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 before they arrive in the mail!

■ **Upcoming Contest Dates & Rescheduling Contests** Contest (and alternate) dates, all Tuesdays, are February 12 (February 5) and March 18 (March 11). If **vacations, school closings, or special testing days**) interfere, please reschedule the contest. Attach a brief explanation, or scores may be considered unofficial. We sponsor an *Algebra Course I Contest* and contests for grades 4, 5, 6, 7, and 8. Get information and samples contests at *www.mathleague.com*.

■ **2008-2009 Contest Dates** The good news is that our Internet Score Report Center allows us to move contest dates forward. We schedule the 6 contests to be held 4 weeks apart (mostly), and to end in March. Next year's contest (and alternate) dates, all Tuesdays, are: Oct. 21 (14), Nov. 18 (11), Dec. 16 (9), Jan. 13 (6), Feb. 24 (17), Mar. 24 (17). If you have a testing or other conflict, right now is a good time to put an alternate date on your calendar! Dennis Kunimura said "Our school loves the accelerated schedule and hope that you will continue this into the future."

■ **What Do We Publish?** Did we not mention your name? *We use everything we have when we write the newsletter.* But we write the newsletter early, so sometimes we're unable to include items not received early enough. We *try* to be efficient! Sorry to those whose solutions were too "late" to use.

■ **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 one low shipping charge per order, regardless of order size. You may use Amex, VISA, MasterCard, or Discover. To order, use our Web site, www.mathleague.com or you may phone your order to 201-568-6328; or fax your purchase order to 201-816-0125.

■ **Contest Books Make A Great Resource** Have you seen our contest books? Kids love to work on past contests. We've enclosed a flyer if you want to order books from us.

■ **The Internet Score Report Center** Lynette Quigley said "Thanks for making the reporting of scores so easy."

■ **General Comments About Contest #4:** Chuck Garner called Contest #4 "a good mix of easy and challenging. It was one of the best single contests in recent years." Phyllis Dupere said "As always, it was a challenge of varied levels." Dr. Jesse Nash's "students found this very difficult. Congratulations on a great series of problems." Lauren Jensen said "This was a tough one." Ginny Magid said her "students had more trouble on this contest than on past ones." Cyndee Hudson called Contest # 4 a "great contest." Susan Cantey said "This contest was a toughy."

■ **Problem 4-2: Alt Sol** Bain Cameron said we only need to evaluate E (given A's value). He said $\text{Avg}(A,B) = A+1 = 2$; $\text{Avg}(ABC) = \text{Avg}(AB)+1 = 3$; $\text{Avg}(ABCD) = \text{Avg}(ABC)+1 = 4$; $\text{Avg}(ABCDE) = \text{Avg}(ABCD)+1 = 5$. Now, $A+B+C+D = 4\,\text{Avg}(ABCD) = 16$ and $A+B+C+D+E = 5\,\text{Avg}(ABCDE) = 25$. Substituting, $E = 9$.

■ **Problem 4-3:** Mary McHugh said "Both of my top scorers got the same answer of 84 to 4-3 since they both assumed (incorrectly) that the sides had integer lengths."

■ **Problem 4-4:** Ginny Magid's students misinterpreted 4-4.

■ **Problem 4-5: Comments & An Appeal (denied)** George Reuter's student's equation was "logs = death." He then said "Keep 'em coming anyway!"Cyndee Hudson said 4-5 "only goes to show (once again) that what teachers think and what students understand do not necessarily coincide." *An appeal for the answer (1,1) was denied because, by definition, no logarithm can have a base of 1.* Dana Rubin said that "after showing my students that this equation was quadratic in 3^x, many said that this was not difficult."

■ **Problem 4-6: Alternate Solutions** Dick Gibbs and student Matt Wong (independently) reasoned that, with 36 edges and 24 vertices, the total number of lines, is $24C2 = 276$. Subtract the edges, leaving 240. On each of 6 faces, there are 5 diagonals from each of the face's 8 vertices. That counts each diagonal twice (once at each endpoint), so there are $(5\times 8)\div 2 = 20$ diagonals on each face. There are 6 faces. Finally, when we subtract $6\times 20 = 120$, we get $240-120 = 120$. Similar solutions were sent to us by Paul Arrigotti and Lynette Quigley. Susan Cantey called 4-6 "devilish. Your solution to #4-6 was elegant!"

Statistics / Contest #4

Prob #, % Correct (all reported scores)

4–1	85%	4–4	35%
4–2	84%	4–5	17%
4–3	36%	4–6	10%