
#### Abstract

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


■ Use the Internet to View Scores or Send Comments to comments@mathleague.com. You can see your results at www.mathleague.com.


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■ Upcoming Contest Dates \& Rescheduling Contests Contest dates (and alternate dates), all Tuesdays, are February 9 (February 16) and March 16 (March 23). If vacations, school closings, or special testing days interfere, please reschedule the contest. Attach a brief explanation, or scores will be considered unofficial. We sponsor an Algebra Course I Contest and contests for grades $4,5,6,7$, and 8 . Get information and sample contests at www.mathleague.com.


- 2021-2022 Contest Dates: We schedule the six contests to be held four weeks apart (mostly) and to end in March. Next year's contest (and alternate) dates, all Tuesdays, are October 12 (Oct. 19), November 9 (Nov. 16), December 7 (Dec. 14), January 11 (Jan. 18), February 8 (Feb. 15), and March 15 (Mar. 22). Have a testing or other conflict? Now is a good time to put an alternate date on calendar!

■ What Do We Publish? Did we not mention your name? We use everything we have when we write the newsletter. But we write the newsletter early, so sometimes we're unable to include items not received early enough. We try to be efficient! Sorry to those whose solutions were too "late" to use.

- T-Shirts Anyone? We're often asked, "are T-shirts available? The logo lets us recognize fellow competitors!" Good news - we have MATH T-shirts in a variety of sizes at a very low price. Use them as prizes for high or even perfect scores, or just to foster a sense of team spirit! The shirts are of grey material and feature a small, dark blue logo in the "alligator region." A photo of the shirt is available at our website. There's one low shipping charge per order, regardless of order size. To order, use our website, www.mathleague.com.
- Contest Books Make A Great Resource Have you seen our contest books? Kids love to work on past contests. To order, use out website, www.mathleague.com.

■ Administer This Year's Contests Online Any school that is registered for any of our contests for the 2020-2021 school year may now register at http://online.mathleague.com for the 2020-2021 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 are going to administer each contest at least one day in advance of the actual contest date.

■ Adjusted Rules for 2020-2021 and Our Internet Score Center For this school year, we have loosened our rules regarding testing. We will allow the contests to be given either at home or at school, and on multiple testing days. Please administer the contests on any day or days during the week of the official test date or the alternate test date. We will be emailing passwordprotected pdf copies of each contest rather than mailing paper copies to the schools. You may either use these pdfs or our online testing site. This temporary policy is a work in progress; we may revise our procedures based on feedback from participating schools. Instructions for submitting scores will be in the emails we will be sending approximately ten days prior to each contest. Scores entered may be reviewed at any time by returning to the Internet Score Center. About 3 weeks after a contest, scores appear on our Web site, www.mathleague.com. Late scores must be accompanied by a brief explanation of the reason for lateness.

- General Comment About Contest \#4: Michael Buescher said, "There was an excellent mix of questions on this contest! We had stronger students stumble on questions, and students who haven't had a lot of success in the past score very well. Questions 4 and 6 were particularly inspired. Well done!"

■ Question 4-5: Appeal (Rejected) Benjamin Dillon appealed on behalf of students who had an interesting theory of friendship. Benjamin said, "Students who believe that friendship is transitive argued that the fifth person breaks a tie of two friends and two strangers. Once I explained that friendship was not automatically transitive, they wanted to file an appeal that the question should have made that clearer." Unfortunately for his students, Benjamin has the correct position. Firstly, friendship is not automatically transitive. I may have a friend at work named Alice and a friend from school named Chris; clearly we cannot assume that Alice and Chris are friends, as in fact they may never have met! The best we can say is that they have a mutual friend. Secondly, the question was pretty clear in its wording. The key language in the question states parenthetically that "three people who are all friends" means that "each knows the other two." (Emphasis added.) This appeal is rejected and credit cannot be given to students whose answer was 5 .

## Statistics / Contest \#4

Prob \#, \% Correct (all reported scores)

| $4-1$ | $63 \%$ | $4-4$ | $18 \%$ |
| :--- | :--- | :--- | :--- |
| $4-2$ | $40 \%$ | $4-5$ | $21 \%$ |
| $4-3$ | $40 \%$ | $4-6$ | $51 \%$ |

