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.

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

■ **Dates of Final HS Contest and Algebra Contest** Our final contest of this school year is March 15 (with an alternate date of March 22). In addition, this year happens to be the 26th year of our annual April *Algebra Course I* contest. There's still time for your school to register! Go to **www.mathleague.com**.

■ **2022-2023 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 18 (Oct. 25), November 15 (Nov. 22), December 13 (Dec. 20), January 10 (Jan. 17), February 14 (Feb. 21), and March 14 (Mar. 21). Have a testing or other conflict? Now is a good time to put an alternate date on calendar!

■ **Rescheduling a Contest and Submitting Results** Do you have a scheduling problem? If school closings **or testing days** mandate contest rescheduling, our rules permit you to use an alternate contest date. Try to give the contest the week after the regularly scheduled date. If scores are late, attach a brief explanation. Late scores unaccompanied by such an explanation will not be accepted.

■ **End-of-Year Awards** Engraving of awards begins March 27th. We give plaques to the highest-scoring school in each region and to the 2 schools and the 2 students with the highest totals in the entire League. *Winning schools must submit their results to our Internet Score Report Center by Match 31st.* Results submitted later *cannot* be used to determine winners. A teacher once asked, "*Has there been any thought to using enrollment figures to divide the schools into two divisions? Personally, I don't care whether we ever receive any team recognition, as my students enjoy the mathematical challenges provided.*" Our groupings are not organized to "even out" the competition. Competition is one feature of our academic enrichment activity, but enrichment should be the main goal. Only a few schools can expect to win, but all schools can profit.

Statistics / Contest #5

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

5-1	78%	5-4	60%
5-2	63%	5-5	49%
5-3	61%	5-6	3%

■ **General Comments About Contest #5:** Tom Goebeler said, "Please know that we have long enjoyed the contests you put together and I marvel at the freshness, quality, and originality of the problems contest after contest." Wes Loewer said, "Thanks for another good season of Math League contests." Robert Morewood said, "Thanks for another set of stimulating questions." Yanli Cui said, "Thank you so much!" Eric Berkowitz said, "Students enjoyed this contest, as they were able to approach each question." Amy Hogan said, "Go math team!" Chris Tillman said, "Thank you, as always, for the wonderful competition questions throughout the year! Our students get very motivated by the contest every month, and a few are practicing every week from your past contests books and reading the solutions."

■ **Question 5-1: Comment** Robert Morewood said, "I particularly liked #1, with both algebraic and geometric solutions."

■ **Question 5-4: Comments** Amy Hogan said, "A lovely problem to go over with my sophomores who are still rather unfamiliar with log rules." Lovely it may be, but several sharp-eyed advisors, including Amy Hogan and Joshua Ruark, noticed that there was a typographical error in our solution to Question 5-4. In part of the last sentence, our solution says "$2^2 < 10 < 3^3$," when clearly what was intended is "$3^2 < 10 < 3^3$." Robert Morewood said, "Are you aware that there are now calculators (such as Casio Fx-300ES plus) which will do #4 exactly as written? It includes both fraction notation and logarithms with any base (I have a photo of the screen showing the exact expression from the contest paper.)" Our calculator policy, which is always printed at the top of each contest as well as at the top of each of these newsletters, is subject to periodic review and may be modified at times to address the continuing evolution of calculator technology. Keep an eye out for future announcements of policy changes!

■ **Question 5-6: Appeals (Accepted)** Many, many advisors appealed the official answer to Question 5-6, pointing out that the question specifies values of r for which "the **two** solutions" of the given equation are "**both** integers" (emphasis added). Setting $r = 0$ creates only **one** solution, so the Appeals Committee has ruled that any student who omitted "0" but has both of the other official answers (-2 and 2/7) should be given credit for the question. Among those advisors writing of this issue were Deanna Abramowitz, Kelly Artzerounian, Dean Ballard, Angelique Bender, Chris van Benthuysen, Beth Benzing, Scott Berger, Eric Berkowitz, Lisa Borenstein, Tara Daley, Benjamin Dillon, Meghan Doebler, Colleen Everett, Will Frazer, Josh Frost, Maria Gaffney, Tom Goebeler, Michael Grigelis, Joseph Griesbach, Amy Hogan, Tara Horowitz, Olga Johnson, Lee Kim, Peter Knapp, Cyrus Koch, Valerie Krieman-Cintas, Wes Loewer, Meg Mann, Robert Morewood, Richard Nickerson, Alison Rodriquez, Todd Rosio, Joseph Scroll, Brian Sterr, Chris Tillman, Robert Tran, Dean Walker, and Danny Young.