



A message from the Executive Director, Tom Young

The state tournament on March 11th was a great end to a great 2018 – 2019 Math League regular season. Congratulations to all the teams that made the Tournament and a special nod to the winners in each class: Wayzata in Class AAA, Highland Park in Class AA, and MN Valley Lutheran in Class A. Congratulations to our Math Bowl winner, Frank Han!! See a wrap-up of the Tournament later in the newsletter.

Thanks again to all the coaches and students who participated in Math League this year. Thanks for challenging yourselves to succeed at difficult and interesting extra-curricular mathematics.
Good luck to all of our seniors as they leave for new adventures!

The “second” season of Math League starts now. Students are gathering on weekends to train for ARML. Our Summer Math Institute is being planned. And the Coaches Conference is in sight. Before you know it, September will be here and the 2019 – 20 Math League regular season will be gearing up! *It'll be our 40th season next year!*

Mark your calendars now for those two summer activities that we coordinate: *The Summer Math Institute and the Coaches Conference*. **SMI runs the week of June 23 – 28** and the **Coaches Conference is July 11 and 12**. See more information on these later in the newsletter.

Fundraising: We are looking for business contacts that can help us support your team individually, your division, or the League in general. If you have a contact person, send the information along to Luke Olson at lolson@sspps.org

State Tournament Winners

Class A – Minnesota Valley Lutheran



Class AA – Highland Park

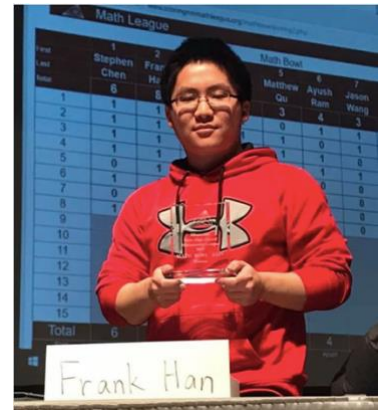


Class AAA – Wayzata



State Tournament Highlights

The 2018 – 2019 State Tournament was a big success. We had over 340 students from 38 teams participate. The State Commissioner of Education Mary Cathryn Ricker kicked off the day speaking to those assembled and then stayed and judged the Math Bowl! Congrats to Eden Prairie senior Frank Han who won the Math Bowl, not missing a question.



And thanks to Elk River for submitting the winning Math League video. Check it out at

[Winning Video! A must see!](#)

Here's how the teams fared in each Class:

Class AAA

1 st	Wayzata HS	107 pts
2 nd	Mounds View HS	99 pts
3 rd	St. Paul Acadamey	99 pts

Class AA

1 st	Highland Park HS	67 pts
2 nd	Mankato West HS	64 pts
3 rd	Mankato East HS	63 pts

Class A

1 st	MN Valley Lutheran	67 pts
2 nd	Mounds Park Academy	58 pts
3 rd	Breck HS	49 pts

Here is a list of the top individuals for the year (total points earned out of 108 possible)

Frank Han	Eden Prairie HS	108	<u><i>a perfect year!</i></u>
Frank Lu	Minnetonka HS	108	<u><i>a perfect year!</i></u>
Jason Wang	Blake School	102	
Matthew Qu	Wayzata HS	100	

Some more photos!



A message from Tom Kilkelly, Head of the Problem Writing Team

In his book, The World of Mathematics, Vol 3, James Newman states, "The most painful thing about mathematics is how far away you are from being able to use it after you have learned it. ... In mathematics it is possible to acquire an impressive amount of information as to theorems and methods and yet be totally incapable of solving the simplest problem."

It is impossible to overstate the importance of problems and the necessity for improving one's problem solving ability. But, unfortunately, few non-standard problems are presented in a typical mathematics classroom. I have always felt that the MSHSML tries to fill this void with problems 3 and 4 in each Individual Event and the problems presented in the Team Event.

We all know that individual student success with these problems has room for improvement. But if improvement is to be made, it is important that students take time to look at and study the solutions. George Polya, author of How To Solve It and Mathematical Reasoning, believes that "problem solving is a practical art, and, like swimming or skiing or playing the piano, one can learn it only by imitation and practice."

So take some time to look at the solutions of these problems from this year's Meets and Tournament so that you might imitate them and hopefully improve your problem solving skills and scores next year.

Fundraising Committee Report:

The League is always looking for sponsors who can help us with our mission. If you know of a company that we should contact, or know a person in a company that we should contact, email suggestions to Luke Olson at lolson@sspps.org

Some in-kind suggestions

Web site: our web site could use a new look and be streamlined better

Mentors/tutors: Local participating schools would welcome mentors/tutors for mathletes

Career counseling: mathletes would benefit from Career counseling

Monetary contribution suggestions

State-wide Transportation Fund: Increasingly, schools find busing costs to be onerous. Donations to a state-wide Transportation Fund for financially burdened schools would help keep schools in the League.

T-shirts: local schools often create T-shirts and might welcome a sponsor. We also sell T-shirts for the State Tournament. Sponsors could add their logo to the shirts, perhaps.

Calculators: we allow any calculator for competition purposes. Some calculators have more functionality. Some local schools would welcome an update of their calculators.

Fees for students: students pay participation fees at schools; sponsor could defray that cost.

Food at Meets and at State Tournament: we have a luncheon with awards at the state tournament. Divisions have end of season banquets and meet treats.

All State Math team competitions: each year, we take All-Stars from Minnesota to several college and national competitions. We charge the students for transportation, room, and board.

Summer Math Institute: each year, we develop a summer camp for 40 – 50 students. We charge \$600 to cover the costs of teachers, room, and board. Hopefully we can reach more students if the price is better.

The Wayne Roberts Scholarship fund: This fund provides grants to students to enroll in mathematical camps/seminars. Each year we try to increase the amount in the fund.

Summer Coaches Conference: each year, we put on a Summer Coaches Conference to help train our coaches. Often, we bring in a guest speaker to help coaches increase the depth of their mathematical knowledge. A sponsor could help pay for the speaker or help with the cost of the social event.

Sponsorship of the League, in general

Do you have other ideas? Send them to Tom Young at tyoung@district16.org

Summer Coaches Conference 2019 and 2020:

If you have ideas for what would be beneficial for you at this summer's conference, email your ideas to Tom Young at tyoung@district16.org

Heads up about the 2020 conference: We will be celebrating our 40th year!! Many activities are being planned, including Hall of Fame Induction and Alumni gathering. If you know of alumni who might be interested, send us contact information.

Nominations Committee Report:

This is the year for officer elections as President Stacy Paleen, Secretary Reid Froiland, and Treasurer Jenna Innes will be completing their 3-year terms. If you would like to run for any of those offices or would like to nominate someone, please contact Michael O'Connell at michael.o'connell@spps.org

Facebook Feature: Team of the Month

We'd like to start featuring team photos on our Facebook page. If your team would like to be featured, send a photo and a blurb about your team to Dana Koletar at mathleague@augzburg.edu

2019 Summer Math Institute

June 23 – 28, 2019 at Augsburg University

7 – 9 Mathematics and Art

Taught by Annie Perkins, Southwest HS

10 – 12 Theory of Equations

Taught by Ken Suman, Winona Cotter HS

The League will offer two one-week programs of the Summer Mathematics Institute in 2019. Both programs run the same week in June June 23-28, 2019. One is for students entering grades 7-9 in fall of 2019; the other is for students entering grades 10-12 in fall of 2019.

Students will investigate mathematical topics not typical taught in the regular high school curriculum in preparation for secondary mathematics competitions. For grades 7 – 9, the area of study will be Mathematics and Art. For grades 10 – 12, the area of study will be Theory of Equations.

These are both one week residential opportunities. Both programs are located at Augsburg University in Minneapolis. **Application deadline is April 15, 2019 or until the camp is full.** Returning students are eligible for a \$25 discount. Cost is \$600. Tuition includes room and board and a field trip experience. Check http://mnmathleague.org/?page_id=444 later in January 2019 for an application.

Email mathleague@augzburg.edu with questions.



As part of the Summer Math Institute, we hire 2 teachers to lead evening problem-solving sessions that emphasize the curriculum taught during the day. The job is 6:15 to 8:30pm, M-Th, June 24 – 27, and it pays \$250. It's a great way to help out SMI students. Interested? Email Tom Young at tyoung@district16.org

The Roberts Award Scholarship

The Roberts Award Scholarship(s) were established in honor of the League founder, Dr. Wayne Roberts of Macalester College.

The Scholarship(s) are offered to help offset the costs for students interested in attending an out-of-state math opportunity. They are offered once each year. A set amount of funds will be available each year, and multiple awards are possible.

Deadline to apply for this season is April 30, 2019

Applications can be found on our web site at: http://mnmathleague.org/?page_id=1033

Problem Corner

an effort to spur conversation

If you'd like to contribute a problem or send in a solution, email tyoung@district16.org

Student solutions encouraged!

Fill in the ten blanks in the following statements in such a way as to make all ten statements true.

- The number of times the digit 0 appears in this puzzle is _____.
- The number of times the digit 1 appears in this puzzle is _____.
- The number of times the digit 2 appears in this puzzle is _____.
- The number of times the digit 3 appears in this puzzle is _____.
- The number of times the digit 4 appears in this puzzle is _____.
- The number of times the digit 5 appears in this puzzle is _____.
- The number of times the digit 6 appears in this puzzle is _____.
- The number of times the digit 7 appears in this puzzle is _____.
- The number of times the digit 8 appears in this puzzle is _____.
- The number of times the digit 9 appears in this puzzle is _____.

Found at https://puzzle.dse.nl/basic/ten_sentences_us.html