AMC's Math Messenger

The Mathematical Association of America's American Mathematics Competitions

AMC 10 Competitions in February 2007

The 8th annual AMC 10 Contest will be on Tuesday, February 6, 2007 or Wednesday, February 21, 2007. 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.

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@unl.edu**

Please include the following information, which will caption the pictures: School Name, Teacher, Class/Club, City, State (optional: web address for school).

Compact Disk with previous AMC exams

We are compiling a compact disk with PDF versions of the AMC 8 (2001-2005), the AMC 10 (both A and B versions, 2001-2006) the AMC 12 (both A and B versions, 2001-2006) the AIME (both I and II versions,2001-2006) and the USAMO (2001-2006). Each contest on the disk will have both the problems and the solutions in separate files, compiled from the original source that we used for printing the contests! We will be offering this CD with the Math Club Package, and it will also be available for sale as a separate item. This is a power package you can't afford to miss! Get this now, so you can prepare your students from all the 21st century contests!

Documentary Film – USAMO and IMO

MAA President-Elect Joe Gallian secured a grant from Larry Penn, who was on the US Math Olympiad Team in the late 1970s, to fund a documentary film about the students in the USAMO, and the USA team at the 2006 International Math Olympiad. Larry Penn is now a partner in the investment firm Ellington Management Group. The film will be similar to the book "Count Down" and the film "Spellbound". The director is George Csicsery. He produced an award winning film on the mathematician Paul Erdos and is working on a film about the American mathematician Julia Robinson. As of this writing, filming at the USAMO awards ceremony and the IMO is complete, and post-production has begun. We expect to see the finished film in late 2007.

AMC 8 Teacher Survey Results

Teachers who participated last year may recall responding to a 10-question survey on the School ID Form. (We have another survey this year, and you can help us by responding again!) About 1,140 teachers responded to the survey. Teachers marked the answers to this questionnaire using the scale: 0 -- Not Applicable, 1 -- Disagree strongly, 2 – Disagree, 3 – Neutral, 4 – Agree, 5 -- Strongly Agree. Here are some highlights of the survey results:

* The AMC 8 offers a positive experience with mathematics to my students who have high mathematical ability. ***Average response: 4.6***

* The AMC 8 offers a positive experience with mathematics to my students who have average mathematical ability. ***Average response: 3.3***

* I enjoy the fact that AMC 8 problems target mathematical skills not covered in our assigned curriculum. ***Average response: 4.0***

* The AMC 8 problems teach my students to think more clearly and deeply. ***Average response: 4.2***

* The students discuss the AMC 8 after the exam, either formally with me or informally among themselves, and learn from the experience. ***Average Response: 3.8***

* My students enjoy the AMC 8. ***Average response: 3.8***

We believe this shows that you and your students enjoy the AMC 8 and find it to be educational and rewarding. We intend to maintain our high standards and keep delivering the same high quality contests for you.

2006 IMO Team with their medals, *from left:* Alex Saltman (deputy leader), Ryan Ko, Zuming Feng (Leader), Zach Abel, Yi Sun, Steven Dunbar (AMC Director), Alex Zhai, Arnav Tripathy and Zeb Brady.

IMO 2006 – Ljubljana, Slovenia

The 2006 International Mathematical Olympiad (IMO) for high school-age students was held in mid-July in Ljubljana, Slovenia. Overall, the six members of the USA team won 2 Gold medals and 4 Silver medals. The USA team ranked 5th among all 90 participating countries.

* Zachary Abel, Silver medal; graduate of Greenhill School, Dallas, TX
* Zarathustra Brady, Gold medal; attends Magnolia Science Academy in Van Nuys, CA
* Ryan Ko, Silver medal; graduate of Philips Exeter Academy, Exeter NH, from Allendale, NJ
* Yi Sun, Silver medal; graduate of Harker School, Saratoga, CA
* Arnav Tripathy, Gold medal; attends East Chapel Hill High School, Chapel Hill, NC
* Alex Zhai, Silver medal; attends University Laboratory High School, Champaign, IL

At the IMO, the USA team has consistently finished in the top five for the last seven years. At this year's IMO 498 young mathematicians from 90 countries competed in solving problems posed in a test administered on July 12 and July 13. Overall, the IMO awarded 42 gold medals, 87 silver and 124 bronze medals.

The 2006 IMO is the 47th in the annual series of international mathematical competitions. The competition poses six math questions to be solved, three very challenging problems each day in a 4.5 hour session. More details on the IMO are available on the web at http://imo2006.dmfa.si

The sponsor of the USA team to the IMO is the Mathematical Association of America (www.maa.org). Additional contributions come from 23 organizations and companies in the mathematical sciences. High scores on a four-stage process of mathematics testing by the Mathematical Association of America's **American Mathematics Competitions** (www.unl.edu/amc) select the US team members.

New MAA Book about Problem Solving

First Steps for Math Olympians Using the American Mathematics Competitions *J. Douglas Faires, ISBN: 0-88385-824-X, 320 pp. Hardbound.*

The American Mathematics Competitions (AMC) have been given for more than fifty years to millions of high school students. This book considers the basic ideas behind the solutions to the majority of these problems, and presents examples and exercises from past exams to illustrate the concepts. Anyone taking the AMC exams or helping students prepare for them will find many useful ideas here. But people generally interested in logical problem solving should also find the problems and their solutions interesting.

This book will provide students with the tools to attack problems that occur on mathematical problem-solving exams, and level the playing field for those who do not have access to enrichment programs that are common at the top academic high schools. It can be used either for self-study or to give people who want to help students prepare for mathematics exams easy access to topic-oriented material and samples of problems based on that material. This is useful for teachers who want to hold special sessions for students, but it is equally valuable for parents who have children with mathematical interest and ability.

As students' problem solving abilities improve, they will be able to comprehend more difficult concepts requiring greater mathematical ingenuity. They will be taking their first steps towards becoming math Olympians!

You can order this book by going to the MAA Bookstore at www.maa.org, then choosing "Bookstore" or at amazon.com.

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.

2006-2007 AMC Contest dates:

AMC 8 - Tuesday, November 14, 2006
AMC 10 & AMC 12 - Tuesday, February 6, 2007
   or Wednesday, February 21, 2007
AIME - Tuesday, March 13, 2007
   or Wednesday, March 28, 2007
USAMO - Tuesday & Wednesday, April 24-25, 2007
MOSP - June 2007
AMC 8 - Tuesday, November 13, 2007

www.unl.edu/amc   amcinfo@unl.edu