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## 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. View results at www.themathleague.com before they arrive in the mail.

■ Upcoming Contest Dates \& Rescheduling Contests Future HS contest dates (and alternate dates), all Tuesdays, are Jan 16 (23), Feb 13 (20), \& Mar 12 (19). (Each alternate date is the following Tuesday.) If vacations, school closings, or special testing days interfere, please reschedule the contest. Attach a brief explanation, or scores may be considered unofficial. We sponsor an Algebra Course I Contest in April, and contests for grades 4, 5, 6, 7, and 8 Get information and sample contests at www.themathleague.com

■ 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.themathleague.com.

■ Contests for iPads and iPhones We have iPad/iPhone versions of ALL of our prior contests for grades $4,5,6,7$, and 8 as well as our Algebra and High School contests available now, including last year's contests. The link to these iPad/iPhone applications is on the home page of our website, www.mathleague.com. Take note of our current special offer: access to all past contests at any selected grade level for all students at a given school for the low, low price of only $\$ 9.95$ for the year!

■ Administer This Year's Contests Online Any school that is registered for any of our contests for the 2023-2024 school year may now register at www.online.mathleague.com for the 2023 2024 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.

■ Students Hungry for More? Don't forget, we do offer the Algebra Course 1 Contest in April!

■ Contest Dates for 2024-2025 and Alternate Dates: HS contest dates for the next school year (and alternate dates), all Tuesdays, are October 15, 2024 (October 22), November 12, 2024 (November 19), December 10, 2024 (December 17), January 14, 2025 (January 21), February 11, 2025 (February 18), and March 11, 2025 (March 20). Please note that each alternate date is the Tuesday following the official date!

■ General Comments About Contest \#3: Mar Yanli Cui said, "Just wanted to wish you a happy holiday! We really appreciate all you are doing!" Roger Finell said, "Another very difficult contest." Catherine VanNetta and James Povilonis said, "James and I would like to thank the contest team for consistently offering problems that challenge our students to think creatively. We appreciate you!"

■ Question 3-3: Alternative Solution: Catherine VanNetta and James Povilonis said, "For question 3, our student entered the expression $1,000,000 / x$ into the $y=$ screen of the graphing calculator and scrolled in the table until he found an integer solution."

■ Question 3-5: Comment: Catherine VanNetta said, "For question 5 , it was not immediately apparent to me to use combinations. I'm a huge 'pattern sniffer,' so I began with a diagram of three lines giving 1 triangle, then 4 lines giving 4 triangles, and finally 5 lines giving 10 triangles. At this point, it hit me that I had a pattern from Pascal's triangle, so I knew it was a combination problem. None of our students who participated in this contest have learned combinations, so James (Povilonis) did a beautiful job explaining it to the students in our debrief by 'naming' the lines, A, $\mathrm{B}, \mathrm{C}$, etc. and listing out the combinations for 3 lines, 4 lines, etc."

## Statistics / Contest \#3

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

| $3-1$ | $48 \%$ | $3-4$ | $21 \%$ |
| :--- | :--- | :--- | :--- |
| $3-2$ | $70 \%$ | $3-5$ | $17 \%$ |
| $3-3$ | $63 \%$ | $3-6$ | $24 \%$ |

