Math League News

■ **Use the Internet to View Scores or Send Comments** Just go to http://www.mathleague.com and look around! David Abineri found the Web site "a very fast and efficient way to report scores." He also commented that "Perhaps not everyone knows that the space bar toggles a radio button; so, for someone with a score of 6, one just touches space tab tab space tab tab, etc. Keep the Web site, please." We certainly intend to, David!

■ **Dates of Final HS Contest & Algebra Contest** Our final contest is Apr. 5. This is the 11th year of our annual April *Algebra Course 1 Contest*. To participate, go to www.mathleague.com.

■ **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.

■ **Rescheduling A Contest & Mailing Results** If there's a schedule difficulty, note that, when " school closings **or testing days**" so require, our rules allow you to use an alternate contest date. We prefer that you use the **previous week**, so we get the results on time. Mail scores by Friday of the official contest week. If scores are late for due cause, attach a brief explanation. Late scores unaccompanied by such an explanation are not normally accepted.

■ **End-of-Year Awards** Engraving of awards begins Apr. 18. We give plaques to the highest scoring school in each region and to the 2 schools and 2 students with the highest totals in the entire League. *Winning schools must postmark their results by April 8.* Results postmarked later *cannot* be used to determine winners. A teacher once asked "*Has there been any thought to using enrollment figures to divide the schools into divisions? Personally, I do not care if we ever receive any team recognition, as my students enjoy the mathematical challenges provided.*" Our groupings are not organized to "even out" the competition. Competition is only one feature of our academic enrichment activity, not its most important one. Enrichment is the main goal, since few schools can expect to win.

■ **High Scoring Students & The Cumulative Column** Completion of the cumulative column is optional, but student awards are based only on scores *regularly* listed in that column. On the most recent score reports, some cumulative scores were reported for students for whom scores were not reported for every prior contest. We are unable to verify these cumulative scores, so we must treat them as *unofficial*. If this affects one of your students, please contact us *promptly*. Note that student certificates of merit were enclosed with Contest 5 for your school's high scorers.

■ **A Rescheduled Contest** One school had a special county

math competition on March 8. *Our rules allow schools to reschedule contests when such disruptions of the normal school day occur.* The rescheduled time was set on bus on the way back, but several of Maria Szijj's best students did not come to the makeup. They'd been told about the questions and disqualified themselves but kept quiet so other students could have a fair contest. Great kids!

■ **Best Wishes to Keith Calkins** Keith, a contest advisor who often shares his insights with us, defended his physics Ph.D. dissertation on March 16.

■ **General Comments** Bill Kohne wrote "Thanks. You guys do a great job." Gerald Lamb wrote "Thank you for all your efforts. The kids just love these contests."

■ **Problem 5-1: Comment** Mark Hartman said "5-1 was a difficult first problem. It should have been 2, 3, or 4."

■ **Problem 5-2: Comment** Mike Buonviri said "My best student missed the word 'integer.' I need to stress active reading!"

■ **Problem 5-4: Comment** Ron Belak said 5-4 "is a thinking problem within the capability of a wide range of students."

■ **Problem 5-5: Appeal (Denied) and Alt. Sol.** An appeal for an answer listing the correct continued ratio of all 3 sides was denied since it did not correctly answer the question asked. Prof. Dick Gibbs used the theorem that the length of each leg of a right triangle is the mean proportional between the length of the hypotenuse and the length of the projection of that leg on the hypotenuse. As seen at the right, $AC^2 = 30$ and $BC^2 = 6$, so $AC{:}BC = \sqrt{5}$.
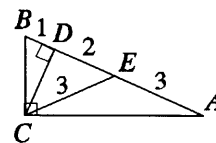
■ **Problem 5-6: Much Simpler Alternate Solution** Ira Fine and Prof. Dick Gibbs independently found a brilliant, simple solution. At the start of any round, the probability of tossing a head and winning (or of tossing a tail and not winning) is $1/2 = 6/12$. The probability of tossing a tail and *then* rolling a 2 (thereby winning) is $1/2 \times 1/6 = 1/12$. If you win on any round, the odds are 1 to 6 that you won because you rolled a 2. Odds of 1 to 6 translate into a probability of $1/7$.

Statistics / Contest #5			
Prob #, % Correct (top 5 each school)			
5-1	84%	5-4	94%
5-2	89%	5-5	53%
5-3	93%	5-6	12%