\$20.00 for HCTM Members & Students

\$40.00 for Nonmembers