



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** Just go to <http://www.mathleague.com> and look around!

■ **Upcoming Contest Dates & Rescheduling Contests** Contest dates (and alternates), all Tues, are on Feb. 8 (Feb. 1), Mar. 8 (Mar. 1), Apr. 5 (Mar. 29). If **vacations, school closings or special testing days** interfere, give the contest on another date. Attach a brief explanation, or the scores may be considered unofficial. We sponsor contests for *Algebra Course I Contest* and for grades 4, 5, 6, 7, 8. See www.mathleague.com for more information.

■ **2005-2006 Contest Dates** Next year's contest dates (and alternate dates), all Tuesdays, are: Oct. 25 (18), Nov. 29 (22), Jan. 10 (3), Feb. 14 (7), Mar. 14 (7), and Apr. 11 (4). If you have a conflict (such as the AMC or scheduled statewide testing), it's a good idea to put the alternate date on your calendar now.

■ **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 one low shipping charge per order, regardless of order size. You may use VISA, MasterCard, or Discover. To order, use our Web site, www.mathleague.com or phone your order 1-201-568-6328; or fax your purchase order to 1-201-816-0125.



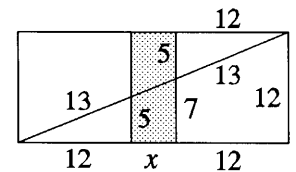
■ **General Comments About Contest #3:** Brother Gary wrote "A very fine set of problems for Contest 3. Several of the students remarked very favorably about how good the problems were. Good but challenging! Thanks for all your work." Linda Muratore wrote "Great contest. Thank you for all you do. The kids continue to be excited about mathematics."

■ **Problem 3-2: Alternate Solution** Mark Nandor said "Instead of looking at divisibility by 2, I looked at divisibility by 3

after adding 1 to both sides. Since $2^n + 2 = 2(2^{n-1} + 1)$ is an even number unless $2^{n-1} + 1$ is a half-integer, n must equal 0, so $m = 1$.

■ **Problem 3-3: All Students Given Credit** The correct answer to 3-3 was 3, not 4. But we had put a box around 4, not 3. When we need to discard a question, our method is to give all students credit for the question, even if they left the answer space blank. To avoid the confusion in grading that would ensue, we announced on our Web site that we would revise scores. If an error was made in posting your score, please let us know. Ed Gardner wrote that "aside from the error, the problem will mislead a lot of students who naively think that their calculator can handle this number. No matter what digit you change, an ordinary calculator will say it's a perfect square. So those who wrote '4' probably tried changing the first digit to a 5 and thought they had a square."

■ **Problem 3-4: Alternate Solution** The area of the large rectangle is $12(x+24)$. The diagonal splits this rectangle into two halves. The lower half is composed of three parts. The left-most part is a triangle with area 30. Together, the other parts determine a trapezoid whose area is $(1/2)(x+12)(17)$. Since the area of the large rectangle = the sum of the areas of 2 trapezoids and 2 triangles, $12x+288 = 17x+264$, so $x = 4.8$ and the area of the shaded region is 57.6.



■ **Problem 3-5: Comment** Keith Calkins wrote that we "should have indicated there was a *continuous* movement of the hour hand. Many clocks move the second or even the minute hand semi-discretely, so this omission caused the intent of the question to be lost on many students."

■ **Problem 3-6: Appeal (denied) & Alt. Solutions** Keith Calkins wrote that "#3-6 was a nice (and effective) 'stopper,' although none of my students got all the answers. Some got all the positive answers, and others got all the negative answers, but, for a variety of reasons, none got more than 3 answers."

Statistics / Contest #3

Prob #, % Correct (top 5 each school)

3-1	97%	3-4	64%
3-2	92%	3-5	55%
3-3	---	3-6	12%