



A message from the Executive Director, Tom Young

Math League has started its 40th year!! Meet One is in the books and we are ready for meet two!

Remember that Meet Two Event A is calculator active. Good luck to all participants next Monday!

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

HMMT Online Competition November 9th



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

We had several challenges from Meet One where the challenge concerned the topic of whether or not a student had to include the units for the answer.

For example, the answer to B1 given on the answer key was 60° . Some divisions marked it wrong if a student had just written 60. However, they challenged it and the ruling was made to accept the answer of 60.

Our League Manual states in the Uniform Grading Procedures (page 27) :

“Units: Unless a problem obviously calls for attention to units (as when an answer requests both feet and inches, meters and centimeters, etc.), students should not be penalized for omitting units in their answers.”

We have tried to be consistent in our answer key, but we sometimes fall short. We are also trying to include the units in the answer blank.

So, when grading, if the question specifically asks for units, then it is wrong if the units are not included. But it is OK to omit units otherwise.

Looking to Meet two and to fend off possible challenges: When a question calls for the y-intercept of a line, it is okay to write it as (0, y-int) or y-int. As in, the y-intercept of $y = 2x+5$ is (0,5) or 5.

Also note that [ABC] means the area of triangle ABC. Study Heron, Stewart, and Ceva!!

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 2020:

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.

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@augsborg.edu

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, 2020

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

Harvard MIT (HMMT)Math Competition November 9

The Minnesota All-State Math Team gathered at Augsburg University on Saturday to participate in the online version of the Harvard/MIT Math Tournament. The results of the online version are not official, but it was still a good opportunity to gather and work on some math together.

Minnesota had 29 students from the team participate on site at Augsburg. There are at least six other students who participated remotely, but were still in contact with us.

We started the day with an Estimation Event written by one of our own students. Jason Wang is a talented junior from the Blake School. In the end, team Good Question came out on top. The lowest score wins in an Estimation Event.

After the Estimation, we hunkered down and completed three rounds of the competition. The day was a great opportunity to enjoy some time together and work on mathematics. The coaches present all commented about the more relaxed environment. Students were more engaged with the mathematical conversations and less worried about scoring points. In all, it was a great day of mathematics!

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!

Newsletter #14 Puzzler

World's hardest Sudoku

8								
		3	6					
	7			9		2		
	5			7				
			4	5	7			
		1					3	
		1					6	8
	8	5						1
9						4		

☆☆☆☆☆☆☆☆☆☆

Solution

8	1	2	7	5	3	6	4	9
9	4	3	6	8	2	1	7	5
6	7	5	4	9	1	2	8	3
1	5	4	2	3	7	8	9	6
3	6	9	8	4	5	7	2	1
2	8	7	1	6	9	5	3	4
5	2	1	9	7	4	3	6	8
4	3	8	5	2	6	9	1	7
7	9	6	3	1	8	4	5	2

New Puzzler:

At school, Mike and I were talking about how much candy we give out that Halloween night. I said that I usually buy the small-size bars but never know whether to give out 1 or 2 bars to the kids. Mike said he gives out 1 to really young kids and 2 to the older kids. That sounded reasonable, so I pledged to do the same.

"How many costumed cherubs do you expect tonight?" Mike asked.

"Oh, somewhere around 50, maybe 60," I replied, noting that a lot of young parents have moved into the neighborhood recently.

"Better buy plenty," Mike advised.

I took Mike's advice to heart and, on the way home, stopped at Cub and bought a 120-piece bag of small candy bars, figuring that would suffice.

It did. Yet, there were so many cherubim (and a smattering of hellhounds) that I lost track of how many kids came to the door!

But even with the flood of kids, I still had candy left over. I took 11 KitKats and stored them in the refrigerator for future midnight snacks. I saved two other bars to bring school the next morning - one for Mike for his sage advice and one for my friend Brad. Sadly, I pitched the remaining 17 bars, not wanting to be responsible for any more sugar rushes than I already had.

"How many kids did you see last night?" Mike asked the next morning. I related to him the facts of the evening, stating that I actually lost track of how many kids came to the door. While he was munching on his candy bar, Mike inquired, "So how many kids did you give 1 candy bar to?"

"I'm certain it was 5 or 6 kids I gave 1 candy bar to," I averred.

"Then I know how many kids came to your door last night!" Mike exclaimed.

And when he related his logic, I was reassured that he knew.

Can you figure out how many kids came to my door Halloween night?