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.

■ **Online Score Reports: What To Do If The Mail Is Late** Roughly 3 weeks after each contest, "results" appear on our Web site, *www.mathleague.com*. Mailed score reports arrive after that.

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

■ **Contest Dates** Future HS contest dates (and alternate dates), all Tuesdays, are Dec 18 (11), Jan 15 (8), Feb 12* (5), Mar 18 (11). (Each alternate date is the preceding Tuesday.) For vacations, testing days, or other *known* disruption to a normal school day, *give the contest on an earlier date*. If your scores are late, please briefly explain why. We reserve the right to refuse late scores lacking an explanation. We also sponsor contests for students in grades 4, 5, 6, 7, 8, & *Algebra Course I*. See *www.mathleague.com* for information.

* *If you plan to give the AMC on Feb. 12, then please give the Math League contest on Feb. 5. This may change your Math League schedule.*

■ **Regional Groupings** Within guidelines, we try, when possible, to honor regional grouping requests for the next school year.

■ **What Do We Print in the Newsletter?** Space permitting, we print every solution and comment we receive. We prepare the newsletter early, so we can use only what we have at that time.

■ **Some Tips on Getting Students Involved** One advisor asked how to persuade more "always busy" students to take our half-hour contests. Would you like to share your tip? Here's a start: **1)** Hold contests during lunch. Serve ice cream or fruit to those who eat while writing the contest. **2)** Use a bulletin board to name top students on each grade. Make a loudspeaker announcement too. **3)** Send a report to a local community newspaper. **4)** Serve cookies and drinks, with funds provided by the student government. **5)** Hold the contest jointly with a neighboring school. The kids will enjoy the occasional travel and meeting kids from another school. **6)** Post a colorful announcement the day before the contest so no one "forgets" about it on the day of the contest. **7)** At Awards Night, give our Certificate to the students on each grade level who score highest on these contests.

■ **Our Score Report Center** Joyce O'Connor said "Thanks for fixing the scoring—it was much faster." Jill Naughton said "I entered my whole team's info [so quickly]. I appreciate your efforts to improve performance." April Dickerman said "The score page was much faster. It made my life much easier." Dolores Pasciak wrote "Entering scores went much faster this time. Thank you for whatever changes you made." Renetta Deremer said "Thanks for speeding up the reporting process. It was really fast this time." Rhonda Berg said "The speed of entering scores is MUCH better. Thanks!"

■ **Contest Schedules Will Improve!** The Score Report Center works well, so we now have more flexibility with contest dates. We'll never avoid all conflicts, but the score report center gives us more flexibility to avoid generally bad dates in the future!

■ **General Comment About Contest 2** Tim Novikoff wrote that at his previous school "we gave many contests, but yours were always the best in terms of the consistent distribution of difficulty, the clarity with which the questions and solutions were written, and the appropriate mathematical typesetting, which somehow escaped the other contests! Keep up the good work!" Albert Roos wrote "We love math!" Gregory Kuhn's "students and I found this test very challenging. It made them look forward to the break even more than usual." :) Eliza Kuberska said "The students have so much enthusiasm. Thanks." Josh Turner "can't remember a prior contest this challenging." Susan Cantey "thought this was the hardest ever." George Reuter called this a very difficult contest for his kids, but "keep writing contests—they are usually so good, and we look forward to them!" Jill Chittenden wrote "Great contest." Joanne Folger said "This was a toughy for the 2nd contest," but then added "Thanks for all the time and effort given to design the tests." Timothy Ryan called it "A very good contest with some good geometry problems." Keith Calkings cited his rule that "blank has never been right and small integers are useful" as being very useful on contest #2!

■ **Problem 2-1 Alternate Solution** Student Samuel Jackson substituted in the x-values that satisfy the given equation.

■ **Problem 2-2: Comments & Appeal** Josh Turner "didn't think I've ever seen so many wrong answers to a #2 question—and it was a pre-algebra concept!" Joyce O'Connor found #2 especially interesting. Jeff Schwartzman wondered if 2007/2006 gets credit: it's 4-place decimal approximation is 1.000. *Give no credit for the incorrect answer 2007/2006—it isn't a correct decimal approximation.*

■ **Problem 2-3: Comments** Barbara Brown said "#3 was not worded to explain what was being asked. It was not clear that the article could not have mixed type." Dennis McCowan said "Nowhere does it say the paper will contain just the single article."

■ **Problem 2-5: Comments & Alt Sol** Joanna Zemia called it "a good contest even though no one solved 2-5. They were confused as to whether they should find the value of the nth term or the number of terms." Joyce O'Connor "thought 2-5 was especially interesting." Joel Patterson said "2-5 went in a new and different direction." Ginny Magid said "2-5 required more pondering than is available during a 30-minute contest. It's a nice question to assign students overnight." Susan Cantey was "still not sure the best way to attack problems like #5." Robert Morewood had a nice alternate solution: In any 4-term sequence, the sum of the first (last) 3 terms is positive, so the 4th (1st) term is negative. Every term in a 6-term sequence is the 1st or 4th term of some 4-term subsequence. Thus, all 6 terms would be negative, so there is no such 6-term sequence.

■ **Problem 2-6: Alt Sols, Appeal (Denied), Comments** Students Becky and Betsy Liu used the Laws of Sine and Cosine. Andreas L. Evriviades drew the perpendicular bisector of $\overline{AB}$, which is another (nice!) way to locate our B'. Lenora Murray "hated that the student who got #6 right assumed both interior angles were bisected." Leeanne Branham and Stephen Demos echoed that feeling. Michael Vituiano said "most students taking the test found this problem challenging." One teacher questioned whether PB' intersected the base of the original triangle. Check the *Crossbar Theorem* by Googling it for a statement or a proof!

Statistics / Contest #2

Prob #, % Correct (all reported scores)

2-1	87%	2-4	22%
2-2	49%	2-5	17%
2-3	69%	2-6	32%