



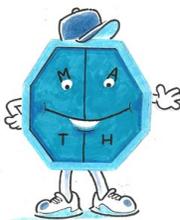
Math League News

■ **Our Calculator Rule** Our contests allow both the TI-89 and HP-48. You may use any calculator without a QWERTY keyboard.

■ **Send Your Comments** to comments@mathleague.com.

■ **Contest Dates** Future HS contest dates (and alternate dates), all Tuesdays, are December 10 (Dec. 17), January 7 (Jan. 14), February 11 (Feb. 18), and March 17 (Mar. 24). (Each alternate date is the Tuesday following the official date.) For vacations, special testing days, or other *known* disruptions of the normal school day, please *give the contest on the following Tuesday*. If your scores are late, please submit a brief explanation. We reserve the right to refuse late scores lacking an explanation. We sponsor an *Algebra Course I Contest* in April, as well as contests for grades 4, 5, 6, 7, & 8. See www.mathleague.com for information.

■ **Name the Math League Mascot Contest** What better time could there be than at the inauguration of a new look to introduce a new mascot? Yes, Math League now has a mascot—but that mascot needs a name! We are turning to you, Math League community, to help us find the perfect name for our new friend. To show our appreciation to whoever supplies us with just the right name, we are running a contest and offering a prize of \$200 and any 7 Math League books to the winner! See our website at <https://mathleague.com> for all the details.



■ **Regional Groupings** Within guidelines, we try, when possible, to honor regional grouping requests for the next school year.

■ **What Do We Print in the Newsletter?** Space permitting, we print every solution and comment we receive. We prepare the newsletter early, so we can use only what we have at that time.

■ **How Do I Change the Spelling of a Student Name?** Please note that an advisor can always return to the Score Report Center to change the spelling of a student's name or to correct a score. We stay out of the loop on such changes. Any advisor noticing a need for such changes should feel free to make them directly.

■ **Can I Add Additional Names and Scores to an Earlier Contest?** One advisor asks, "Since some students did very well in the second contest, can we add their names (with the scores) to the Contest 1 report?" We always allow adding additional names and scores to an earlier contest as long as the additions do not affect the team total previously submitted for the earlier contest.

■ **Administer This Year's Contests Online** Any school that is registered for any of our contests for the 2019-2020 school year may now register at www.online.mathleague.com for the 2019-2020 Online Contests at no cost. The advantages of administering the online versions of our contests rather than the paper and pencil ones are that you do not have to grade your students' papers and that you do not have to submit any scores at our Score Report Center ~ these tasks are done automatically for you when your students take our contests online. If you decide to use this free service, you must set up your account and set the day you will administer each contest at least one day in advance of the actual contest date.

■ **General Comments About the Contest** Tim Baumgartner said, "Thank you for a very interesting contest! My students in general had a difficult time with it, though, perhaps as tough a contest as I have seen in a long time." Kipp Johnson said, "Another good contest—thanks for the hard work!" Linda Muratore said, "Most of my students struggled with this contest. Thank you for raising the bar." Tim Thayer said, "Yeah, so my students found this contest hard! Usually Contest #2 isn't such a challenge for my group." Josh Turner said, "My students though this was a difficult contest, especially for the second one of the year. They are now a bit unsure moving forward since only one student even managed to get 4 correct. Yikes!"

■ **Question 2-1: Appeals (Accepted and Denied)** More than one adviser, including James King and Tim Thayer, wrote to verify which answers to Question 2-1 would be acceptable versus unacceptable given the Math League policy of requiring answers to be correct to four significant digits (correctly rounded). The answer 4.076×10^6 is correct, as it correctly states the four required digits. The answer 4076361.068, for example, is not correct, because it includes incorrect digits. The hardest case is an answer of 4076000; while it is correct for the first four digits, there is no indication of how many of the digits are intended to be significant, and if all seven are considered significant the answer would be incorrect. In this case, we have accepted the appeal, but we urge all advisors to tell their students that writing approximate answers in scientific notation is the safest way to indicate the significant digits.

■ **Question 2-3: Comment** Kevin Horstman said, "The artwork, while spelling 'S' for separation and showing paths taken in lines parallel to the axes, did not show the shortest path to the finish. This led to some confusion as students began attacking problem 2-3."

■ **Question 2-6: Comment and Alternate Solutions** Kipp Johnson said, "One suggestion for you to think about: Even though you defined the greatest integer function in #6, all of my students thought this was just an absolute value. I know, they don't read carefully. Perhaps you could switch over to the floor and ceiling notation, which is becoming quite common. Of course, you'd have to define those as well, but would probably avoid confusion with the absolute value." An interesting thought that we will have to consider! One of Linda Muratore's students submitted an alternate solution based on a graphic approach. The student took each side of the given equation as expressions of y in the coordinate plane and looked for their intersection point. The student found that it was 7.79..., so he knew he could replace $[x]$ with 7 and solve for the exact value of x .

Statistics / Contest #2

Prob #, % Correct (all reported scores)

2-1	72%	2-4	16%
2-2	61%	2-5	14%
2-3	49%	2-6	5%