



Minnesota State High School Mathematics League

proudly challenging Minnesota students since 1980

NEWSLETTER 56

December 19, 2025

Executive Director Message

Happy Holidays!

Let me begin with some positive shout-outs:

- Angie Huang (East Ridge), Sam Kretschmar (Spring Lake Park), Ben Lu (Mounds View), Michael Luo (Minnetonka), Will Masanz (St. Paul Central), Saanvi Naveen (Marshall School), Ryan Niu (Woodbury), Aizada Yemar (Minnetonka), Kaining Zhang (Blake), and Jefferson Zhou (Wayzata), for perfect individual scores of 15 on Meet 3, and to Sam Kretschmar for maintaining an unblemished individual score (45) through the first 3 meets;
- Wayzata, St. Croix Lutheran, and Lourdes for achieving the top team scores in class AAA, AA, and A respectively on meet 3;
- Wayzata, Minnetonka, St. Paul Academy, Century, Parnassus Prep, and Shattuck St. Mary for perfect scores of 30 on the meet 3 Team Event!

Now, for some very real concerns. **Coaches and Division Coordinators, please note carefully:**

We have continued to receive reports of improper meet procedures that must be addressed. There are many schools and divisions that have conducted meets virtually, and in order to accommodate that, our League office has sent the PDFs of the exams on the Wednesday prior to the meet date so that there is plenty of time for photocopying. However, we have strong evidence that some schools are using this lead time to create practice materials strikingly similar to the meet problems. **This is strictly forbidden.** The only purpose of sending the meet materials ahead of time is for photocopying convenience. Coaches should really not even be looking at the problems; it would be best if you could find a trusted individual at your school (administrative staff, etc.) to make the copies for you so that you aren't tempted to peek. Please recognize that even looking through the problems ahead of time can cause you to indirectly influence students' preparation. It is essential that we all work together to train and guide our students in academic honesty, both by word and our own example.

That said, we are putting the best construction on the reports we have received, hoping that things are happening solely out of inexperience or ignorance. Let's all continue to make this a great Math League!

Mike Reiners
Interim Executive Director
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Problem Writers' Corner

Meet 3 produced our highest average student score of the season; congratulations to all students! At the same time, the individual #5 problems were tough, with success rates between 1.9% and 2.7%: students able to solve any of them should be commended. Most teams solved 2 to 4 team round problems, but six schools achieved a perfect score on that round!

Meet 4 Preview: Topics and Resources

Meet 4 includes at least one problem related to each of the following topics:

- **Geometric Sequences and Series:** I recommend that students understand the derivation of the sum of a series - since these aren't on the formula sheet, knowing the "multiply by r and subtract" trick is more reliable than rote memorization.
- **Vieta's Formulas:** Specifically, finding the sum and product of roots of polynomial equations. You can find helpful videos on the quadratic case in section 10.4 of [AoPS Algebra 1](#).
- **Circles:** Students should be able to find the center and radius of a circle equation by completing the square.
- **Simon's Favorite Factoring Trick:** This topic may be new to many of you and your students - I recommend watching and sharing [this AoPS video](#).
- **Sticks and Stones** (sometimes called Stars and Bars): Another fun counting technique which isn't generally covered in school. I recommend [excerpt 2](#) of [Competition Math for Middle School](#) or [this Numberphile video](#) for this topic.
- **Expected Value:** Introductory videos are included with chapter 11 of [AoPS Counting & Probability](#).

[Alcumus](#) remains an excellent resource for practice problems on these topics. Reviewing the [sample meets](#) - particularly [Coyote Sample Meet 4](#) - is also highly recommended.

As the season progresses, our list of topics can feel overwhelming, especially for newer students. My general recommendation is that these topics should be covered over the course of four years, not annually. Some of the less common topics may be best left as enrichment for your top students. We always strive to include problems accessible to all levels, so I hope you'll continue to encourage your students to participate even if several topics are new to them.

Happy holidays to all; see you in 2026!

Colin

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Score Troubleshooting

Please remember to verify all your student's scores when they take the event online. Go to Meet Op \ Grade Online Taken Event. For each event, select each student. Look at what they entered. You are looking for things such as "x=2" instead of just "2" so generally looking for instances where they should have gotten more points.. Even if you have nothing to change, click "Save and mark verified". Until then you will find their raw total for the meet and year does not include the event even though their power scores are updated. This must be done before the division is marked done with the meet. Coaches also need to verify the team event score which is done on the same page.

State Tournament Update

The State Tournament will return to South St. Paul High School on March 16, 2026, bringing together teams from across the state for an afternoon of competition. **Please note that the tournament is being held during a different week and at a different time of day than in recent years;** this scheduling change was made to better support League operations. To ensure a smooth and timely start, teams with Invitational students will be asked to arrive by 10:00 AM, and all remaining teams should plan to arrive by 12:30 PM. Additional details regarding the State Tournament will be shared with invited teams closer to the event date.

In conjunction with the 2026 State Tournament, the MN State High School Math League again invites students to participate in our annual T-shirt Design Contest! Please see the details below:

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- Students are invited to submit a one-color design for the front of the official State Tournament T-shirt.
 - Designs must include the text: *MN State HS Math League State Tournament March 16, 2026.*
 - The selected designer will receive a \$50 VISA gift card and a free T-shirt.
 - Entries should be emailed as a PDF by January 30 to parkshar@augsborg.edu and must include the student's name, grade, and school. The winner will be notified via email by February 9.

Holiday Hours

The Math League office will be closed for the holiday season from December 22 through January 2. We will resume regular operations on January 3 and look forward to connecting with you then. We wish you a restful and enjoyable holiday season!

Reminders of Website Changes (repeated from Newsletter 54 for convenience)

In order to handle the access issues faced by a number of schools, it was decided we needed to move our website operations to a new server with some new features and a new website address. Starting at some point Monday evening, you will need to start going to <https://www.mnmathleague.com> (note change from .org to .com). One of the biggest challenges is likely to be that you may have your browser remembering your password but it is a new site. If needed, you can always reset your account username and password by clicking "Initialize Account" on the login page. If students need their passwords, you can go to Team Admin \ Student Accounts to see and if necessary reset their passwords.

There is also one change being made to what students do on the site when competing online. Currently, students would click a button to have their browser "watch" for the event start. This triggered repeated checks to the server contributing to debilitating load on the server during the busier competition times. From now on, please direct students to not click that button until **after** you, the coach, have clicked yours to trigger the start of an event. As before, they should still not turn over their papers to start competing until the problems load on **their** computer. We will monitor Meet 2 to see what effect this has on operations and if necessary make additional adjustments.

Regular Season Meet Reminders

- Time slot signups open at 9:00 AM on the Wednesday before each meet. These slots help prevent server overload and serve as general guidelines, not strict time assignments.
- Associate Director Sharin Park (parkshar@augsborg.edu) will email the meet problems and solutions that same day.
- Challenges to meet results are due by 12:00 PM on the Thursday after the meet. Please review the Math League Manual language about challenges: