

Welcome to the Ladue Middle School MCTM Contest!

Please register your students at <http://mathleague.org/register0.php?event=14102> . If your student's school is not listed in the dropdown menu, you will need to fill out a mathleague membership form at <https://mathleague.org/membership.php> . Please also pay the \$10 per student registration fee by using the link provided in your confirmation email. You may also pay \$10 by cash or check made out to MCTM on the day of the contest. **The location of the contest is Ladue Horton Watkins High School, 1201 South Warson Rd., St. Louis, MO 63124.**

8:00 - 8:45	Registration (please enter through the front entrance)
8:45 – 8:55	Orientation of Students and Proctors in Cafeteria
9:00 – 9:40	Sprint Event (Calculators may NOT be used.)
9:40 – 10:00	Restroom Break
10:00 – 10:40	Target Event (Calculators may be used.)
11:00 – 11:20	Team Event (Calculators may be used.)
Lunch Break	
1:00-1:30	Awards Assembly in Cafeteria

For **all of the rounds**, students should report to the Cafeteria for testing.

Parents may wait in the commons while students are testing.

Students and parents are required to read the [Mathleague Code of Conduct](#) before participating in this event.

Lunch: There are many places to eat near Plaza Frontenac or in the Brentwood/Clayton area near the Galleria.

Event Descriptions

Sprint Event: This is a 40-minute test consisting of thirty questions. Students may not use calculators on this test. Answers must be fully simplified and, where appropriate, given in the format asked for in the question. One point is awarded for each correct answer, with no penalty for questions that are skipped or answered incorrectly.

Target Event: Four pairs of problems are administered, and students have 6 minutes to complete each pair. Answers must be fully simplified and, where appropriate, given in the format asked for in the question. Students may use [any calculator allowed for use on the SAT](#). One point is awarded for each correct answer, with no penalty for questions that are skipped or answered incorrectly.

Team Event: One to four team members of various or same grade levels from the same school work together for 20 minutes to answer ten questions. Answers must be fully simplified and, where appropriate, given in the format asked for in the question. Students may use [any calculator allowed for use on the SAT](#). One point is awarded for each correct answer, with no penalty for questions that are skipped or answered incorrectly.

After awards today, all results will be posted online at <https://mathleague.org/results/middleschool/> .

If your child has qualified (listed under the Qualifiers to the Next Level tab), he/she will be attending the MCTM State Middle School Contest being held on **Saturday, March 13, 2027**, at **MICDS (Mary Institute and St. Louis Country Day School)**, 101 N. Warson Rd., St. Louis, MO 63124.

[State Middle Contest Information and Registration Link](#)

Strategies to Share with Sponsors and Students

- Team Formation: Students should be organized into teams of 1-4 students for the team event prior to the day of the contest. Teams can be made up of 1-4 students of mixed or same grade levels FROM THE SAME SCHOOL; we encourage mixed grade level teams. Every student attending will take the team test.
- For purposes of awards, a school's overall score (the "sweepstakes" score) is obtained by adding the top 4 individual point totals from the school, dividing by 4, and adding twice the school's top score on the team round. A maximum team total would be 66 points (46 points if the team had four members with perfect individual scores, 20 for the team test). Ties are broken by comparing team round scores (weighted by item analysis). If teams are still tied, the fourth highest individual scores that contributed to the tied sweepstakes scores will be compared (highest ranking score wins the tie), after which the third highest and then second highest individual scores will be compared if necessary.
- During the restroom break (approximately 10:00-10:15), students are expected to remain in the area near their testing room. Restrooms and a water fountain will be nearby. Students may bring and eat a small snack ONLY during the break between testing.
- No student will be allowed to enter a testing session after a test has begun. Students are expected to remain in their assigned area and to refrain from talking throughout the individual testing sessions. Any student making disruptive noises may be asked to leave the room. During the team event, students should talk quietly with their teammates so that they do not inadvertently share answers with other teams.
- Students should bring at least 2 sharpened pencils and a calculator. [Any calculator allowed on the SAT](#) may be used. Calculators are allowed ONLY on the Target and Team Events, NOT the Spring Event. A student must furnish his or her own calculator. Students may NOT use cell phones or be wearing smartwatches during the contest. These need to be put away at all times students are taking a test. STUDENTS MAY NOT USE CELL PHONES AS CALCULATORS OR TRANSLATORS.
- Students may not use any dictionaries or other reference materials. If any student's proficiency in the language(s) the tests are offered in is so severely limited as to preclude participation in mathleague.org contests, that student's coach may make arrangements with mathleague.org to provide a written translation of the tests, so long as the translation can be accomplished in a timely and secure fashion, and at no cost to mathleague.org. Any such translation must be approved by mathleague.org before use at a contest.
- Only answers written in the proper spaces will be graded. Any blank space on the test may be used for any work to help you solve the problem. Scratch paper will be provided for the Sprint and Team events.
- Instruct students to not be concerned with writing units unless the question prompts them to do so.
- Fractional numbers must be expressed in simplest (lowest) terms or as an equivalent decimal fraction, unless a ratio is requested. For example, 0.33 is not equivalent to $\frac{1}{3}$ and would be counted incorrect if the answer were $\frac{1}{3}$. All improper fractions should be left as improper fractions.
- Each participant will receive a Ribbon of Participation.
- The students earning the five highest scores in Target and Sprint at each grade level will be recognized. Also, the five highest individual overall scores in each grade level will be recognized. The top five Sweepstakes teams will also be recognized.
- For the Regional and State Math Competitions, there are two different ways that ties are broken for awards. If two students tied with the same score in an event (e.g. Target with a score of 3), their Borda scores were compared to see which student answered the more difficult questions. The student with the lower Borda score would place higher than the other. To break absolute ties in Sprint or Target at either the Middle level, we looked at the students' opposing event scores. Say that Students A, B and C are all tied with a score of 3 on Target, all with the same Borda scores indicating they answered the same 3 questions correct. We then look at their Sprint scores. Say Student A has a Sprint score of 6, Student B has a sprint score of 5, and Student C has a sprint score of 4. Then to break the tie on Target, Student A would be first, Student B would be second, and Student C would be third.

Information/Instructions for Proctors

Students may NOT use cell phones as a calculator or be using earbuds during testing. All cell phones should be silenced and put away. Calculators should also be placed on the floor until events that allow their use.

- **Sprint Round:** Pass out a copy of the answer sheet and scratch paper to each student. **Instruct students to place their labels.** “Everybody, take one sticker, and then stick it in the box that says ‘place ID sticker inside this box.’” Placing the labels uniformly helps the graders. Pass out the tests face down. Explain to the students, “You will have 40 minutes to complete this test. There are thirty questions. Make sure your answers are written in the answer blank before time is called. You will be awarded 1 point for each question answered correctly, and 0 points for each incorrect answer or unanswered problems. You may NOT use a calculator. Are there any questions?” Give verbal time warnings when 20 minutes remain and when 5 minutes remain. Give the students exactly 40 minutes to work, after which they should be instructed, “Stop! Put your pencils down and hold your answer sheet in the air; a proctor will be by to collect your answer sheet.” Collect the answer sheets and send them to the grading room.
- **Target Round:** While the first pair of questions is being distributed folded so that they can place their labels but not see the questions, explain to the students that, “You will be given four pairs of questions in the target round, and the first pair is being handed out now. Once the signal is given to begin you will have exactly six minutes to solve the two questions you have been given. Make sure your answers are written in the answer blank before time is called. You will be awarded 1 point for each question answered correctly, and 0 points for each incorrect answer or unanswered problems. After six minutes all official answer slips for questions one and two will be collected. Students may use any calculator allowed for use on the SAT. Do not turn your questions over until the signal is given to begin. Are there any questions?” **Instruct students to place their labels.** “Everybody, take one sticker, and then stick it in the box that says ‘place ID sticker inside this box.’” Placing the labels uniformly helps the graders. Once everyone is ready to start the first round, tell the students they may begin. Give a verbal time warning when one minute remains. After exactly six minutes, tell the students to “Stop! Put your pencils down and hold your answer slip in the air; a proctor will be by to collect your answer slip.” After all the answers are collected, begin to pass out the next set of questions. After making sure every student has a copy of the questions for round two and has placed his/her label on the test, begin the second round. Continue this pattern until all four rounds have been completed. After the end of each round, make sure the answer slips are sent to the grading room.
- **Team Test:** Distribute one set of questions face down to each person, and give each team an answer sheet and scratch paper. Team size is at least one with a maximum of four students. Instruct the teams to indicate their school and all of their names on the answer sheet, or have each student place one of his/her labels on the answer sheet. **Instruct students to place their labels.** “Everybody, take one sticker, and then stick it in the box that says ‘place ID sticker inside this box.’” Placing the labels uniformly helps the graders. Tell the students, “You will have twenty minutes to complete the team test. Your team may work together but may not consult any books, other teams, or any other resources. You may use any calculator approved for the SAT. You will be awarded 1 point for each question answered correctly, and 0 points for each incorrect answer or unanswered problems. Are there any questions?” Give a verbal time warning when 3 minutes remain. After twenty minutes, instruct the teams, “Stop! Put your pencils down and hold your answer sheet in the air; a proctor will be by to collect your answer sheet.” Send the answer sheets to the grading room.
- **All** tests, answer sheets, and scratch paper, used and unused, are to be collected, secured in some kind of container, and taken to the grading room. These tests have been numbered and we need absolutely every test returned. Students are to be released.