Math League News

■ **IMPORTANT ANNOUNCEMENT Regarding Our Calculator Rule** We goofed! The blue sheet "HS Contest Procedures," under "Materials Allowed," says that a calculator (without a QWERTY keyboard) can be used, but this year's printed contests say calculators are strictly prohibited. To remedy this error, we have decided to allow students to use a calculator on the contests for this school year. We will implement the "no calculator" policy for the next school year. We apologize for the error and the resulting confusion. We hope that by allowing calculator usage (without a QWERTY keyboard) this school year, we can clear up confusion caused by our contradictory announcements. So, for this year, our rule is still: Our contests allow both the TI-89 and HP-48. You may use any calculator without a QWERTY keyboard.

■ **Our Internet Score Center** All students who take the paper and pencil version of our contests and whose scores you report must have been tested at exactly the same time. Don't list students from any later class period. Instructions for submitting scores appear on each contest envelope. Scores you enter 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. Scores you enter 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.

■ **Contest Dates** Future HS contest dates (and alternates), all Tuesdays, are November 17 (Nov. 25), December 15 (Dec. 22), January 12 (Jan. 19), February 9 (Feb. 16), and March 16 (Mar. 23). Please note that each alternate date is on the Tuesday following the official date!! For vacations, special testing days, or other *known* disruptions of the normal school day on a contest date, please *give the contest on the following Tuesday.* If your scores are late, meaning beyond the week of an alternate date listed above, 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.

■ **Administer This Year's Contests Online** Any school that is registered for any of our contests for the 2026-2027 school year may register at http://online.mathleague.com for the 2026-2027 Online Contests at no cost. 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.

■ **Eligibility Rules** Only students officially registered as students at your school may participate. That's our rule.

■ **Authentication of Scores** To give credibility to our results, we authenticate scores high enough to win recognition. Awards indicate compliance with our rules. Please print the Selected Math League Rules (posted on the same page as this Newsletter) and have students read them and then sign them to confirm knowledge of the rules. *Keep* the signed sheets. Do *not* send them to us unless we request authentication from you.

■ **Past Contests Online** Teachers of any school registered for any of our 2026-2027 contests can now purchase online versions of the past contests for any selected grade (4th Grade through High School) for $9.95 per grade level for use throughout this school year at http://online.mathleague.com. For this fee, all students in your school can take all the past contests for a specific grade online. We grade each contest for you, provide you with answers and solutions, and keep statistics on each student's performance.

■ **We Are on Facebook!** Like us at https://www.facebook.com/TheMathLeagueInc

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

■ **General Comment About the Contest** Robert Morewood said, "Thanks for another stimulating contest!" Tim Thayer said, "Good morning! I never heard about calculators not being allowed on the CML this year, and then the email comes out allowing calculators ... confusing. Would you provide clear instructions to read to the students about the rules on rounding answers using a calculator? Thank you!" An excellent point, Tim...Please see the first paragraph of this newsletter for the calculator policy! As for rounding, the rules are pretty much the traditional ones. If you simply truncate a calculator result, your answer will be incorrectly rounded half the time. If you wish to round to d digits, look at digit $d + 1$. If that digit is a 5, 6, 7, 8, or 9, round digit d up. If it is a 0, 1, 2, 3, or 4, truncate. Answers must be exact or correctly rounded to four or more significant digits.

■ **Question 1-6: Comments and Alternate Solutions** Edward Groth said, "Loved the last problem. My first instinct was to force a Pythagorean Triple into the problem, especially since 24 is a member of 2 common Triples: 10-24-26 and 7-24-25. So I first 'guessed' that the diagram shown was 10-24-26, meaning the big radius was 26 and the small radius was 5. Solving it through I found the shaded area to be $144 - \pi$. Then I 'guessed' 7-24-25, and to my (initial) amazement, it was STILL $144 - \pi$! Luckily, I had 5 minutes left, so I played around with 'what if one leg is D (diameter of small circle) and the hypotenuse is R (radius of large circle)?' No longer surprising, the answer is always $144 - \pi$." Jon Graetz said, "Let $r = 0$, and the problem reduces to finding the area of a quarter circle with radius 24. So $V = \pi 24^2/4 = 144\pi$." Robert Morewood said, "I especially liked #6. Alternate solution: One student just picked a value (8) for the small radius, but then made a mistake calculating the larger radius. Some extensions for #6: Is it possible for both radii to have integer values? What are the largest possible radii (exact values)?"

Statistics / Contest #1

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

1-1	65%	1-4	53%
1-2	65%	1-5	58%
1-3	48%	1-6	18%