AMC's Math Messenger

The Mathematical Association of America's American Mathematics Competitions

AMC 10 Competitions in February 2008

The 9th annual AMC 10 Contest will be on Tuesday, February 12, 2008 or Wednesday, February 27, 2008. The AMC 10 is a 25-question, 75-minute, multiple-choice contest. The content is algebra, geometry, number theory, counting, and logic problems at the level usually covered in 9th and 10th grades. If you have high-scoring or accelerated students, you may be interested in having them challenge themselves with this contest.

Texas Mathworks offering AMC 8 to 400 Students

Texas Mathworks is a center for innovation in mathematics education at Texas State University in San Marcos TX. Their mission is to develop model programs and self-sustaining learning communities that engage Texas K-12 students from all backgrounds in doing mathematics at a high level. Texas Mathworks operates on the principle that developing students' natural math abilities earlier is critical to their success in algebra and more advanced math. As a part of that strategy, Texas Mathworks is reaching out to schools in their area and is offering a joint administration of the AMC 8 to schools in the south-central Texas region. In addition to having students compete in the AMC 8, students will receive a tour of the Texas State campus, and compete in another math contest. Consult with local university and college mathematicians, math educators, colleagues and friends. You may be able to schedule a regional AMC 8 competition day similar to this in your area with collaboration. Using the official sectioning rules described in the Teachers Manual, all schools can still receive their school awards and save money and effort by combining with others interested in improving mathematics in the US.

Important Teacher Survey

We want to learn what you think about Middle School Curriculums. Our questions are on the back of the Certification Form, page 8 of the AMC 8 Teachers' Manual. Mark your responses using the grid on the back side of the School ID form. Please help us by answering these questions!

Hard Problems: A film about the 2006 IMO:

The film **"Hard Problems"** about the 2006 USA team to the IMO in Ljubljana, Slovenia is nearing completion. MAA President-Elect Joe Gallian secured a grant from Larry Penn, who was on the US Math Olympiad Team in the late 1970s to fully fund a documentary film about the students in the USAMO, and the USA team at the 2006 International Math Olympiad. The director is George Csicsery, who produced an award winning film on the mathematician Paul Erdos and a new film about the American mathematician Julia Robinson. A working draft of the finished film was shown at the USAMO to the enjoyment of all present. We expect to see the finished film in late 2007.

Calculator Policy:

Calculators are still allowed on the November 2007 AMC 8. (The statement on the AMC 8 invitation and information brochure was in error. Statement 5 on the cover of the contest pamphlet itself is correct.) For the 2007 AMC8 calculators that are accepted for use on the SAT may be used. No problems on the contest will require the use of a calculator. The 2007 AMC8 is the last exam to allow the use of a calculator. Starting in January 2008, all subsequent AMC exams at all levels will not allow calculator usage. In particular, the 2008 AMC 10 A , 2008 AMC 12 A, 2008 AMC 10 B and 2008 AMC 12 B in February 2008 will not allow the use of a calculator. The November 2008 AMC 8 will not permit the use of a calculator.

A word of explanation is in order about this policy: This change comes after repeated lengthy discussions over a period of several years between AMC staff, the contest committee chairs, and sponsoring organizations. All of these, and in particular the contest committees who create, edit and polish the contests are still enthusiastic advocates of calculator usage by students in classrooms. The decision to make the AMC contests calculator-free came about for several reasons. The foremost of these has to do with the fact that not every contestant has the same level of calculating power available. Some modern calculators can do feats of factorization, equation solving and graphing, geometric constructions and even programming that make some interesting mathematical questions pointless. In order not to place any student at a disadvantage, we have had to create problems that render even the most sophisticated calculator essentially useless. One advantage of the coming calculator-free format is that contests can once again contain some of the easier computational exercises that often appeared as early problems on the pre-1994 contests.

New and Improved AMC 8 Email Reports:

Since 2001 the AMC office has been emailing the AMC 8 contest results directly to teachers, followed in the mail by the familiar paper report accompanying the awards pins and certificates. Emailing the results gives you the results fastest way possible, immediately after we have processed your answer sheets. Now we have added a new feature to the emailed reports: Along with the results in the usual report form, we will now also include all individual student data in comma-delimited format, so you can import the results immediately into a spreadsheet for analysis. This will allow you to analyze your school results in the way that is most meaningful to you with your favorite software. We hope you enjoy this new feature, along with all the familiar reports you are used to seeing.

Please Send Us Your Photos:

To submit your pictures, first check on the school policy on photographs of students, and in compliance with that, send them electronically to: **rroyer1@maa.org**

Please include the following information, which will caption the pictures: School Name, Teacher, Class/Club, City, State (optional: web address for school). I will send a return email to acknowledge receipt, so if you don't hear back within a week, call me at 1-800-527-3690 to check. Every year some get lost in cyber space.

If you need help taking the photos, why not as the school newspaper or year book to take a few for the publications, and ask them to send a few to us!

Chinese Girls Math Olympiad

Sherry Gong, from Exeter, N.H., earned a gold medal and tied for first place at the 2007 China Mathematical Olympiad for Girls, which was held in Wuhan, China, from August 11-16.

The MAA co-sponsored the participation of two four-member teams of high school girls — one made up of participants from the eastern U.S. and one from the western U.S. This was the first time the U.S. participated in that math olympiad, which has been held annually since 2002.

The East team members were Sway Chen (Lexington, Mass.), Jennifer Iglesias (Aurora, Ill.), Wendy Hou (Tampa, Fla.), and Sherry Gong. The West team members were Marianna Mao (Fremont, Calif.), Wendy Mu (Saratoga, Calif.), Colleen Lee (Palo Alto, Calif.), and Patricia Li (San Jose, Calif.). These students were chosen from the ranks of the top female finalists in the 2006 USAMO.

There were about 180 students from 42 teams in the China competition. Zhuo Chen, from Wuhan, China, tied Gong for first place with 114 points (out of 120). U.S. team member Wendy Hou received a silver medal, while Wendy Mu, Patricia Li, and Mariana Mao garnered bronze medals.

The teams went to Beijing, then to Wuhan, the capital of Hubei province, in central China, for the competition. For photos and messages from the girls during their travels, see www.msri.org/specials/gmo.

Coaches for the U.S. team were Melanie Matchett Wood, a graduate student at Princeton who was the first female to make a U.S. International Mathematical Olympiad (IMO) team; Alison Miller, a member of the 2004 U.S. IMO team; and Zuming Feng of Phillips Exeter Academy and director of the Mathematical Olympiad Summer Program since 2003.

Problem Proposing:

Give your great mathematics problem an audience of thousands of students and teachers worldwide! The American Mathematics Competitions is always in need of good, new mathematics problems for our contests. If you would like to join our panel of problem proposers, please contact Steve Dunbar at sdunbar@math.unl.edu and we will send you a Problem Proposer enrollment form, along with directions for submitting mathematics problems to us.

2007 IMO Team with their medals, *from left:* Sherry Gong, Tedrick Leung, Arnav Tripathy, Alex Zhai, Brian Lawrence, and Eric Larson.

IMO 2007 - Hanoi, Viet Nam

The 2007 International Mathematical Olympiad (IMO) for high school-age students was held July 23-30, 2007 in Hanoi, Vietnam. The U.S. team members won two gold medals (Alex Zhai, Sherry Gong), three silver medals (Brian Lawrence, Eric Larson, Arnav Tripathy), and one bronze medal (Tedrick Leung).

Russia's six-member team captured first place. They scored 184 out of a possible 252 points. Five of the six team members earned gold medals. The U.S. team placed fifth (155 points). In the official results, the other teams that came in ahead of the U.S. were China (181 points), South Korea (168), and Vietnam (168). Teams from 93 countries, with over 500 students present took part in the competition. At the IMO, the USA team has consistently finished in the top five for the last eight years. More details on the IMO results are available on the web at http://www.imo2007.edu.vn

The competition poses six math questions to be solved, three very challenging problems each day in a 4.5 hour session. Congratulations go to the team for a fine performance on what the leaders agree was a very hard IMO. Thanks also go to team leader Zuming Feng and coach Ian Le.

Photos from the team training and touring are on our website at www.unl.edu/amc. The 2008 International Mathematical Olympiad will be in Madrid, Spain.

2007-2008 AMC Contest dates:

AMC 8 - Tuesday, November 13, 2007

AMC 10 & AMC 12 - Tuesday, February 12, 2008
or Wednesday, February 27, 2008

AIME - Tuesday, March 18, 2008
or Wednesday, April 2, 2008

USAMO - Tuesday & Wednesday, April 29-30, 2008

MOSP - June 2008

AMC 8 - Tuesday, November 18, 2008

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