

Missouri Council of Teachers of Mathematics Middle School Regional Contest Coordinators' Handbook

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To utilize any links within this document, hold the Ctrl key while clicking on the link.

If you are an experienced site coordinator, please use the checklists (and the links within them) to remind you of the necessary components of hosting a contest.

If you are a first time coordinator, you may find it more helpful to skim the checklists and then read through all of the detailed information that starts on page 4.

Before the Contest Checklist

- ___ Facilities scheduled
 - large room for Target/Sprint events and possibly smaller rooms for the team event if extra space is needed between participants/teams
 - grading room with tables for sorting answer sheets, located away from contest rooms' traffic
 - a table for registration near the main entrance
 - cafeteria or library for a waiting area for parents and sponsors
 - auditorium for awards (allow for at least twice the number of participants)

- ___ Sign up to host at <http://mathleague.org/hostform.php> and enter 14159 as the registration code—you will immediately receive the invoice email with your database link included (DO NOT LOSE THIS EMAIL!); MCTM pays, you do not.

- ___ Response to entries received
 - read the registration rules for all participants on the Official Entry Form
 - e-mail to sponsors detailing the schedule and location of the day's events, including the link where sponsors will enter their own students' names and grade levels
 - copy of Official Entry Form received and signed by the principal of the respective school

- ___ all personnel committed
 - ___ registration table
 - ___ testing/proctoring overseer
 - ___ timekeeper/proctors
 - ___ grading room judges/sorters
 - ___ parents room/program

- ___ data entry of participants (2 different links found in invoice email from customercare@mathleague.org or operations@mathleague.org)
 - ___ Send out registration link to sponsors to enter their own students' names and grade levels (MUCH PREFERRED) or
 - ___ Coordinator enters all students' names and grade levels through the same link that you will use to enter scores
 - ___ MAKE SURE THAT ALL STUDENTS HAVE A VIABLE GRADE LEVEL (NOT Grade 14)

- ___ all awards received from MCTM Contest Chair
 - ___ participants' ribbons and winners' ribbons and plaques
 - ___ affix labels to ribbons

- ___ all materials duplicated
 - ___ [all tests received from mathleague.org and copied \(one of each event for each student\) – in ACTUAL SIZE, not scaled to fit](#)
 - ___ Team answer sheets copied (number of participants divided by two)
 - ___ Sprint answer sheets copied (as included with the contest)
 - ___ [information for proctors](#) (two needed per testing room plus five extra)
 - ___ [contest rules](#)
 - ___ [labels printed for each student to affix to answer sheets for digital grading](#)
 - ___ [high-speed copier/scanner that can save files as pdf, tested and ready for use for digital grading](#)
 - ___ coordination with mathleague on time and method of sending answer sheet files for digital grading
 - ___ [schedule of day's events](#) (one copy for each school registered plus three extra)
 - ___ signs, room assignments, etc.
 - ___ paper copy of the blank test and 3-4 copies of the solutions for the grading room

- ___ other materials
 - ___ scanner (if grading digitally)
 - ___ extra pencils (at least 5 per room already sharpened)
 - ___ scratch paper for Sprint and Team events
 - ___ red and blue marking pens in grading room (at least two different colors to double check)
 - ___ stopwatches or computer/projector with Internet to use <http://mathleague.org/timer/>
 - ___ refreshments (for workers)

- ___ publicity (notify the media in your area at least one week before the contest)

- ___ school packets for registration table (manila file folders, one per school)
 - ___ schedule of day's events with assigned duties, name tags (optional)
 - ___ strips of labels for each student if grading digitally

- ___ last-minute facilities readiness (keys, custodian, temperature control, PA system)

Day of the Contest Checklist

- Registration table
 - manila folders of schedule, room assignments and students' labels
 - extra ZZZ labels in case of substitutions (if grading digitally)
 - copies of each school's registration form or copy of database printout to double-check names and grade levels
- Testing Rooms
 - only put copies of the tests in the rooms after a proctor can be in the room at all times
 - use teachers that are known to you and are familiar with the events as proctors
 - if you have multiple rooms, DO NOT put proctors/teachers in a room with their own students
 - extra pencils and scratch paper in all rooms
 - have at least one proctor bring answer sheets to the grading room
 - [information for proctors](#) (two needed per testing room)
- Grading Room
 - scanner (if grading digitally)
 - at least two computers that have Internet capability for [data entry](#) and/or Google Drive access
 - red and blue marking pens in grading room (at least two different colors to double check)
 - one person who can make decisions regarding students' questionable answers and know how all events are graded
 - refreshments (for workers)
 - as one event is finished being graded, have graders organize all answer sheets by school and stuff into large envelop
- Awards
 - have labels affixed to ribbons BEFORE the day of the contest
 - have someone organize your awards table as grading is being completed
 - announce that all information about State can be found online at <https://moctm.org/mctm-math-contest/mctm-middle-school-math-contest.html>
 - [break ties](#) by using the lower Borda score first (as is shown in the mathleague database), then look at the opposing event
 - Return contest answer sheets in school packets; do NOT give out paper copies of solutions

After the Contest Checklist

- school packets (9" X 12" envelopes, one per school)
 - green participants' ribbons for each student attending
 - students' answer sheets (NOT SOLUTIONS TO THE TESTS)
 - send home packets with sponsors on the day of the contest at end of awards ceremony
- [press release](#) to local news agencies
- finalize your results by going to View Results in your mathleague database and clicking on Finalize Results
- send out an email to all participating schools with a link to the results <https://mathleague.org/results/middleschool/> and <https://moctm.org/mctm-math-contest/mctm-middle-school-math-contest.html> for Middle School State Contest information
- email all sponsors an electronic copy of the tests and solutions at the end of the month in which your contest is being held
- Mail (or email electronic copies if no money to be sent) the following forms and money to Sonya Land, 1402 Sycamore Manor Dr., Chesterfield, MO 63017 **WITHIN 30 DAYS of your contest**
 - [Remittance of Entry Fees Form](#)
 - all money received
 - [Expense Report Form](#)
 - [NCTM Membership Form](#)
 - [MCTM Membership Form](#)

Response to entries received

As entry forms are received from each school, the following actions should be taken:

1. The number of entrants per grade level and fees should be recorded. Provide the sponsor with the mathleague registration link so that he/she may enter this information directly. This information can also be entered by you as the site coordinator if changes need to be made.
2. Examine the check or money order to make certain that it is properly completed, including a proper date, signature, matching numbered and written amounts, and that it is made out to 'MCTM'. Or encourage schools to pay by credit card through the PayPal link received with the registration confirmation. Do NOT put payment information into the mathleague database; keep paper records accordingly.
3. In the event a school sends a **purchase order** in lieu of a check or money order for payment of entry fees, do not accept the purchase order. Accept the school's entry form but return the purchase order to the school principal and request a check made payable to MCTM or purchase by credit card through mathleague.
4. Assign each entrant to a testing room; record that room number on the Official Entry Form. Also, use information on the entry form to assign teachers and sponsors to grading or proctoring duties.
5. The original entry form (with checks for entry fees) is mailed soon after the contest to Sonya Land. You may wish to make an extra copy for your records.

Use your own discretion regarding **late entries**. If you have plenty of space and enough time to make additional copies, you may opt to accept late entries. In the event additional participation ribbons cannot be made available to you in time for them to be distributed for the day of the contest, the ribbons could be mailed to the school after your contest.

Correspondence with Schools

School sponsors who are entering the contest for the first time are unaware of the operational procedures of the contest. You may want to drop them an email indicating that you have received their entry form and that additional information will be mailed later. This will probably save a phone call from an anxious, first-time sponsor.

About two weeks prior to your contest, you should correspond with all the schools entered in your contest. Essential information in the e-mail or letter should be the specific location of the contest (with directions included if necessary), where the registration table can be found, that only the sponsor need report to the registration table to "check in" and pick up the school's information packet and/or student labels, where the contest participants should go upon arrival, a detailed schedule of the day, what awards will be given, state contest information, and any changes in this year's contest. You should include your email address and telephone number and best time(s) to call.

Correspondence to Schools (Email or Letter)

[Date]
[Sponsor's Name]
[School Address]

Dear [Sponsor's Name],

I have received your Official Entry Form and the entry fee that you submitted to the Missouri Middle School Student Mathematics Contest sponsored by the Missouri Council of Teachers of Mathematics. We appreciate your interest in the contest and look forward to having your students compete with other students from our area on Saturday morning [date of your contest]. We begin with an orientation of students at 8:45 a.m. but need to meet with sponsors at 8:25 a.m. We suggest you plan to arrive no later than 8:15 to register and get acquainted with the school. I look forward to the contest this year and hope your students will be challenged and have fun participating.

If sending as an email, attach a copy of the day's [schedule](#), [sponsor checklist and strategies](#), [event descriptions](#), and any other important resources you would like for the sponsor to have. Also, ask sponsors to respond back to you with which students will be on which teams. Assign teams names such as Shenandoah1 or ShenandoahA using the school's name and a letter or number if you are planning to grade by hand.

Sincerely,
[Name]
Contest Coordinator

Rejection of Late Entry (Letter or Email)

[Date]
[Sponsor's Name]
[School Address]

Dear [Sponsor's Name],

I am returning the Official Entry Form and the entry fee that you submitted to the Missouri Middle School Student Mathematics Contest sponsored by the Missouri Council of Teachers of Mathematics. The deadline for entries was three weeks prior to the contest date. Due to (space limitations, necessary preparation for the contest, or other explanation), we regret that we are unable to accommodate entries at this late date.

We appreciate your interest in the contest and hope your school will participate next year.

Sincerely,
[Name]
Contest Coordinator

Personnel

Plan to have 3-5 assistants who know as much about their assigned duties as you know! **Delegate responsibility!** It is easy to overload yourself on the morning of the contest. You must have people on whom you can depend for these key positions. You need to be free to answer questions and coordinate the entire event. Attain commitment from responsible persons who will serve as your assistants in the key areas of responsibility. Orient each assistant to his or her assigned responsibilities prior to the Saturday contest. Prepare a list of assigned responsibilities so each assistant knows his or her responsibilities as well as those of others.

One way to delegate the responsibilities to your assistants follows:

1. One assistant should be assigned to the registration table. (This person could later work as an assistant in the grading room or in the contest headquarters.)
2. One assistant should be in charge of testing. This assistant should meet with the proctors before the testing begins and orient them to their responsibilities. After the orientation the assistant should be responsible for distributing and collecting tests, answer sheets and student answer sheets, as well as for accounting for all test materials. (A "walk-in" sponsor or two may be used to assist in collecting the student answer sheets and taking them to the grading room.)
3. One assistant should organize and supervise the grading room and serve as the Grading Judge. This could be the same person who worked earlier at the registration table.
4. Another person may be responsible for arranging for refreshments and having them available for the workers and/or for coordinating the sale of refreshments.
5. One person should be in charge of double-checking all names, grade levels, teams, scores and other data into the online results program prior to the contest and on the day of the contest. This person can also be the one who scans all of the test answer sheets in bundles for digital grading. This could be the same person who worked the registration table at the beginning of the day.

Copying and Preparing the Tests

When you receive the contests from mathleague.org as email attachments, print a copy of each event. The Target event is its own answer sheet, and students will do all scratchwork on the sheet itself. The Target event needs to be printed with each pair of questions on the front side of a sheet of paper. Then each pair of questions is then folded with the name area on the upper portion facing out, so that students cannot see the questions but can place their labels in the appropriate place. For the Sprint event, print and collate the actual test as one-sided **WITHOUT STAPLING** the answer sheet to it. Print the Sprint answer sheets separately. The team event can simply be printed on the front side of a sheet of paper and distributed face-down after each team has received a team answer sheet. Divide your total student attendance by two to determine the number of team answer sheets needed. **EVERY STUDENT TAKES EVERY TEST, INCLUDING TEAM. SO MAKE ENOUGH COPIES OF EVERY EVENT FOR EVERY STUDENT IN ATTENDANCE.** Make five complete copies of all of the solutions to the contest to have on hand the day of the contest for all of your graders.

Labels (only needed if using digital grading)

To print the labels (only after entering all students into the database), go into your results file online. Click on View Results. Click on Create Avery 5363 Labels. Then click on Get PDF of Avery 5363 labels. This should open up a PDF of your labels ready for you to print. Print using the labels that I sent to you. Be sure to only print out the pages with your students' names as well as maybe one zzz extra page of labels. **Each kid will get 8 labels to use on all tests; the new labels for digital grading are A4 labels with 3 columns of 8 on each sheet.** I have included several pages of extra labels in case you have a printer mishap. Printing, especially for the labels, must be of the highest possible quality. If the labels are printed on an inkjet printer for instance or a printer with low toner, the ink may be unreadable.

If a student shows up at your contest that was not originally listed within the database, use one of the extra sets of labels (e.g., zzz extra 101) and put that student's name and grade level on each label (not over the QR code). Then be sure to enter that student's name, school and grade level into the database in place of the SAME zzz extra code (e.g., zzz extra 101) you used. Now that student is linked with his/her labels in the database.

Scanning (only needed if using digital grading)

When testing your scanner, please try 50 or more sheets in the scanner, and send the file to yourself. If your scanner will not handle emailing a file as large as 50 sheets, you should strongly consider using one of MCTM's scanners or grading the target round by hand and entering all target results online by yourself. If you have the option of using a flash drive to save your scans rather than emailing them to yourself, you will be able to scan much larger batches and have fewer difficulties with digital grading.

Scan a test copy of at least one of the answer sheets with a student label and answers written in pencil a couple of days before your contest. This will not only check whether your scanner is working but also allow Tim Sanders to tell you if the quality of scanning is good enough for digital grading. Please be sure to choose "GRAYSCALE" and "300 dpi" on your scanner otherwise the QR stickers do not scan correctly. Share with customercare@mathleague.org through the folder that they will send in invitation to you in the days before your contest. This will be through Google Drive, so whoever is scanning sheets will need a Gmail account with Hangouts access by computer or phone. If there are many contests on the day of your contest, Tim Sanders may send additional directions to you through Google Hangouts.

As soon as the Sprint round is finished, you can begin scanning answer sheets. All of the files should be uniformly named starting with the name of the school and then the name of the test (sprint, target12, etc.). Also, upload all tests of a single type at once and by itself. In other words, Tim wants a file with all the target12's and nothing else. This will really help with keeping track of what has been done and what still needs to be done on his end. Send all of the Target Round questions 1 and 2 in one batch or PDF. **If not possible, consider using one of MCTM's batch scanners that WILL do large PDFs.** OPEN all of the PDFs before sharing them with mathleague; if some of the pages are skewed or not oriented all in the same direction, you will need to re-scan this bunch. Count how many pages are in a batch and make sure the PDF has the same number of pages. Mathleague would like PDFs of all events; this will SAVE you if a student appeals the grading or tries to cheat by changing answers after the day of the contest. If you are hosting an elementary and middle school contest, you will also want to include something in your name that identifies it as elementary or middle (e.g., ColumbiaElemTarget12).

Graders and Proctors

Prior to the contest date, known sponsors', teachers', and principals' names may be selected from the Official Entry Forms and assigned to specific testing rooms as proctors. At least two persons should be assigned to each testing room. Preferably, these persons should be notified of their assignment in the correspondence to the school sponsor. However, they can be informed upon their arrival at the contest. Sponsors and teachers who are known to be dependable and responsible should be assigned as proctors. It is important that proctors follow instructions and take their responsibility seriously. All proctors should read mathleague's conduct standards before the date of the contest: <http://mathleague.org/conduct.pdf>. If you choose to have all of the students (> 75 students) in one large room like a cafeteria for the testing, assign at least four people to proctor so that the collection of answer sheets is efficient.

Sponsors and teachers unknown to you may be assigned to the grading room. These persons work under the supervision of the Grading Judge. It is generally not a good idea for parents to be proctors unless the parent has had classroom experience. Try to use at least one sponsor from each school in some capacity.

Grading Room Information

All of the events can be graded electronically if the site coordinator has access to a high-speed scanner. The scanner will be used to scan in all the answer sheets to multiple pdf files that will be shared to mathleague.org on Google Drive to grade those tests electronically. The Sprint Event should definitely be scanned because it will take a fraction of the time for the scores to be automatically inputted into the online results file. Your scanner may be different but many of the settings will need to be the same. If a site has fewer than 50 participants, the site coordinator may choose to grade everything by hand.

New in 2023: Mathleague has hired graders for all contests, so that as long as you upload all files to Google Drive for digital grading, you will have no responsibilities for grading online. Instead, your grading room volunteers can sort papers by school and find specific papers that are marked as INCOMPLETE in the database for whatever reason (and need to be double-checked by hand).

Sprint Event

If grading the Sprint round by hand, be aware that this will take the longest of all events to grade. It is also the most prone to errors in the lengthy data entry, so double-checking the accuracy of the data entry's item analysis is REQUIRED. A Sprint answer sheet will be sent to the site coordinator with a copy of the test itself.

Approximately $\frac{1}{2}$ of the graders should get a red pen and grade the entire sheet (1 point for each correct answer, 0 points for each incorrect answer or skipped answer), calculating a score using the box in the upper right corner and initialing in the appropriate place. The remaining $\frac{1}{2}$ of the graders should be given a blue pen and be double-checkers, double-checking the accuracy of the answers as well as the scoring calculation in the upper right corner. This person should initial and circle the score if he/she agrees with it. If he/she finds an error, he/she should correct any error in grading or scoring and then ask another grader to confirm the correction(s).

Target Event

If grading the Target round by hand, please instruct proctors to bring all of questions 1 & 2 to the grading room once students start on questions 3 & 4. Proctors should continue this process throughout all four rounds. Group your graders accordingly. Approximately $\frac{3}{4}$ of the graders should get a red pen and grade all of questions 1 & 2 first, putting a score for #1 and #2 (1 point if correct, 0 if incorrect or skipped) and initialing in the correct place on the Target answer sheet. The remaining quarter of your graders should be given a blue pen and be double-checkers, double-checking the accuracy of the first grader and initialing in the second place on the Target answer sheet. Graders should grade all of questions 1 & 2 first (both first check and double check). Then graders grade all of questions 3 & 4, all of questions 5 & 6 and all of questions 7 & 8. This causes less human error when all of a certain question are graded at one time. Then graders can re-organize the students' answer sheets and staple all four pairs of questions together for each individual and total them in the upper right corner.

Team Event

Approximately $\frac{3}{4}$ of the graders should get a red pen and mark the correct answers with a check next to the answer and mark an X next to the incorrect answers. Each grader should then calculate a total score (1 point for each question if correct, 0 if incorrect or skipped), write the score next to Score #1 and initial in the correct place on the Team answer sheet. The remaining quarter of your graders should be given a blue pen and be double-checkers, double-checking the accuracy of the first grader and initialing in the second place on the Team answer sheet.

Overall Score

The combined total score for each individual student is calculated as Sprint plus 2 times the Target Score. If scoring by hand, overall total score ties will be broken first by the higher Target score and then the higher Sprint score.

Sweepstakes Score

A team's Sweepstakes score is obtained by adding the individual scores of the team members, dividing by 4, and adding double the team's score on the team test. 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 test scores (weighted by item analysis). If a team is not comprised of 4 members, there will be a 0 added into the sum for each missing team member before dividing by 4.

You WILL be returning the students' tests on the day of the contest, and you will be entering scores into the online results file. Therefore, have graders organize the students' tests into piles/envelopes by school to make data entry and the returning of materials easier.

Even if you grade all students' tests by hand, all scores and ITEM ANALYSIS must be entered into the mathleague.org online results file within one week of your contest date and finalized. You cannot finalize your results without this item analysis entered. For example, when Target is complete, have one person read the correct problems to the data enterer (e.g., 1 0 0 1 0 0 0 1 would indicate that the student got problems 1, 4 and 8 correct.). Then check to make sure the total score for the kid matches the total score you calculated (3 for our example student). This reading off of the scores makes a huge difference in the amount of time you have to enter data. **Designating which students are on which teams for the Team event must occur BEFORE entering the item analysis for Team scores.** This reading off of the scores makes a huge difference in the amount of time you have to enter data. The same can be done with Sprint and Team.

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.

Awards

The students earning the five highest scores in Target and Sprint at each grade level will be recognized. The top five Sweepstakes scores will also be recognized. In each grade level, the top five combined scores (sprint score plus two times the target score) will be recognized.

A Missouri student may compete in the State Middle School contest if he or she participates in a middle school qualifying round (either a local contest or the in-school qualifying round) during the school year and does any one of the following:

- Earns at least 50% of the available points on any of the individual tests.
- Scores strictly higher than 80% of the participants in his or her grade on any of the individual tests.
- Participates on a team that scores either at least 50% of the available points or strictly higher than 80% of the other teams on the team test.

Before you finalize your results, you can find who has qualified for State on the Individual Results page by looking for a “1” in the last column to the right. Once you finalize, a list of qualifiers can be found within the “Qualifiers to Next Level” tab in each site’s results found at <http://mathleague.org/results/middleschool/>

At state, all individuals who qualified individually or through the team event will take all events (Target, Sprint, and Team).

Tiebreaking

For the Qualifying 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 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 10, Student B has a sprint score of 9, and Student C has a sprint score of 8. Then to break the tie on Target, Student A would be first, Student B would be second, and Student C would be third.

New in 2023: MCTM will be releasing all students’ answer sheets to the sponsor on the DAY OF THE CONTEST. This allows students to see what they have missed, learn from their mistakes, and even have time to learn some new concepts before the state competition. After ALL mathleague contests have concluded each month, you as the site coordinator can then email out an electronic copy of the blank contest and solutions. For example, you host a contest on January 15; you can then send out an email with a complete copy of the contest and solutions attached on February 1.

In addition to releasing the test materials, results of ALL sites will be available online at mathleague.org to the public after the results have been finalized by the site coordinator. Students’ names will not be listed; the school’s name will be listed and the student’s first and last initials. Students will now be able to see how they rank with regard to everyone else at a particular site and across the state. On all events, students should never leave a question blank—they should always guess since there is no penalty for guessing.

Possible Schedule

8:25 – 8:45	Registration
8:40 – 8:55	Orientation of Students and Proctors in separate rooms
9:00 – 9:10	Students move to testing rooms
9:10 – 9:50	Sprint Event
10:00 – 10:30	Target Event
10:30 – 10:45	Restroom Break
10:40-11:00	Team Event

LUNCH BREAK (YOU WILL NEED THIS TIME TO FINALIZE RESULTS.)

1:00-1:30	Awards Assembly
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Event Descriptions

MCTM will be continuing the format that is similar to MathCounts and the MCTM high school contest. All students (grades 6-8) will take the same tests, and awards will be given out by grade level. **Sixth graders will be able to attend the elementary contest, the middle school contest, or both.** The different events are described below; all events shall occur at each qualifying and state contest.

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. Although measurement units are not required unless specified, any units written by the student as part of the answer must be correct for the problem to receive credit. Students may use any calculator allowed for use on the SAT. 1 point is awarded for each correct answer; 0 points are awarded for skipped or incorrect answers. Students should definitely guess rather than leave the answer blank.

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. Although measurement units are not required unless specified, any units written by the student as part of the answer must be correct for the problem to receive credit. 1 point is awarded for a correct answer; 0 points are awarded for skipped or incorrect answers. Students should definitely guess rather than leave the answer blank.

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. 1 point is awarded for a correct answer; 0 points are awarded for skipped or incorrect answers. Students should definitely guess rather than leave the answer blank.

Sample tests for these events can be found at <http://mathleague.org/ms.php>.

Registration forms and detailed site information are available on the MCTM website <https://moctm.org/mctm-math-contest/mctm-middle-school-math-contest.html>.

The deadline for sending registrations to site coordinators is three weeks prior to each contest date. Site coordinators may accept registrations after this date at their discretion.

Middle School Contest Checklist for Sponsors

BEFORE THE CONTEST DATE

_____ Share specific details about the contest events with your students. There will be three events: Target (calculator allowed), Sprint (no calculator), and Team (calculator allowed). On Target, Sprint, and Team, students should never leave a question blank—they should always guess since there is no penalty for guessing. ALL students will take ALL events. For more details about each of these events and how they will be scored, please go to <http://mathleague.org/mstests.php> and use practice tests to prepare for the contest (<http://mathleague.org/freetests.php>). All participants should be familiar with our Conduct Standards available at <http://mathleague.org/conduct.pdf>. This document outlines some of the rights and responsibilities each participant has at our contests, as well as the consequences for committing infractions.

_____ Fractional numbers must be expressed in simplest (lowest) terms or as an equivalent decimal fraction, unless a specific form is requested. For example, 0.33 is not equivalent to $\frac{1}{3}$ and would be counted incorrect if the answer were $\frac{1}{3}$. Units should not be included with answers since the question usually includes the units in the prompt. If dealing with a problem including time, AM or PM should be indicated.

_____ Team Formation: Teams can be made up of 1-4 students of mixed or same grade levels; we encourage mixed grade level teams since a sixth grader may be stronger in a particular topic than an eighth grader just because he or she recently studied that topic in school. Every student attending will take the team test. The team event will be a part of the Sweepstakes score. A team's Sweepstakes score is obtained by adding the individual scores of the team members, dividing by 4, and adding double the team's score on the team test. 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 test scores (weighted by item analysis). If a team is not comprised of 4 members, there will be a 0 added into the sum for each missing team member before dividing by 4.

_____ **All schools must sign up for mathleague membership online at <http://mathleague.org/membership.php> BEFORE submitting the entry form for registration.** Your school may choose to administer the in-school qualifying round if you are unable to attend a site in your area due to conflicts or are simply too far from a qualifying contest site. Or, you may have students attend a contest site and take the in-school qualifying round as another chance to qualify for the state tournament. Middle school entries to the in-school contest must be submitted to mathleague by February 15 each year.

_____ All entries must be submitted on the **Official Entry Form**, or copy thereof, signed by the school principal and postmarked no later than **3 weeks prior to the contest date**. A non-refundable fee of \$10.00 is required for each participating student, and site coordinators do not accept purchase orders. The entry form and check made out to MCTM should be mailed to the **Site Coordinator** (see addresses on the adjacent pages) at the qualifying site where the school plans to participate, which is normally the site closest to your school's location. Schools may also choose to pay by credit card or PayPal after receiving an online registration link from the site coordinator.

DAY OF THE CONTEST

_____ Students should bring at least 2 sharpened pencils and a calculator. Scratch paper will be given on all events; any space on the test may be used for calculations. An answer sheet will be provided for recording and marking answers for each event. Care must be taken to write or mark each answer in the appropriate space. Calculators are allowed ONLY on the Target and Team Events. A student must furnish his or her own calculator. Calculators are NOT allowed on the Sprint Event. Any calculator allowed on the SAT may be used <http://sat.collegeboard.org/register/calculator-policy>.

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.

No student or adult will be allowed to enter a testing session after a test has begun. Students are expected to remain in their assigned rooms 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 may be working in adult-sized arm chairs in university classrooms.

During the restroom break, students are expected to remain in the area near their testing rooms.

Restrooms and a water fountain will be nearby. They may bring a small snack to eat during the break.

The students earning the five highest scores in Target and Sprint at each grade level will be recognized. The top five Sweepstakes scores will also be recognized. In each grade level, the top five combined scores (sprint score plus twice the target score) will be recognized.

AFTER THE CONTEST

Each participant will receive a Ribbon of Participation.

A Missouri student qualifies for the Middle School State contest if he or she participates in a middle school qualifying round (either a local contest or the in-school qualifying round) during the school year and does any one of the following:

- Earns at least 50% of the available points on any of the individual tests.
- Scores strictly higher than 80% of the participants in his or her grade on any of the individual tests.
- Participates on a team that scores either at least 50% of the available points or strictly higher than 80% of the other teams on the team test.

A list of qualifiers can be found within the “Qualifiers to Next Level” tab in each site’s results found at <http://mathleague.org/results/middleschool/>.

If you have any state qualifiers, please register and pay for them online using the link found within the State Information at <https://moctm.org/mctm-math-contest/mctm-middle-school-math-contest.html>.

For the Qualifying 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 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 10, Student B has a sprint score of 9, and Student C has a sprint score of 8. Then to break the tie on Target, Student A would be first, Student B would be second, and Student C would be third.

MCTM will be releasing all students’ answer sheets to the sponsor on the DAY OF THE CONTEST. This allows students to see what they have missed, learn from their mistakes, and even have time to learn some new concepts before the state competition. After ALL mathleague contests have concluded each month, the site coordinator will email out an electronic copy of the blank contest and solutions. For example, you attend a contest on January 15; you will receive an email with a complete copy of the contest and solutions attached on or after February 1.

In addition to releasing the test materials, results of ALL sites will be available online at mathleague.org to the public after the results have been finalized by the site coordinator. Students’ names will not be listed; the school’s name will be listed and the student’s first and last initials. Students will now be able to see how they rank with regard to everyone else at a particular site and across the state.

STATE CONTEST INFORMATION

https://docs.google.com/document/d/1gJsQPwe_Dt5NeTekguTzofDIRLv4wOq3sABluCZrsjY/edit?usp=sharing

Remittance of Entry Fees

Name: _____ Contest Location: _____

Number of Participating Schools Public: _____ Private: _____

Enumeration of checks enclosed:

_____ x	\$8	=	\$ _____	_____ x	\$64	=	\$ _____
_____ x	\$16	=	\$ _____	_____ x	\$72	=	\$ _____
_____ x	\$24	=	\$ _____	_____ x	\$80	=	\$ _____
_____ x	\$32	=	\$ _____	_____ x	\$ _____	=	\$ _____
_____ x	\$40	=	\$ _____	_____ x	\$ _____	=	\$ _____
_____ x	\$48	=	\$ _____	_____ x	\$ _____	=	\$ _____
_____ x	\$56	=	\$ _____	_____ x	\$ _____	=	\$ _____

Currency enclosed: \$ _____

Total enclosed: \$ _____

Letter to School Administrator

If you would like for the Contest Director to send a letter of commendation/recognition to your school administrator acknowledging your service as a Regional Coordinator, complete the information below and return with your expense form.

Your Name:

Administrator's Name & Title: _____

School Address (include city and zip code): _____

Guidelines for Reimbursement

MCTM Regional Math Contest Coordinators

The MCTM Board makes the following recommendations to help streamline and clarify the reimbursements for expenses associated with the regional math contests. Some guidelines are meant to try to limit expenses, but most are more concerned with potential problems during an audit.

Note that these are more like “guidelines” rather than absolutes in the “contest code” (apologies to Pirates of the Caribbean). So contact the director if there is a special case that might warrant bending the guidelines a little.

1. An expense form (previous page) is being used that is consistent for all expenses at every level (including Math & Art).
2. Receipts are required for all expenses (when a receipt is reasonably generated). For example, the normally small phone charges, and a few copying charges, and minor postage charges may not easily generate a receipt for expense. However, building / custodial charges and refreshments must be submitted with a receipt. *Note that the reimbursement form has an explanation section to include a comment about the situation that makes receipts impossible.*
3. Building rental/custodial charges greater than \$100 should be approved through discussion with the director.
4. Food/refreshments (intended for contest workers) greater than \$60 should be approved through discussion with the director.
5. No expense reimbursements for electronic equipment/hardware should be expected. (See the director for special cases.)
6. Costs for name badges should be minimal (less than \$15) unless more permanent badges are being purchased for collection and reuse over multiple years. (Check with the director.)

Complimentary NCTM Membership Form

Coordinator:

In appreciation of your hard work and dedication for running an MCTM Contest, MCTM offers to pay for a one-year membership [individual or e-member] in NCTM for you or your assistant. To obtain this, please complete this form and mail or email it to Sonya Land within 30 days of your contest. I will forward it to the MCTM Treasurer, who will make the payment to NCTM for the membership. All parts of this form must be completed to process the membership.

Site: _____
CITY BUILDING

____ I am currently a member of NCTM, and would like to have my membership extended by one year at no cost to me.

Name _____ NCTM member # _____
[Your membership # is on the mailing label of each issue of your *NCTM Bulletin* and *NCTM Journal*]

or

____ I am not currently a member of NCTM, and would like to receive a one-year membership at no cost to me.

Name _____

Home Address	and	Work Address
_____		_____
_____		_____
_____		_____

Phone # _____ Email _____

Circle one: Individual Membership E-Membership [only an online journal]

Circle one NCTM Journal (9 issues, August to May):

- TCM [Teaching Children Mathematics - grades preK-6]
- MTMS [Mathematics Teaching in the Middle School - grades 5-9]
- MT [Mathematics Teacher - grades 8-14]

Mail Journal to (Circle one): Home Address Work Address

Please mail or attach via email this form to:
Sonya Land sonya@mathisfun.org
1402 Sycamore Manor Dr.
Chesterfield, MO 63017



Missouri Council of Teachers of Mathematics
Affiliated with National Council of Teachers of Mathematics

COMPLIMENTARY MEMBERSHIP FORM for Contest Coordinator

Name:					
Street Address:					
City:		State:		Zip:	
School District:					
# of Yrs in Teaching:					
Phone:	()				
E-Mail Address:					

If you do NOT wish to be included in the MCTM directory, please check this box.

Choose One	Teaching Level
	Elementary
	Middle School
	Secondary
	Higher Education
	Administration
	Student
	Retired
	Other

News Release for Regional Contests

The Missouri Council of Teachers of Mathematics sponsored the 38th Annual Missouri Middle School Student Mathematics Contest. The contest, conducted at approximately fifteen regional sites across Missouri throughout the 2022-2023 school year, had over 1000 student participants in grades six, seven, and eight. Students who score at least 50% in any event or greater than the 80th percentile in their grade within an event qualify to participate in the MCTM State Finals Middle School Mathematics Contest, at Selvidge Middle School, Ellisville, Missouri, on Saturday, March 11, 2023.

Students from _____ School
competed in the Regional Contest held at _____
on _____. The students were . . .

Teachers from the school who accompanied the students to the contest as sponsors were . . .

Principal _____ is pleased that students from the school were willing to prepare for the contest and to represent their school in the statewide event.

Winners from the school included . . .

The students who will be competing in the State Finals Contest in Ballwin are

Congratulations to this school and to these students.

For additional information contact the Contest Director:

Online Registration and Results Data Entry

To enter a new school and its participants into the online mathleague.org database, click on the results link that you received from mathleague.org. Click on Add Students in the upper left corner, and you should see the following screen:

Choose the school name from the dropdown menu, enter the number of participants and each student's name and grade level. If a school's name is not in the dropdown menu, that school has not filled out the mathleague membership form at <http://mathleague.org/membershipform.php>. **Payment is not necessary unless the school wishes to utilize the in-school contest round and/or has students attending the regional or state competitions.** Click Submit. *Apostrophes and symbols (e.g. &) cannot be included in school names or students' names.* In order to make changes to a school's information that you have already entered, click on View/Edit Students. **Make sure to click Update at the bottom when you are finished making changes.**

If grading by hand, enter team names in the View/Edit window for each student (e.g., SchoolNameA for all students on first team, SchoolNameB for the second team from that school). Schools should be told to send a list of which students are on which teams prior to the day of the contest so that you do not have to enter this on the day of the contest. **If you are electronically grading the team tests, you do not need to enter team names.**

ID	sch	School	First Name	Last Name	Grade	Paid	Team Name	Team	Number Sense	Sprint	Target
122210	6658	MO - Shenandoah Valley Elementary	Joshua	Land	4	<input type="checkbox"/>	ShenA	incomplete	incomplete	incomplete	incomplete
122211	6658	MO - Shenandoah Valley Elementary	Rachel	Land	5	<input type="checkbox"/>	ShenA	incomplete	incomplete	incomplete	incomplete
122212	6658	MO - Shenandoah Valley Elementary	Sonya	Land	5	<input type="checkbox"/>	ShenA	incomplete	incomplete	incomplete	incomplete

In order to begin entering scores on the day of the contest, click on the same results link in which you have been entering students. Click on Enter Scores. In order to enter scores for all events, choose the correct event from the Test drop down menu and click on Enter Scores. You will then see the following screen if you choose Target.

If you would like a spreadsheet of all students attending your site, click on View/Edit Students and then Click Here to Download Registration Data. This will include sponsor names and emails of who registered the students.



[Add Students](#)

School:

[View/Edit Students](#)

Test:

[View Results](#)

Target data entry for all

Enter 1 for a correct answer and 0 for an incorrect answer

School	First Name	Last Name	Grade	1	2	3	4	5	6	7	8
Ozark High School	Joshua	Land	9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ozark High School	Rachel	Land	10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ozark High School	Sonya	Land	11	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
zzz extra	101	101	14	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
zzz extra	102	102	14	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
zzz extra	103	103	14	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
zzz extra	104	104	14	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
zzz extra	105	105	14	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

As it states on the page, enter a 1 for each correct answer and 0 for an incorrect answer. The red squares indicate that no score has been entered for this question. This allows the results program to do item analysis on all of your students' scores, breaking ties mathematically. Click on Submit at the bottom of the screen. Then you should see the actual scores of all students for whom you have entered your data. Repeat this process until you have entered all data for all events.

If you have chosen to scan all of your events (Target, Sprint, and Team) and send them to mathleague.org for grading, all of these results will automatically be entered for you.

Once you believe that all results have been entered (manually or digitally), click on View/Edit Students and look for any INCOMPLETEs or Grade Levels that are listed as 14.

School	First Name	Last Name	Grade	Paid	Team Name	Team	Number Sense	Sprint	Target
MO - Shenandoah Valley Elementary	Joshua	Land	4	<input type="checkbox"/>	ShenA	60	205	40	incomplete
MO - Shenandoah Valley Elementary	Rachel	Land	5	<input type="checkbox"/>	ShenA	60	242	53	40
MO - Shenandoah Valley Elementary	Sonya	Land	5	<input type="checkbox"/>	ShenA	60	88	60	40

Fix the appropriate grade levels from 14 to the correct grade. Looking at our example above, notice that there are incomplete Target scores. Incompletes occur when a student's answer is unreadable in the scans. To check this score and manually enter the correct data, choose Target from the dropdown menu and click on Enter. You should then see the red blank that needs to be filled in with a 1 or 0; check the student's actual paper and enter the appropriate score, clicking Submit when finished.

To view results for your students and determine awards, click on View Results. To see one event's scores, click on Target Results, Sprint Results, or Team Results. If two students are tied with the same score, look at the Borda number. The student with the *lower* Borda score should win the tie and be given the higher place. In our example below, Rachel would place higher than Sonya. If two students have the exact same score and the exact same Borda in Target or Sprint, look at their respective Sprint or Target scores to break the tie.

Southwest Baptist University, 2020-05-02

[Add Students](#)

School:

[View/Edit Students](#)

Test:

[View Results](#)



Target Results

3rd Grade

School	First Name	Last Name	Score	Borda
--------	------------	-----------	-------	-------

4th Grade

School	First Name	Last Name	Score	Borda
Shenandoah Valley Elementary	Joshua	Land	20	3

5th Grade

School	First Name	Last Name	Score	Borda
Shenandoah Valley Elementary	Rachel	Land	40	6
Shenandoah Valley Elementary	Sonya	Land	40	7

To view the Sweepstakes scores, click on View Results and then Sweepstakes Results. Since your teams will be of varying grade levels, **look ONLY at the Overall list at the bottom of the Sweepstakes Results screen to determine your top 5 teams.**

To view combined scores for each student, click on View Results and then Individual Results. You should see a screen much like the one below (except you won't have Number Sense listed as a middle school site). If a student qualifies for state, there should be a "1" in the last column to the right on this screen.

Individual Results

3rd Grade

School	First Name	Last Name	Score	Target (Target Borda)	Sprint	Number Sense	State?
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4th Grade

School	First Name	Last Name	Score	Target (Target Borda)	Sprint	Number Sense	State?	
Shenandoah Valley Elementary	Joshua	Land	111.25	20	3	40	205	1

5th Grade

School	First Name	Last Name	Score	Target (Target Borda)	Sprint	Number Sense	State?	
Shenandoah Valley Elementary	Rachel	Land	153.5	40	6	53	242	1
Shenandoah Valley Elementary	Sonya	Land	122	40	7	60	88	1