11/00

Math League News

■ **Our Calculator Rule** Our contests allow both TI-89s and HP-48s. Our printed rules have now been updated. The Math League now allows any calculator without a QWERTY keyboard.

■ **Contest Dates** HS Contest dates are Nov. 14, Dec. 12, Jan. 16, Feb. 13, and Mar. 20. A registration form for our April *Algebra Course I Contest* is enclosed. Do you have a schedule conflict with our contest dates? The alternate contest date is always the preceding Tuesday. Our rules say that, in case of **vacations, special testing days, or other disruptions of the normal school day**, you may *give the contest on an earlier day*—but you must *still* mail scores by Friday of the official contest week. If scores are late for due cause, please attach a brief explanation. We reserve the right to consider as unofficial late scores lacking such an explanation.

■ **Received Your HS Contest Package Late?** If you have ***not yet*** received the contests, phone 1-201-568-6328 so we can ship another set. If you just recently got the contests, *please take Contest #1 as soon as possible, even if it's late!*

■ **The Score Report and the Cumulative Column** Students on your score report **must** take the contest at the exact same time. Do not include students taking the contest during any later class period. Below is part of a score report. The *Total* column is for Contest 2 totals only. The *Indiv. Cumulative* is for student totals for the first 2 contests. This column is optional; but high scoring students not tallied here cannot be named in our newsletter. Chris Lewis got 5's on the first 2 contests and had a cumulative total of 10. Pat Harris got a 5 and had a cumulative total of 9. Team members may vary each contest—use your school's 5 best scores each time, *and submit additional sheets if needed.*

Check One
Contest Number ☐ ☒ ☐ ☐ ☐ ☐ (1 2 3 4 5 6) Team Score 18

1 = Correct, 0 = Incorrect, No Partial Credit

Highest Scoring Participants Please PRINT Last Name, First Name	Question 1 ↓	2 ↓	3 ↓	4 ↓	5 ↓	6 ↓	Total ↓	Indiv. Cumulative
1. *Lewis, Chris*	1	1	1	1	1	0	5	10
2. *Harris, Pat*	1	1	1	1	1	0	5	9
3. *Smith, Lee*	1	1	1	0	0	0	3	
4. *Nelson, Jan*	1	0	1	1	0	0	3	
5. *Sun, Ronnie*	1	1	0	0	0	0	2	
TEAM TOTALS ▶	5	4	4	3	2	0	18	

Completion of the "Cumulative" column is optional, but ***must*** be completed for any student who might be listed as a League high scorer.

■ **Authentication of Scores** To give credibility to our results, we authenticate scores high enough to win recognition. Awards indicate compliance with our rules. Please ask students to read the *Selected Math League Rules* on the back of this newsletter and sign a sheet to confirm knowledge of the rules. *Keep* the signed copies. Do *not* send them to us unless we request authentication from you.

■ **Viewing Scores on the Internet** Roughly 3 weeks after a contest, scores will appear at http://www.mathleague.com.

■ **General Comments About the Contest** Rob Frenchick said "On this contest, at least one person got every question correct. No one got a 6, but now everyone will try all the problems." Gael Brewer said we "provide an excellent way to give students real *extra* credit." Donna Cooper likes "easier problems on contest 1 to allow everyone to get something correct." Mary E. Cole said "it was a contest where my seniors and freshman can compete together, and often the freshman score higher." Dave Farber said "It was interesting and challenging." Jerry Detweiler said "Thanks for another great contest." Judith Howell said "Thanks for the excellent problems that you continue to incorporate into your contests." James Kraft said "If Steve Conrad is still involved with these contests, please tell him that I was a student of his 30 years ago." Hi Jim! I'm still involved! Dave Ollar said "Smart people could do well from 9th to 12th grade." Joe Holbrook said "You've made many students feel good." Mark Pinzur said "All student were able to succeed at their level." One advisor said he had waited 20 years for a perfect score, and now he had one! Several advisors objected to the exam date conflict with the PSATs. How about it people? We think we'll go back to a late October date. Others noted that we have a contest on the AMC 10 & 12 date. *We now supply an alternate date for every contest for these reasons.*

■ **Problem 1-1: Comments** Dave Farber said that some students chose {0,1,2}, thinking 0 was positive, while others chose {3,5,7}, mistakenly replacing "largest" with "smallest."

■ **Problem 1-3: Comments** John Brosseau said the best way is to see if the triangles are 3-4-5, and they are. Mike Reinea used ratios to find that each triangle's area was 6, and $6 \times 24 = 144$.

■ **Problem 1-4: Comment and Appeal (Denied)** Frank Gumee asked us to confirm that "$x = 3$, $y = 1$" is incorrect. It is incorrect. The correct answer is "1." David Seetliff said 1-4 was "too easy to guess. Why not ask for the ordered pair?" Good idea!

■ **Problem 1-5: Comments, Appeals (Denied), Alt. Sol'n** Dave Farber, John Brosseau, & student Linda Wu noted that 5 & 6 could be done using a graphing calculator that sums a sequence. The same solution, without a calculator, was suggested by Andrew Turner, Kathleen Haché, & Jerry Detweiler. Susan Ferguson's students asked us to not hyphenate: they read "positive" as "possible."

■ **Problem 1-6: Alt Sol'n** Renita Dueckman and students Andrew Cooley and Oleg Fridman found a pattern. They saw that 4 of the first 10 would be allowable, then 4 of the next 10 too, and correctly concluded that $0.4(1000) = 400$ was the answer, since this has the effect of removing the pairs that involve 2s and 5s. Student Johnathan Cheng tried smaller numbers, and imagined the sum to be 20 instead of 2000. When 40% of the pairs worked, he took 40% of 1000 (n can't exceed 1000). Dave Farber & Andrew Turner said that $1000 - 1000/2 - 1000/5 + 1000/10 = 400$.

Statistics / Contest #1

Prob #, % Correct (top 5 each school)

1-1	99%	1-4	83%
1-2	98%	1-5	68%
1-3	91%	1-6	41%