



# Math League News

■ **New Calculator Rule** Our contests say that neither a TI-89 nor a TI-92 is permitted. That rule has changed. Since Contest 2, we have allowed any calculator without a QWERTY keyboard.

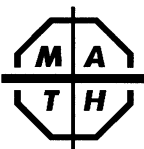
■ **Use the Internet to View Scores or Send Comments** Just go to <http://www.mathleague.com> and look around!

■ **Future Contests and Rescheduling Contests** Contest dates are Feb. 8, Mar. 7, and Apr. 11. Our annual *Algebra Course I Contest* is in April. If circumstances (such as **vacations, school closings or special testing days**) require it, we permit you to give the contest on another date. If your scores are late, please attach a brief explanation, or the scores may be considered unofficial.

■ **Regional Groupings** We sometimes receive requests about regional groupings. Within guidelines, we try, when possible, to honor such requests for the next school year.

■ **Student Cumulative Scores** Although completion of the Cumulative Column is optional, we list (and consider **official**) only cumulative scores reported in this column. A student whose cumulative scores are incorrect (or don't appear regularly in the **Cumulative Column**) may lose eligibility for recognition by the League.

■ **T-Shirts Anyone?** We're often asked "Are T-shirts available? The logo lets us know fellow competitors." Featuring grey shirting and a small, dark blue logo in the "alligator region," we have MATH T-shirts in all sizes at a **very** low price. There's just one low shipping charge per order, regardless of order size. For a VISA or MasterCard order, please phone 201-568-6328; or fax a purchase order to 201-816-0125.



■ **General Comments:** Ed Imgrund wrote "Thanks for another great contest." Tim Baumgartner thanked us "for a challenging contest with non-routine problems within the reach of most students." Suzie Moll wrote that we "forgot probably the most motivational trick of all to get students to participate in contests: bonus points on their grade. At only 1/2 point for each correct answer, I have 150 students taking the contest each month." Nola Forbes said that "refreshments are a great draw for students who can say they came to get the homemade cookies." She also wrote that "in contest 3, everyone from freshman to seniors felt that the questions were within their grasp." Don Wojciechowski said "Keep up the good work. My students and I love the contests."

■ **Results on the Web or by Mail?** Nola Forbes liked the idea because the results would be available more quickly and would incite more "competitiveness" because the results would be available about a week earlier than now. Brook Randal liked the idea because it would help keep costs down and delay a price increase. M. Henke liked mail because "I can see results on the Web, but I cannot print them successfully." This puzzles us, and we suspect that the printer is not set up correctly. We can always print. Steve Johnson wrote "I am fine with getting results on the web. Snail mail is not necessary." G. Brewbaker liked the idea of posting scores on the Internet in lieu of mail, for those that agree to the idea. Pat Farrell wants results on the internet because "we should make every effort to conserve natural resources."

■ **Use of TI-89 & TI-92 Calculators** Suzie Moll is "somewhat in agreement with the teacher who questioned the use of the TI-89, though I wrote a program that sums series on a TI-83." Tim Baumgartner concurred that "Just because the College Board ap-

proves does not mean it is *fair*." G. Brewbaker asked if we were sure that TI-89s were allowed on other contests. Pat Farrell "prefers calculator-active contests. Calculator inequities are best dealt with by writing good questions, not limiting the type of calculator." Bryan Knight personally prefers that the TI-89 not be allowed, but is "not happy with making kids use a different calculator in competition than they use in class." S. Davenport said "since my calculus students are so dependent on the TI-89, I dare not complain." Keith Calkins said that 2-2 and 3-2 are in a class of questions which gives students using a TI-89 an advantage, even though they are trivial without a calculator." *The issue is: should students NOT be allowed to use the calculator they use day to day in their classroom.*

■ **Comments About 2-6 Appeal** Nola Forbes thanked us "for granting the appeal on 2-6. Around here, people's workdays are very different from each other." One student complained of spending too much time on question 2-6, missing 2-2 as a consequence. He wanted compensation for "time lost." *We both made mistakes on 2-6. Ours was in not providing sufficient information. Yours was in not budgeting your time. Professor Brian Conrad, Mathematics Department, University of Michigan, denied this request.*

■ **Problem 3-4: Comment, Alt Sol, & Appeal (Granted)** Suzie Moll said 3-4 was "a great way to incorporate the years 1999, 2000, and 2001 all into one problem. The kids love these problems." Several appeals were received for the answer 2001. Since rounding 2000.5 to 4 significant digits gives this result, the answer is correct without the need to appeal. Student Nathan Bates used Heron's formula for polygons. Stephen Demos, Jay Crowley, and Ed Imgrund extended the upper side of the quadrilateral (whose slope is -1) to the  $x$ -axis, creating a triangle with a base of 2 and height of 2001. Now, subtract the extra triangle. Sharon Wilson used determinants. Ryan Walsh and an unknown student of C. Fitzsimmons connected the  $x$ - and  $y$ -intercepts and added the areas of the two resulting right triangles.

■ **Problem 3-5: Alternate Solution** Ed Imgrund said his students used guess-and-check on  $y = -x/(1+x)$ . One advisor asked if  $(-1/2, 1)$  also worked. *This is not a pair of integers.*

■ **Problem 3-6: Comments Aplenty** Many students wrote iterative programs to approximate the sums, then rounded their answers to 1. Their teachers thought that writing the program was real mathematics. Peter Osborn used the limit of the sequence of partial sums. Dave Farber said this was a good problem for his calculus class since they had just learned partial fractions. Helen Manning thought we should have discussed the necessity for absolute convergence. Don Wojciechowski, Ken Welsh, David Anstey, Suzie Moll, and Bryan Knight thought the answer was too easy to guess. Ms. Moll loved the problem.

## Statistics / Contest #3

Prob #, % Correct (top 5 each school)

3-1	98%	3-4	58%
3-2	84%	3-5	53%
3-3	62%	3-6	60%