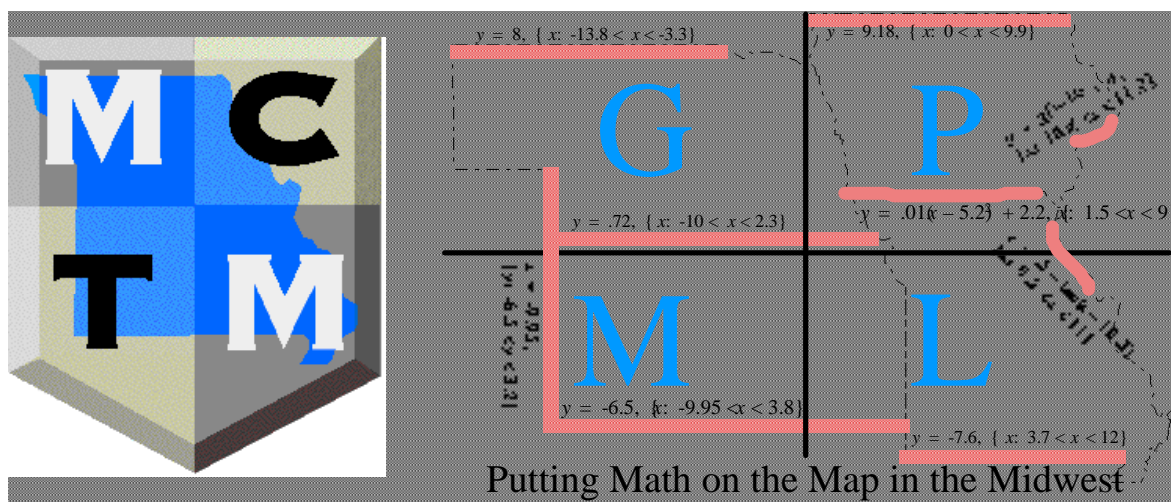


MO Council of Teachers of Mathematics & mathleague.org 2008-2009 High School Contests



Summary of mathleague.org Contest Events

	Power Question	Relay	Target	Team	Sprint
<i>Work Format</i>	L: group ≤ 6 S: group ≤ 3	3 in group working in turn	Individual	L: group ≤ 6 S: group ≤ 3	Individual
<i>Question Type and Number</i>	1 multi-part multi-type	5 rounds 3 parts each	8 short answer (given in 4 pairs)	10 short answer	30 multiple-choice
<i>Time (min.)</i>	60	30 (6/round)	40 (10/pair)	20	60
<i>Points/Question</i>	varies	10 in first 3 min., 5 up to 6 min.	10	10	4 for correct, -1 for wrong
<i>Calculator Use (SAT-approved)</i>	yes	no	no	yes	yes
<i>Point Possible/Event</i>	100	50	80	100	120
<i>Points Contributed to Sweepstakes</i>	[none]	L: (top 2 groups) S: (top group, x 2)	L: avg. of top 6 S: avg. of top 3	top group	L: avg. of top 6 S: avg. of top 3
<i>Points to Qualify for State Meet</i>	≥ 50	≥ 25 or a Sweepstakes total of: ≥ 200 <i>qualifies anyone contributing to the</i>	≥ 40 <i>Sweepstakes score of ≥ 200</i>	≥ 50	≥ 60

[Any school with an average enrollment per grade level of 250 or more students, as well as any school with a selective admissions process, must compete as a large school.]

Rev: 9/08

Important MCTM Policies

Any school that attends MCTM-sponsored sites may submit a minimum payment of \$100 to MCTM to cover *this year's* costs at multiple sites. This new policy will reduce the number of submissions made by a sponsor to his/her school district for funds to attend these contests. Each MCTM-sponsored site will check with Sonya Land two days before a contest to determine if a school has an "account" with submitted funds that would pay for that school's student registrations. Any extra funds remaining after the state competition will NOT be rolled over to the next school year, so please budget your funds accordingly. If your school is interested in paying a lump sum to MCTM for contests, please submit a check made payable to MCTM for a minimum of \$100 and a note indicating which school(s) may use these monies for the 2008-2009 school year. Send your payment to Sonya Land, 1402 Sycamore Manor Dr., Chesterfield, MO 63017.

Also, any student who receives 4 state qualifier coupons from the MCTM-sponsored events throughout the school year will be able to compete at the state competition for FREE as long as all 4 coupons are presented at the registration table on April 25, 2009. Similarly, any student who receives 3 state qualifier coupons will pay a \$1 registration fee at the state competition (provided that all 3 coupons are presented at the registration table on April 25, 2009); any student who receives 2 state qualifier coupons will pay a \$2 registration fee at the state competition (provided that both coupons are presented at the registration table on April 25, 2009).

About the mathleague.org High School Contests

This year, mathleague.org will be sponsoring a series of high school math contests for the twelfth year, in order to determine the individual and team state champions for Missouri, Iowa, and Kansas in several mathematics events. MCTM is again teaming up with mathleague.org to sponsor the state contest finals in Missouri, as well as some of the qualifying local meets.

Regional qualifying meets will be held throughout the school year at various sites around the Midwest. Within space limitations at each site, schools may attend any or all of these six meets in attempting to qualify for the state meet. Each event has a cutoff score, and all students and teams attaining the cutoff score will be invited to compete at the state championship. The state meet will be held on **April 25, 2009**, in Columbia, Missouri; details will be e-mailed to all schools with qualifying students in late March. Here is a checklist of things to do:

- Become a mathleague.org member school online for \$20 (large school) or \$10 (small school). The benefits of being a mathleague.org member school include one free entry in mathleague.org's Power Question Contest, and only students enrolled in member schools may compete at the state meet.
- Check out the mathleague.org web site (at <http://mathleague.org>) to keep updated on where and when all (including IA, KS, MO) qualifying meets will be held, and the contact information for each.
- Register and attend any of the qualifying meets, as many as desired. Keep going to meets until your school and students qualify. After your students or school qualifies, go to more meets for extra practice.
- Make plans to be at the state finals meet on **April 25, 2009**, in Columbia, Missouri. (If anyone at your school has qualified for the state finals meet, you will be e-mailed an invitation in March.)

Current List of 2008-2009 Meet Sites

The rules and policies in this brochure, sample test sets, as well as updates on the sites listed below, are found on the mathleague.org website at <http://mathleague.org>, MCTM's site at <http://math.missouristate.edu/44540.htm>, or <http://www.mathisfun.org/MathContests.htm>. If not stated below, the **registration deadline** is 2 weeks prior to the contest date. All registration payments received after the deadline are subject to a late registration fee. For additional information about the contests in general, contact: Sonya Land, MCTM Secondary Contest Chair, at sonya@mathisfun.org or (636) 728-0012.

Saturday, September 27, 2008

Wednesday, October 1, 2008, 4-7:30 p.m.

<p>Location: <u>Southwest Baptist University</u> Math Dept. 1600 University Drive Bolivar, MO 65613 Registration: \$6.00 / student MCTM-Sponsored Registration deadline: September 20, 2008</p>	<p>Site Coordinator: Dr. Kevin Hopkins Contact SC by: Cell: 417-399-0182 Office: 417-328-1675 Fax: 417-328-1658 E-mail: khopkins@sbuniv.edu</p>
<p>Location: <u>Pembroke Hill School</u> 5121 State Line Kansas City, MO 64112 Registration: \$7.00 / student & INCLUDES LUNCH Not MCTM-Sponsored Registration deadline: September 20, 2008</p>	<p>Site Coordinator: Bill Griffiths Contact SC by: Home: 816-822-0709 Office: 816-936-1412 Fax: 816-936-1429 E-mail: WGriffiths@pembrokehill.org</p>

November 8, 2008

November 15, 2008

<p>Location: <u>Missouri Academy</u> 800 University Dr. Maryville, MO 64468 Registration: \$6.00 / student Not MCTM-Sponsored Reg. Deadline: November 1, 2008</p>	<p>Site Coordinator: Lisa Hamblen Contact SC by: Cell: 660-562-1915 E-mail: lham@nwmissouri.edu</p>
<p>Location: <u>Spokane High School</u> 1123 Spokane Rd. P.O. Box 218 Spokane, MO 65754</p>	<p>Site Coordinator: Phyllis Farmer</p>

December 6, 2008

Friday, December 12, 2008

<p>Location: <u>Parkway South High School</u> 801 Hanna Road Manchester, MO 63021-6799 Registration: \$7.00 / student Not MCTM-Sponsored Reg. Deadline: Nov. 30, 2008</p>	<p>Site Coordinator: Scott Degitz Contact SC by: Cell: 314-580-9931 Office: 314-415-9707 E-mail: sdegitz@pkwy.k12.mo.us Fax: 314-415-7712</p>
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January 10, 2009

Location: <u>McCluer North High School</u> 705 Waterford Drive Florissant, MO 63033 Registration: \$6.00 / student MCTM-Sponsored Reg. Deadline: January 3, 2009	Site Coordinator: Erin King Contact SC by: Cell: 314-952-3669 Office (direct): 314-506-9260 Office (VM): 314-506-9342 E-mail: eking@fergflor.k12.mo.us Fax: 314-506-9201	Location: <u>Spokane High School</u> 1123 Spokane Rd. P.O. Box 218 Spokane, MO 65754 Registration: \$6.00 / student MCTM-Sponsored Registration deadline: January 3, 2009	Site Coordinator: Phyllis Farmer Contact SC by: Home: 417-443-3206 Cell: 417-830-4505 Office: 417-443-3502 Fax: 417-443-7714 E-mail: farmerphyllis@spokane.k12.mo.us
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February 14, 2009

Location: <u>Ozark High School</u> P.O. Box 166 1350 W. Bluff Dr. Ozark, MO 65721 Registration: \$6.00 / student MCTM-Sponsored Reg. Deadline: February 7, 2009	Site Coordinator: Brandy Krudwig Contact SC by: Home: 417-883-6404 Office: 417-582-5785 Fax: 417-582-5944 E-mail: brandykrudwig@mail.ozark.k12.mo.us	Location: <u>SLCC-Florissant Valley</u> Math Dept. 3400 Pershall Road St. Louis, MO 63135-1499 Registration: \$6.00 / student MCTM-Sponsored Registration deadline: February 7, 2009	Site Coordinator: Rick Armstrong Contact SC by: Home: 314-771-4402 Office: 314-513-4346 Fax: 314-513-4199 E-mail: rarmstrong@stlcc.edu
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March 7, 2009

Location: <u>St. Charles Co. Comm. College</u> 4601 Mid Rivers Mall Dr. St. Peters, MO 63376 Registration: \$6.00 / student Not MCTM-Sponsored Reg. Deadline: Feb. 28, 2009	Site Coordinator: Joe Howe Contact SC by: Work: 636-922-8318 Cell: 314-640-5385 E-mail: jhowe@stchas.edu Fax: 636-922-8441	Location: <u>Nixa High School</u> 205 North St. Nixa, MO 65714 Registration: \$6.00 / student MCTM-Sponsored Fax: 417-724-3515 Reg. Deadline: Feb. 28, 2009	Site Coordinator: Patti Blanton Contact SC by: Home: 417-882-7734 Cell: 417-860-3724 Office: 417-724-3628 E-mail: pblanton@mail.nixa.k12.mo.us
Location: <u>Pembroke Hill School</u> 5121 State Line Kansas City, MO 64112 Registration: \$7.00 / student & INCLUDES LUNCH Not MCTM-Sponsored Registration deadline: February 28, 2008	Site Coordinator: Bill Griffiths Contact SC by: Home: 816-822-0709 Office: 816-936-1412 Fax: 816-936-1429 E-mail: WGriffiths@pembrokehill.org		

April 25, 2009

MCTM/MATHLEAGUE.ORG State Meet

Location: <u>University of Missouri-Columbia</u> Columbia, MO	Registration: \$6.00 / student (Entry only by achieving a cut-off score at one of the MATHLEAGUE.ORG Qualifying Sites; limited to MO students)	Site Coordinator: Sonya Land	Home: 636-728-0012 Cell: 314-322-3757 E-mail: sonya@mathisfun.org
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May 8, 2009

Four-State Regional Championship Location TBA

MCTM and MATHLEAGUE.ORG Are Looking for New Regional Meet Sites

Would you or a colleague like to host a meet site for a qualifying local contest? We would especially like to see more sites outside of the "Big Three" metro areas. If you are interested, a list of MATHLEAGUE.ORG guidelines can be sent to you, or much of the information is on the website <http://mathleague.org>. You can choose to run your own site (under MATHLEAGUE.ORG contest rules), handling all expenses and income on your own. A second option is to ask MCTM to assist you in the operation. If you decide to use MCTM (still following MATHLEAGUE.ORG rules), MCTM will receive and disburse all monies, and in return MCTM:

- provides you with a list of procedures and a checklist for running a site
- provides a member of the contest committee to assist at the site
- charges a registration fee of \$6 for each student (\$7 per student if received later than 2 weeks before the contest date)
- assists in promoting your contest

- pays for phone calls, postage, and printing related to the contest
- purchases the plaques, medals, and ribbons, and mails them to you
- pays for security and custodial services if necessary for your site
- pays for contest materials and duplication
- provides special assistance costs for a student with a disability (we must be notified at least 2 weeks in advance)
- pays for some refreshments (up to \$50) for graders and proctors
- for any student who qualifies, waives \$3 or more of the \$6 registration fee for the state finals in April.

If interested, contact: **Sonya Land**, MCTM Secondary Contest Chair, at sonya@mathisfun.org or 636-728-0012.

MCTM / MATHLEAGUE.ORG HIGH SCHOOL CONTESTS REGISTRATION FORM

General Directions: Please read all of the 'MATHLEAGUE.ORG Policies' carefully. Make blank copies of this form first, and use it for several contests. Copy your completed form before mailing it in. Mail your form to the site coordinator and address you listed in the boxed area below. Registration deadlines are 2 weeks before the date of the meet if not otherwise noted. A confirmation of your registration, with directions for payment (check, money order, or cash only; no purchase orders) and other directions, will be mailed to you 10-20 days prior to the contest date. *Please print all information clearly.* The cost for registration at any MCTM-sponsored contest will be \$6 per student. Registrations after the deadline are subject to a late charge (\$1 for MCTM-sponsored events).

Home Schoolers: All students who are home-schooled are welcome to be registered as a 3- or 6-member team as long as they meet the following conditions stated on the mathleague.org website.

Contest Site _____	Contest Date _____	MCTM-Sponsored: Yes / No
Site Coordinator & Address _____		

School Name _____ Small / Large School (*circle one*)

School Address _____

Sponsor Name _____ Phone _____ Fax _____

Sponsor Signature _____ Sponsor E-mail _____

Submitting this registration form for an MCTM-sponsored contest site grants permission to the Missouri Council of Teachers of Mathematics to release the names and pictures of participants in the contest to the news media, the MCTM *Bulletin*, and the MCTM Web Site. **If you do not grant permission** for a registrant's name or picture to be released to the news media, the MCTM *Bulletin*, and the MCTM Web Site, *please put a \surd in the box in front of that registrant's name below.*

	Registrant Name	Grade		Registrant Name	Grade
1)	<input type="checkbox"/> _____	_____	7)	<input type="checkbox"/> _____	_____
2)	<input type="checkbox"/> _____	_____	8)	<input type="checkbox"/> _____	_____
3)	<input type="checkbox"/> _____	_____	9)	<input type="checkbox"/> _____	_____
4)	<input type="checkbox"/> _____	_____	10)	<input type="checkbox"/> _____	_____
5)	<input type="checkbox"/> _____	_____	11)	<input type="checkbox"/> _____	_____
6)	<input type="checkbox"/> _____	_____	12)	<input type="checkbox"/> _____	_____

(If entering additional teams or participants, please attach them on a second registration form.)

The *Missouri Council of Teachers of Mathematics* and the *Great Plains Math League* comply with state and federal laws. Requests for special accommodations for persons with disabilities, who are participants in a given contest, must be submitted in writing to that site coordinator **at least 14 days in advance of the contest** so that special arrangements may be made. A special request must be made if a religious belief prohibits participation in a Saturday contest. The request must be submitted in writing to that site coordinator at least 14 days in advance of the contest so that special arrangements may be made. The arrangements may require that the contest participants go to another location to participate in the contest.

Description of mathleague.org Events

[Please note: Where the grading or test administration differs for small schools, those differences are denoted *in italics in parentheses*. The qualifying (cutoff) scores for the state contest are underlined.]

- **Power question:** [Calculators are allowed.] This is a multi-part, proof-oriented question that will test the students' higher-level mathematical reasoning skills. The power question is a team event in which groups of six (*or three for small schools*) work for one hour to produce a single multi-page answer. Scores for this event will be out of 100. Any team that scores above 50 will be invited to compete at the state meet. [Please note: due to time constraints, the power question will not be offered as an event at qualifying meets. Rather, power questions will be sent to schools that become MATHLEAGUE.ORG members according to the mathleague.org website. Completed tests will be mailed to MATHLEAGUE.ORG and scored centrally. The prior cost of \$10 for grading one entry is included as a benefit of the MATHLEAGUE.ORG membership.]
 - **Team test:** [Calculators are allowed.] This is a ten-question, twenty-minute test which a team of six works on together (*or three for small schools*). There will be different team tests administered to large and small schools. Each question will be worth ten points, and the top team test score from each school will contribute to that school's overall point total. The cutoff score for state meet qualification will be 50.
 - **Sprint round:** [Calculators are allowed.] In this individual test, students will have sixty minutes to complete 30 multiple choice questions. Four points will be awarded for each correct answer; one point deducted for each incorrect answer; no penalty will be assessed for skipping a question. Individual awards will be given for each grade level, and the top six scores from each school (*or three for small schools*) will be averaged to calculate that school's sprint round score. If fewer than six (*or three*) students take the test, zeros will be assessed for the leftover slots. This is to encourage schools to bring more students and not limit participation to only the one or two top math students in the school. The state meet cutoff score for individuals is 60.
 - **Target round:** [Calculators are **NOT** allowed.] This is an individual event consisting of eight questions, each worth 10 points. Questions will be given out in pairs, and students will have ten minutes to complete each pair. Awards and the team scoring procedure are the same as those for the sprint round. The state cutoff score for individuals is 40.
 - **Relays:** [Calculators are **NOT** allowed.] In this event students will arrange themselves into teams of three, aligned in a row. A relay question consists of three parts, where the first student completes part 1 and passes its answer back to the second person, who must use that answer to solve part 2. This answer is then passed back to the third person, who uses that answer to solve part 3. The third person is the only one to turn in an answer. [Detailed rules and procedures are mailed to participants, and will be explained at each MATHLEAGUE.ORG meet.] The third person has a chance to turn in an answer at three minutes, when a correct answer nets 10 points (no penalty); and at six minutes, when a correct answer receives 5 points. There will be five relay rounds, and the top two teams (*or one team for small schools*) from a school count toward the school's total. The relay score of small schools is doubled before being added to the school's total, so the relay round is worth 100 points in the overall rankings for both large and small schools. Any team of three that scores at least 25 will be invited to the state meet.
- **Sweepstakes:** A school's sweepstakes total is computed by adding its scores for each event. There are maximums of 100 points available in the team test (the score of the highest scoring team from the school), 120 in the sprint round (average of the top six (*or three*) highest scores), 80 in the target round (average of the top six (*or three*) highest scores), and 100 in the relays (sum of the two (*or one, doubled*) highest-scoring relay teams from the school), for a total of 400. [At the state meet, the power question will be a competition event as well, so the maximum team total will be 500.] A total cutoff score is 200 — meaning any school scoring at least 200 will be allowed to bring all team members *who attended the respective competition* to the state meet.

American Regions Math League

Great Plains Math League contests are modeled after the national high school mathematics team competition: American Regions Math League (ARML). The ARML competition occurs simultaneously in three locations: Iowa City, Penn State University, and California. Each June, Missouri sends a 15-person team to compete in Iowa City. If you have any students interested in this national team competition, ask them to contact Rick Armstrong at rarmstrong@stlcc.edu or 314-595-4346. The Missouri ARML team especially needs talented 9th and 10th grade students. For students in the St. Louis area, ARML practices have been held at the St. Louis Community College-Florissant Valley campus on Sunday afternoons in past years. For students in the Springfield area, Patti Blanton has been arranging ARML practices there. Please contact her at pblanton@mail.nixa.k12.mo.us for more information.

MATHLEAGUE.ORG Policies for 2008-2009

- **Cellular Phones, PDAs, Translators, and Calculators (began in 2004-2005):** All cellular phones and PDAs must be turned off and put away during all rounds of testing. Any electronic translator may not be used during the Target or Relay rounds; however, it may be used for its calculator functions during the Power Question, Sprint or Team rounds. Any calculator approved for use at the ARML national contest is acceptable for the power question, team test, and sprint round. This list is identical to the list of calculators approved for the SAT ('QWERTY' keyboards and infrared devices are not permitted).
- **Separate Individual Awards for Small Schools (began in 2004-2005):** At the state tournament in Columbia, the top five places in each grade level on the sprint and target rounds will be recognized in two separate divisions, small and large schools. Therefore, small schools who have only one or two students qualify for state have an opportunity to win awards without having a full team present.
- **MATHLEAGUE.ORG School Membership:** All schools attending MATHLEAGUE.ORG contests will be asked to become a MATHLEAGUE.ORG member for an annual cost of \$20 (large school) or \$10 (small school). The benefits of becoming a MATHLEAGUE.ORG member school include one free entry in MATHLEAGUE.ORG's Power Question Contest, and only students enrolled in member schools may compete at the state meet. Membership should be paid online at <http://mathleague.org>.
- **School Size:** In every state in which MATHLEAGUE.ORG sponsors contests, the following school size classifications apply: Any school with an average enrollment per grade level of 250 or more students, as well as any school with a selective admissions process, must compete as a large school. Any school with fewer than 250 enrolled students per grade and which does not employ selective admissions criteria can be considered a small school. Any school which would otherwise be classified as a small school may voluntarily reclassify itself as a large school for the remainder of the school year by registering at any MATHLEAGUE.ORG tournament as a large school. MATHLEAGUE.ORG may interpret any such registration as intent to reclassify, causing that school to be required to compete in the large school classification at all subsequent MATHLEAGUE.ORG events that school year. For purposes of this section, selective admissions describes any school which, at any point over the last four years, has declined to enroll any student for any set of reasons that directly or indirectly relates to the student's academic performance or potential, or which has currently in place a set of admissions policies or standards that would allow this to happen
- **Substitutions for the State Meet:** Your school is allowed one substitution for every six students (large schools) or one substitution for every three students (small schools) who qualify for state. To determine the exact number of substitutions allowed: take the number of students from your school that are qualified for state, divide by 6 (or 3), and if this number is not an integer round up to the nearest integer. *Any student used as a substitute must have competed at a MATHLEAGUE.ORG meet or on your school's power question team during that school year.*
- **Varsity / JV Teams:** While some schools choose to offer local awards at their meets for Junior Varsity teams (grades 9 and 10 only), local meets may not force 9th and 10th graders to compete on a JV team if their coach would rather they compete at the varsity level. MATHLEAGUE.ORG does not make a distinction between Varsity and JV teams in determining who qualifies for state, so a JV team at a local meet has the same opportunity to qualify for the state meet as a varsity team.
- **Junior High Students:** Local meets may permit students younger than 9th grade to compete individually, but only students in grades 9-12 may qualify for or attend the state meet. Schools bringing junior high students must take care when assembling teams, because the presence of any junior high students on a 3- or 6-member team with high school students renders that whole team ineligible to qualify for state in that event. In cases where a high school consists of only grades 10-12, coaches may bring 9th graders onto the team as long as every such 9th grader is zoned to attend that high school based on the district's residency policy.
- **Crossing State Lines:** A school may only attend the state meet in the state where the school is located; however, a school may qualify for the state meet at any MATHLEAGUE.ORG meet regardless of the state where the meet is held. For instance, if a school in Council Bluffs, IA, attends a meet in Omaha, NE, its students may qualify for the Iowa state meet if their scores reach the cutoffs.