

# Mathworks Newsletter

## Winter 2019



Snowflakes are object lessons in symmetry and hexagonal structure.

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- Summer Review
  - Camps
  - Satellite Camps: Camp RAM and O Henry Camp
  - Mathworks 30 Year Anniversary
- Applications for Summer Camps 2020 open in January

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## Summer Review

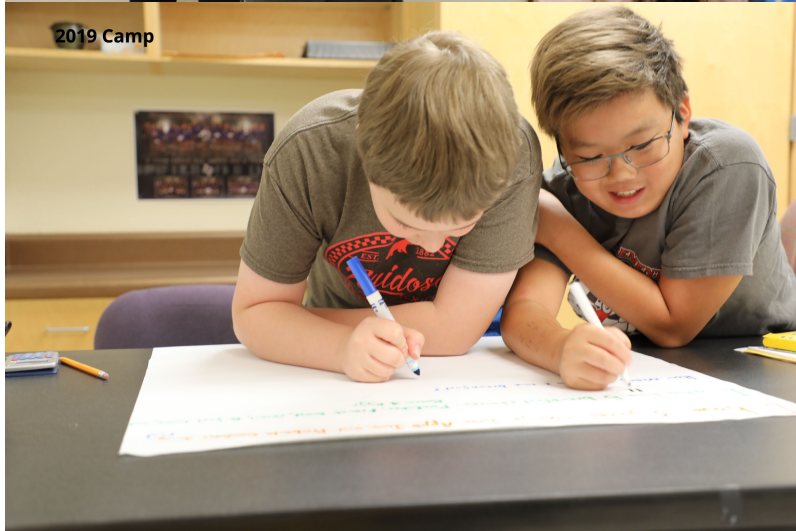
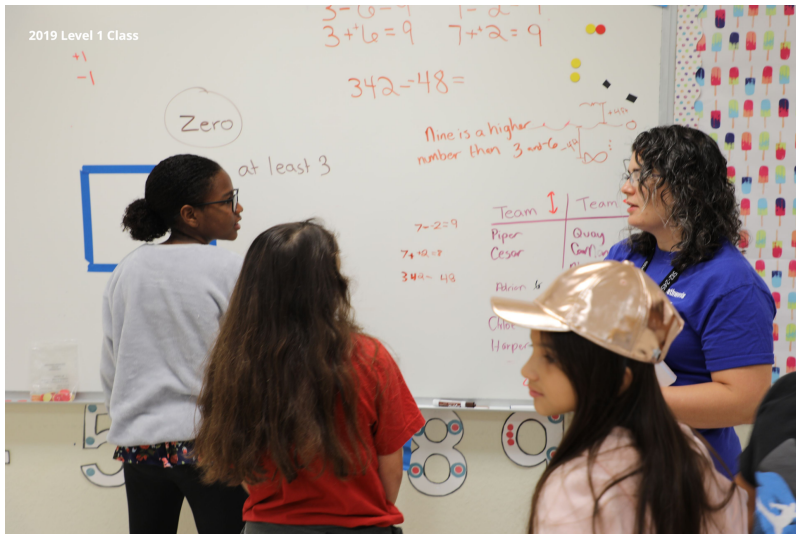
### Junior Summer Math Camp Half-Day (JSMCH) (2 weeks) :

The Mathworks JSMCH provides a unique mathematical learning community for elementary and middle school students, pre-service teachers, in-service teachers, master teachers, undergraduate students, graduate students, and university faculty. Young students have role models who provide a vision for why studying math is important and how students can use what they learn to pursue careers in Science, Technology, Engineering, and Mathematics (STEM).

Fostering conversations and letting students feel comfortable to debate with each other as they work to solve problems gives students ownership and understanding of the material. The results from a retrospective self-change student survey (PEAR Institute evaluation, Partnership in Education and Resilience) showed that 87% of the students reported a positive change in STEM engagement during a retrospective self-evaluation, 76% of the students reported increased interest in working in a math-related career in the future. This summer 195 students in grades 3 -8 attended classes with 23 undergraduate Mathworks Fellows assisting the teachers. This environment set the stage for the Professional Development (PD) program where teachers analyze classroom practices and strategies to successfully teach pre-algebra and algebraic concepts at the elementary and middle school level.

*"I have the opportunity to interact with peers and in-service teachers in a professional setting, teaching, and working with students. This is an experience that college education students don't get to have. I truly believe it helps me become the best teacher I can be." - 2nd year Mathworks Fellow, 2019*

*"The class moved at a much slower (more problem solving) pace. This was hard to do coming out of a typical classroom pace but refreshing." "The students naturally wanted to be very detailed and get the right answer. (Later) the students seem more willing to explore, and take risks (with the problems)." - PD Teacher from Austin, 2019*



**Junior Summer Math Camp Residential (JSMCR) (2 weeks):**

Carefully chosen and thoughtfully organized lessons are delivered during daily classes taught by Texas State faculty. Students learn to keep working on problems that appear too difficult at first. By setting goals and working together with their study group companions, they can track their progress and

celebrate their successes.

*"I especially like being able to solve hard problems that I wouldn't even think of doing before I came to this camp." - 8th Grade Student, Tomball, TX*

*"During Problem Session, we would review what we learned so if I didn't understand something I could ask questions, then we would do a problem and then present it." - 8th Grade Student, Austin, TX*

*"I feel energized from the pace of this camp and inspired to do more in the subject of mathematics because of it." - 9th Grade Student, Atlanta, GA*

Sixty-three students in grades 6, 7, and 8 studied in-depth topics including Counting Techniques, Number Theory, Combinatorics, Advanced Geometry, Probability and Problem Solving for up to 8 hours a day.

**Honors Summer Math Camp Residential (HSMC) (6 weeks) :**

The HSMC immerses students in doing mathematics in a collaborative problem-solving environment that builds a foundation for success. For the past 30 years, Mathworks has provided high school students with an innovative approach to learning mathematics. In 2019, 73 of the 342 students who applied were invited to participate. Thirty-two first-year students took classes in Number Theory, Mathematica Lab, Honors Seminar, and Problem Session, while 34 second-year students focused on Combinatorics, Analysis 1, and original research projects. Third-year students took Analysis II, Abstract Algebra, and also worked on original research projects.

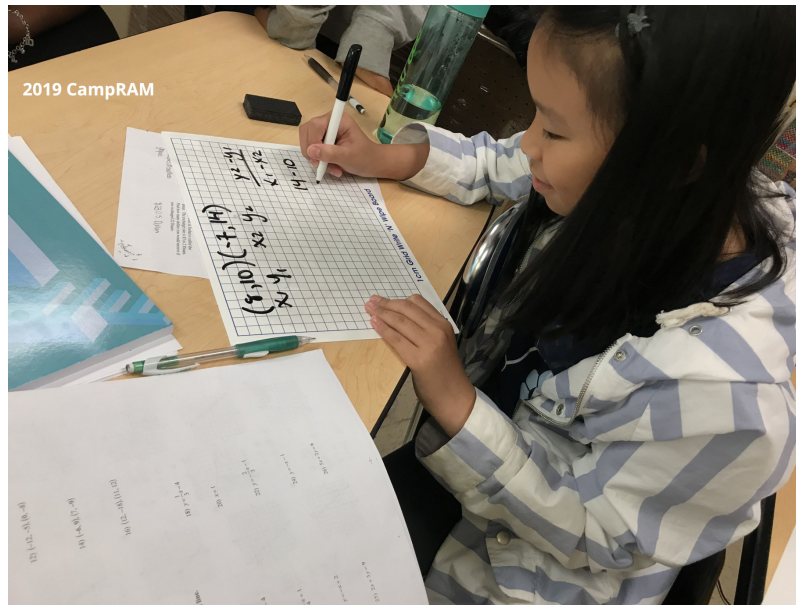


### **Camp RAM:**

Camp Readiness Across Mathematics (RAM) held at T.H. Rogers Middle School in Houston between June 10th and June 13th, 2019 was a free, week-long math camp geared towards incoming sixth graders. The program was created, organized, managed, and staffed by Annie and Shirley Zhu, who are current HSMC students.

Preparations for the camp began in April with the formulation of lesson plans and familiarization with a curriculum based on Mathworks Camp-in-A-Box, Math Quest Level 1 and Math Quest Level 2.

*"Ultimately, our goal is to guide the students to self-discovery," noted Annie. "So, it was incredibly rewarding to witness the students' joy when they solved questions correctly and understood the material deeply." - Annie Zhu*



2019 CampRAM

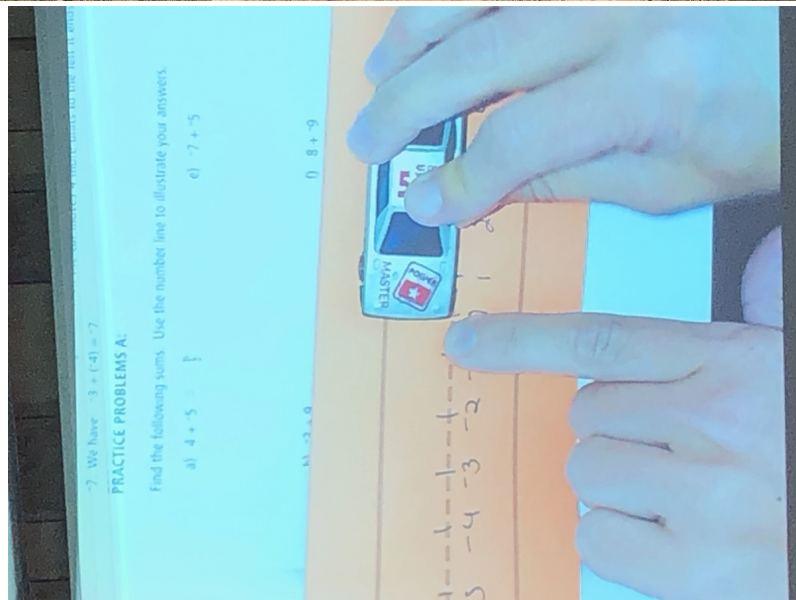


2019 CampRam Group

### **O Henry (AISD) Camp:**

For the third year in a row, O Henry Middle School in Austin conducted a week-long summer math camp using the Mathworks *Math Quest* curriculum to bring their rising middle school students together for a rich learning experience before the academic year gets started. The students met other new students who would soon be their classmates while learning prealgebra, algebra and geometry using fun games and activities. The camp was held from August 5th - 8th, with 81 students attending classes taught by five math teachers from O Henry.

*"Parents report to me that their kids are coming home every day from camp stating that they are having so much fun doing math. And the Advanced math teachers report that they can pick out during the academic year which kids have attended the camp and which have not based on their level of concept knowledge." - Karen C, O Henry Middle School Teacher and Camp Director*

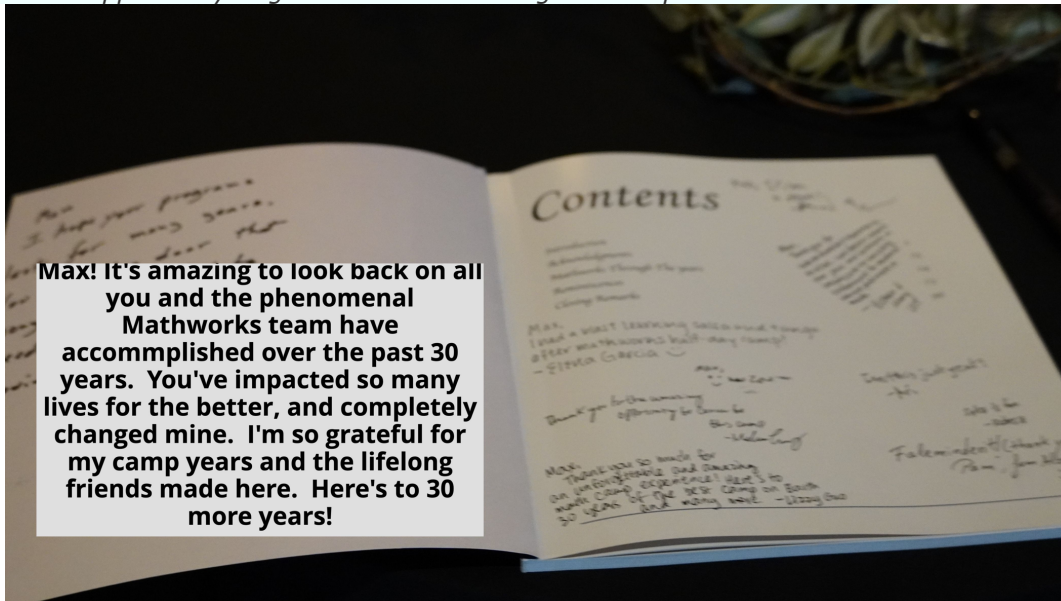


### 30th Anniversary Celebration

Sustaining excellence in math education and research for 30 years is remarkable. Thank you for celebrating with us: attendance, notes, gifts, and encouragement will help us continue to provide and improve the programs. Highlights of the weekend included 4 panels of alumni talking about their experiences in camp and what they are doing now; a wonderful colloquium by Mike Starbird about "Cutting Cake for Greedy People;" and an evening Gala dinner featuring Ken Baker who attended HSMC for 6 years and is now a Professor of Mathematics at the University of Miami. Other weekend activities included a 4<sup>th</sup> of July Celebration at the Warshauer's, and a picnic at Rio Vista after rafting down the San Marcos River.

*"Dear Max,*

*I still can't think of anything I would've rather done the 10 summers I spent at camp! Thank you so much for the opportunity to grow and make lifelong friendships." - HSMC Alum*



**Max!** It's amazing to look back on all you and the phenomenal Mathworks team have accomplished over the past 30 years. You've impacted so many lives for the better, and completely changed mine. I'm so grateful for my camp years and the lifelong friends made here. Here's to 30 more years!



30th Anniversary Banquet

## 2020 Camp Applications Open - January 1, 2020

[Click here to apply!](#)

### Junior Summer Math Camp (half-day)

- June 8 - 19, 2020
- \$400 - Scholarships are available
- A two-week, multi-level program that introduces students (grades 3 - 8) to beginning concepts in algebra through activities, with more advanced levels in problem-solving and discrete math. Students explore problems together and share in the excitement of mathematical exploration and discovery.

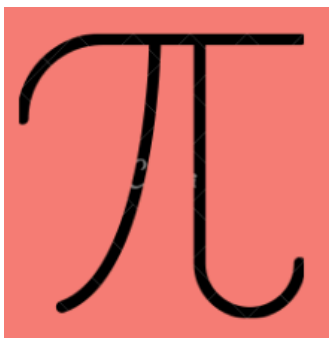


### Junior Summer Math Camp (Residential)

- June 7 - 19, 2020
- \$1600 - Scholarships are available
- The two-week, residential program for middle school students challenges students with advanced math problems. The goal of the program is to develop students into *creative and critical thinkers*. We nurture students' interests and abilities to pursue higher-level math courses and degrees and careers in STEM.

### Honors Summer Math Camp (Residential)

- June 21 - August 1, 2020
- \$4800 - Scholarships are available
- Six-week, intensive multi-summer program for high school students. The goal of the program is to develop talented students from all socioeconomic backgrounds through in-depth experience in a unique learning environment.



# MATHWORKS

## 2020 CAMP APPLICATIONS OPEN

**JAN 1,  
2020**

**THINK DEEPLY  
OF SIMPLE  
THINGS**



**Apply online  
now!**



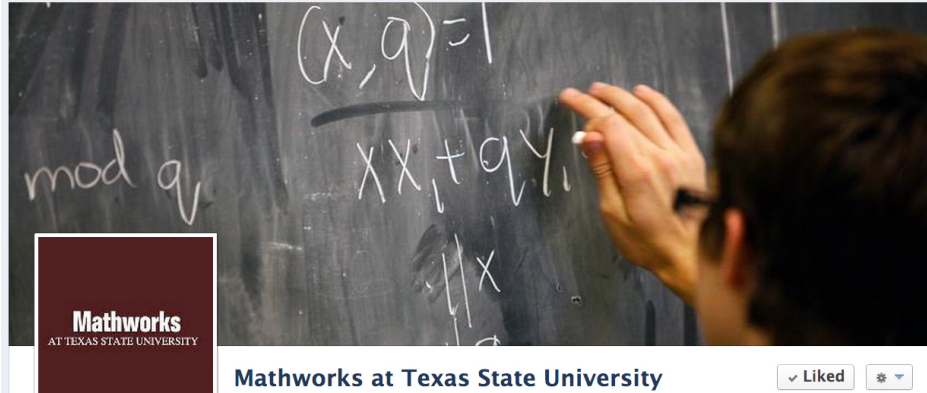
[www.txstate.edu/mathworks/camps/applications.html](http://www.txstate.edu/mathworks/camps/applications.html)



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