AMC's Math Messenger

Tips from Sliffe Award-winning Teachers:

Just as in sports dynasties, some schools and coaches have consistently top-scoring students on the AMC contests. Ever wonder how they prepare their students for math competitions, including the AMC Contests? We have gathered tips and suggestions for the AMC 10/12 Math Club Package from the student award nominations for the MAA's Edyth May Sliffe Awards for Distinguished High School Mathematics Teaching. The following is a representative sample. We understand that no one teacher could do all of these things, but we hope you can find a suggestion or two which you can incorporate into your program. Happy Problem Solving!

- Organize your own mathematics tournament.
- Cultivate an attitude of learning, solving and competing for life rather than for score.
- Develop an appreciation for unusual mathematics and divergent thinking.
- Maintain a relaxed, friendly, fun, enjoyable atmosphere (with snacks!) at club events.
- Be very generous with praise and frequently announce the math team's achievements school-wide.
- At the end of the year, organize an award ceremony for all the students who won any sort of award in the various contests the club has participated in.
- As a High School Teacher, approach your "Feeder" middle schools and help them start or improve a math club.
- Spend time working with the student leadership of your group to plan meetings and seek out new competitions.
- Distribute challenging sets of problems in practices each week that force students to think about math in ways that would prove invaluable on the contests.
- Instruct students on the finer points of competition strategy, including time management, strategies for double checking work and ways of dividing up problems.
- If there is a University or College nearby, talk to them about someone who might be willing to mentor several students through a series of weekly problem solving seminars.
- Teach math beyond the curricula by assigning various projects in which students research unique mathematical topics.

AIME Competition in March 2006.

The 24th annual AIME Contest will be on Tuesday, March 7, 2006 or Wednesday, March 22, 2006. The AIME is a 15 question, 3 hour examination in which each answer is an integer number from 0 to 999. The questions on the AIME are much more difficult and students are very unlikely to obtain the correct answer by guessing. As with the AMC 10 and AMC 12 (and the USAMO), all problems on the AIME can be solved by pre-calculus methods. The use of calculators is not allowed.

Important Teacher Survey

We want to learn what you think about the AMC 10/12 contests. Our questions are on the back of the Certification Form, page 10 of the AMC 10/12 Teachers' Manual. Mark your responses using the grid on the back side of the School ID form. Please help us by answering these questions!

NCTM National Meetings in St. Louis

At the NCTM Annual Meeting and Exposition last April in Anaheim we had the privilege to meet and talk to many of you in person. We will be at the 2006 NCTM Annual Meeting and Exposition in St. Louis, April 26-29, and we hope to see you there. Please stop by and see us at Booth 2933.

AMC 10/12 Math Club Booklet

In response to requests from teachers for training materials to help students prepare for the AMC 10/12 contests, we have created the expanded and improved 2005-2006 AMC 10/12 Math Club Package. The Math Club Package is an approximately 120+ page book of materials and ideas to help you and your school start a math club. In the Math Club Package we have

- guidelines for starting a club,
- tips for coaching a math team on problem solving,
- a calendar to help plan math club meetings and plan for the AMC contest year,
- a listing of other math competitions: local, regional and national,
- an annotated collection of web sites which contain additional ideas and assorted problems for solution,
- an annotated list of books and publications for broadening students skills,
- pages of formulas which frequently occur in problem-solving,

and

- *All new!* 50 master pages of AMC 10/12 problems and solutions for use in teaching problem-solving.

The problems are indexed by topic, NCTM standard and difficulty level to help you find exactly what you need to coach your students. These problem study guides are based on our experiences in demonstrating AMC 10/12 problems to teachers and students. The Math Club Package incorporates ideas from Edyth May Sliffe award-winning teachers.

You can order the Math Club Package on the AMC 10/12 Registration form, in the lower right hand corner of the form. You can find the form for printing on our web site at www.unl.edu/amc, by choosing Registration, then AMC 10/12 Registration 2006. The entire text is also on-line at: http://www.unl.edu/amc/mathclub/index.html, with many additional problems and solutions.

The 2005 United States IMO Team, from left: Zuming Feng - Head Coach, Brian Lawrence, Thomas Mildorf, Sherry Gong, Robert Cordwell, Hyun Soo Kim, Eric Price, and Melanie Wood - Assistant Coach .

International Mathematical Olympiad Announces Winners

High School-Age Team from USA gains 4 Gold Medals, 2 Silver Medals

The 2005 International Mathematical Olympiad (IMO), was the 46th in the annual series of mathematical competitions for high school-age students. At this year's IMO, 513 of the best young mathematicians from 93 countries competed in solving 6 problems posed in a grueling nine-hour test administered over two days (July 13 and July 14). The competition poses six math questions to be solved that would daunt even some professional mathematicians. Overall, the IMO awarded 43 gold medals, 80 silver and 129 bronze medals. More details on the IMO are available on the web at www.imo2005.org.

Overall, the six members of the USA team won 4 Gold medals and 2 Silver medals. The team from China ranked first overall. The USA team ranked second among all 93 participating countries.

- **Robert Cordwell,** who graduated from Manzano High School in Albuquerque, New Mexico, received a Gold medal.
- **Sherry Gong,** who attends Philips Exeter Academy in Exeter New Hampshire, and is from San Juan, Puerto Rico, received a Silver medal.
- **Hyun Soo Kim,** who graduated from Academy for Advancement of Science and Technology in Hackensack, New Jersey, received a Silver medal.
- **Brian Lawrence**, who attends Montgomery Blair High School of Silver Spring, Maryland, received a Gold medal and had a perfect paper.
- **Thomas Mildorf,** who graduated from Thomas Jefferson High School of Science and Technology in Alexandria, Virginia, won a Gold medal.
- **Eric Price**, who also graduated from Thomas Jefferson High School of Science and Technology in Alexandria, Virginia, won a Gold medal.

Free Gifts in this Package!

We included free gifts for you in the package with your contest confirmation materials! You received a colorful trio of posters to display and advertise the contests, and a copy of a previous year's AMC contest to practice with. When we return your scores to you, we will include a "sticky-note pad".

Send Us Your Photos:

In past years, teachers have sent us pictures of their classes or clubs taking the AMC contests. We would like to post the pictures on the web, attached to the page that will give the AMC 10/12 answers. We also like to use them in the Summary.

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)

(If a school submits more than four pictures, we reserve the right to select from those submitted)

2005-2006 AMC contest dates:

AMC 10 & AMC 12 - Tuesday, January 31, 2006
or Wednesday, February 15, 2006

AIME - Tuesday, March 7, 2006
or Wednesday, March 22, 2006

USAMO - Tuesday & Wednesday, April 18-19, 2006
MOSP - June , 2006

AMC 8 - Tuesday, November 21 , 2006

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