

## I. Eligibility

Any student who is officially enrolled in high school (or below) and is taking at least one course at the school and has not graduated is eligible to take the AMC 10 or AMC 12 or AIME (with qualifying score). Please note that students in grades 11 & 12 can not take the AMC 10. However, students in grades 9 & 10 may choose which contest they take. Home School Students age 19.5 and under are eligible for AMC 12 and AIME (with qualifying score) and age 17.5 and under are eligible for AMC 10 or AMC 12.

## II. Team Score Identification

TO RECEIVE OFFICIAL "TEAM" STATUS AND AWARDS, A SCHOOL MUST HAVE AT LEAST THREE PARTICIPANTS ON A CONTEST DATE. The team score for a school is the sum of its three highest student scores and will be determined from the AMC 12. There is no team score or ranking for the AMC 10. The AMC 10 and AMC 12 must be proctored by a faculty member of the participating school. A student may take only one exam on a given day but can participate on both contest dates if the school registers for both contests. The higher score will be used for awards.

The score of USA and Canadian teams is used to determine National School awards. In addition, the team score is used to select the top 60 schools to identify teachers who are eligible for the Edyth May Sliffe Award for Distinguished High School Teaching.

## III. Braille or Large Print Exams

The AMC 10/AMC 12 time limit set by the CAMC for students who are visually impaired or learning disabled is 120 minutes. Please note that it is permissible for a certified teacher or a school administrator to read the questions to the student and mark the answers as directed by the student. For the students who are learning disabled, please call for instructions. The cost of a Braille or Large Print exam is \$7.00 shipping and handling plus \$1.50 per exam for the AMC 12 and \$1.30 per exam for the AMC 10. They are mailed separately and must be ordered by January 15th.

## IV. Preliminary Instructions for Administering the AMC 10/AMC 12

1. Inform students far in advance about the date for the AMC 10/AMC 12 and obtain a supply of No. 2 lead pencils.
2. Hand out the student Answer Forms and have the students complete the non-answer sections on the front and back. Tell the students to pay special attention to marking their name and address accurately. Remind them that student names to be listed in the National Summary come from this form. The Lincoln Office will not do any editing of the information provided.
3. The name of the school, city, state and postal code must be stamped or written on each student answer form.

This is very important because there is no computerized school identification on the answer forms. Please do not use computer generated labels to provide this information.



4. Announce that the students may use scratch paper, graph paper, ruler, compass, protractor and four-function, scientific, or graphing calculators. No problems on the contest will require the use of a calculator. However, any non-typewriter keyboard calculator may be used during the exam. Students may not share a calculator.

5. Review past tests and solutions or inform your students how to order copies for themselves. Please make available to the students a copy of the Publications Order Form included with this package or download the order form found on the AMC Web page at [www.unl.edu/amc](http://www.unl.edu/amc), [www.amc10.org](http://www.amc10.org) or [www.amc12.org](http://www.amc12.org). (or call, fax or write to the Lincoln Office for a copy)

6. Encourage participation by students who have not taken the contest before, especially younger students, but make sure students know what to expect. Let them know about typical scores at your school last year at their grade level. Show students the national statistics in our National Summary of Results and Awards from last year. Tell them to set appropriate goals for themselves.

7. Remind students the day before the contest about the time and place of the AMC 10/AMC 12. Also tell them your plan if the school should suddenly close. All students must take the contest at the same time, either in one group or in separate classrooms under the supervision of a certified teacher.

8. Make sure you have arranged to follow all the rules and procedures in this manual. EARLY ADMINISTRATION OF THE CONTESTS IS NEVER PERMITTED, and will lead to disqualification. In order to assure the validity of the results we report, we take our rules very seriously.

## V. Sickness and Other Special Situations

A student who is sick or on a field trip on the first contest day will be advised to register and take the alternate Contest B on Wednesday, February 25, 2004. YOU MUST REGISTER FOR CONTEST B if you have not already done so. (see page 13 for a Registration Form,).

## VI. International Students and Non-Citizens in USA Schools

Any Student who is officially enrolled in high school (or below) and is taking at least one course at the school and has not graduated is eligible to take the AMC 10 or AMC 12 or AIME (with qualifying score). US Citizens and Students residing in the United States (with qualifying scores) are eligible to take the USAMO.

Students learning “English as a Second Language” (ESL) may use a book or electronic type dual-language nontechnical dictionary between their native language and English. A student may use the dictionary only the first time that he/she takes the AMC 10/AMC 12. The dictionary must be given to the school contest manager to examine and retain for the 24-hour period preceding the contest. The proctor must announce to other students that the student(s) has/have been given special permission to use the dictionary during the contest.

## ✓II. Instructions For The Day of The AMC 10/AMC 12

If today is not yet Tuesday, February 10, 2004. STOP EVERYTHING. Under no circumstances is the contest to be given to anyone before the official day, nor should the contest package(s) be opened before that date.

1. Take the unopened contest package(s) and Certification Form to your Principal (or equivalent) to certify that the package was opened within an hour before the contest. Have the Principal sign the Certification Form at that time.

2. When the students arrive, seat them so they are separated by an empty space, if possible.

3. Hand out the Answer Forms which have been partially completed by the students (AMC 10-orange/AMC 12-red).

4. As you hand out the papers, tell the students not to open the contest booklet. They should then read the entire front cover. Give them 5 minutes to do this.

5. Inform the students to, “Note carefully instructions 3 and 4 on the contest cover (see pages 17 and 18 of this manual). The AMC 10/AMC 12 has a unique scoring system which has important consequences for guessing. “Unless you are fairly sure of the answer, it is better to leave a question unanswered than to guess.” Because of the revised scoring system which began in 2003, with 6 points for a correct answer, 2.5 points for a blank answer and 0 points for an incorrect answer, if a student can reduce the problem to two possible answers, it is advantageous to guess one of the two possible answers. If a student can only reduce to 3 possible answers by eliminating 2 of the possibilities, then it is not advantageous to guess.

6. Inform the participants that they may not talk or ask any questions during the contest, and that they must do their own work.

7. Remind students that they have 75 minutes, then tell them to BEGIN.

8. Students who finish the contest early may be dismissed provided they will be under the supervision of a teacher during the remainder of the contest period.

9. You (and other teachers, if there are many participants) should proctor continually as you would for any important contest. Students whose eyes wander should be warned;



students caught copying answers or collaborating must be disqualified. Try to provide as quiet an environment as possible.

10. Announce when there are 30 minutes remaining and when there are 5 minutes remaining.

11. When time is up, tell the students to STOP and have them sign their name in the space provided on the Student Answer Form. Collect the Answer Forms as quickly as possible.

12. Please do not grade the answer forms. They are to be sent to Lincoln, Nebraska for grading. You may have the students circle their answers on the contest booklet. However, the official answers will be the ones blackened on the answer form.

13. Fan the forms, making sure none are stuck together, and insert them along with the School ID Form (placed on top) inside the Report Envelope. There is only one ID FORM to be used with all the AMC 10/AMC 12 answer forms.

YOUR SCHOOL'S CEEB NUMBER IS THE NUMBER WRITTEN ON THE FRONT OF THE AMC 10/AMC 12 REPORT ENVELOPE.

14. Complete the Certification Form (only one form is needed) and place it on top of the School ID Form and the answer forms in the Report Envelope, seal and send it by First Class (please affix the proper postage before mailing) within 24 hours or as soon as possible.

15. Please note: After the Answer Forms have been delivered to the school office to be mailed, you may discuss the contest with your students under the following conditions which take into consideration the fact that there will be schools taking the contest in other locations at different times.

a. Inform the students that the contest may not be discussed with anyone outside of your school either orally, via email, www, copier or media of any type until the next day.

b. Students may keep the contest booklets and take them home.

## ✓III. Policy Statements

### Statement 1

#### Early Administration

Administration on an earlier date is NEVER permitted and will lead to disqualification. Such an administration would jeopardize the validity of all scores from other participating schools.

#### Official Administration

The AMC 10-A/AMC 12-A will be given officially on Tuesday, February 10, The AMC 10-B/AMC 12-B will be given officially on Wednesday, February 25. Only official participants, their school and their teacher are eligible for National Awards. In addition, official participants are eligible for all intramural awards and for participation in the AIME.

### Unofficial Administration

If you are unable to give the Contest A on February 10 because:

- your school is closed,
- your school has an academic conflict,
- the class periods have been shortened due to an assembly or other reason,
- the majority of your best students will be on a field trip on contest day,

(Please Note: Students must participate in a contest on the assigned day, at the same time.)

then you may give the second version of the contests (AMC 10-B/AMC 12-B) on the second official day, Wednesday, February 25, 2004 (See Contest B Registration Form on page 13). You may still take either exam unofficially on other days, but those contests will not be eligible for state and national awards and will not be eligible for participation in the AIME. Unofficial participants are still eligible for intramural awards.

It is important to note that the only days eligible for official participation are the two official Contest days: Tuesday, February 10, and Wednesday, February 25, 2004.

### Statement 2

#### Questionable Scores

If it is clear to the Contest Manager from personal observation that a student has cheated, then the Manager must disqualify the student. If the Contest Manager receives an accusation of cheating, or obtains other indirect evidence of cheating, then the Manager must hold back the student's paper and immediately report all the facts of the situation to the AMC Director, who in conjunction with the Chair of the CAMC, will determine what to do. UNDER NO CIRCUMSTANCES may the school decide on its own to accept a questionable score, nor should a school carry on its own investigation or retest the student in question before receiving instructions from the Lincoln Office. If it appears that a student has scored beyond his or her ability, this could be a case of previously unrecognized talent, or it might be a case of extremely lucky guessing, which is one of the grounds for reexamination.

### Statement 3

#### Follow-up Inquiries and Reexamination

The results of this contest are used to identify students with unusual mathematical ability. To assure that this purpose is served, the CAMC reserves the right to retest students before deciding whether to grant official status to individual or team scores. A follow-up inquiry may be made of a school if one or more scores are unusually high compared to other scores at that school in recent years, or if a student scores high on the AMC 10/AMC 12 and low on the follow-up AIME. Reexamination will be requested when, after an inquiry, there is a reasonable basis to believe that a high score is well beyond a student's ability



due to extremely lucky guessing, dishonesty or some other circumstance. Official status will not be granted if a student or school does not agree to a requested retesting.

### Statement 4

#### Policy for Changes

The CAMC may, from time to time, change the program rules, regulations, awards and conditions of participation in whole or in part. Whenever possible you will be notified of these changes ahead of time.

### Statement 5

#### Refund/Credit Policy

If your school is unable to take the contests, please use the materials as practice sets for the next year. Do not return them. WE CAN NOT GIVE REFUNDS OR CREDITS AFTER THE CONTEST MATERIALS ARE SHIPPED.

## IX. School Results

Your school's results will be mailed by first class as soon as the answer forms are scored. If you have not received your results from our office within 30 days after the AMC 10/AMC 12 please contact us to verify that your answer forms were in fact received.

In addition to the hard copy of the results and awards mailed via Postal Services, we offer an e-Mail copy of the results. If you would like to receive your results by e-Mail, and have not previously sent us your address, send a message, including your name, school name, address, and CEEB # to:

[hstran@amc.unl.edu](mailto:hstran@amc.unl.edu)

Results are not official until the hard copy of your report is received, and that should be no longer than 30 days after AMC 10/AMC 12.

## X. AIME Instructions

The 22nd annual American Invitational Mathematics Examination (AIME) will be held on Tuesday, March 23, 2004 with a second alternate exam given on the alternate date of Tuesday, April 6, 2004. These are the only days the exam may be taken officially. You may give the exam for practice (unofficially), on Wednesday, March 24, Thursday, March 25 or Friday, March 26, 2004. We will be pleased to grade it for you but your students will not be eligible to take the USAMO. The contest is provided free of charge to all those taking the exam on the first date, however those taking the exam on the second alternate date will be charged a processing fee to cover expedited delivery.

#### AIME Rules for AMC 10/AMC 12

Students who are in the top 5% of all AMC 12 participants or score at least 100 points on the AMC 12, and those who are in the top 1% of all AMC 10 participants or score at least 120 the AMC 10 are invited to participate in the American Invitational Mathematics Examination.

PLEASE read the following participation rules to your students as



soon as you receive the AMC 10/AMC 12 package so potential AIME students will be able to plan accordingly.

To the AIME School Manager:

1. All materials relating to the examination (including proctoring instructions for the exam) will be included with your AMC 10/AMC 12 results.
2. All questions or problems concerning the AIME should be directed to the Lincoln office (800-527-3690).
3. The AIME is a three-hour examination. Each of its 15 questions requires a three digit integer answer and each correct answer will receive one (1) point.
4. The AIME Answer Forms are sent directly to the Lincoln office for grading and processing.
5. Each participating school will receive a report of their results, an AIME solution pamphlet, and a list of students who qualify for the USAMO.
6. All AMC 10/AMC 12 procedures for disqualification, follow-up inquiries and reexamination apply to the AIME as appropriate.
7. If you have students who you feel may qualify for the AIME please order prior year AIME exams and solutions for practice now. This way you will have these practice materials on hand when you receive your AMC 10/AMC 12 results.

#### Second AIME Testing Date

There are THREE situations in which a student may take a second version of the AIME to be held on Tuesday April 6, 2004, keeping their USAMO eligibility open:

1. School is closed on March 23rd (i.e. spring break, weather).
2. Student is out of school the entire day due to attendance at an academic/school related event.
3. Student is ill and can not attend school on March 23rd.

There will be a processing fee for the second AIME as follows: 1-10 students = \$25, 11+ students = \$50. We will need your payment before the answer forms can be graded. A special envelope and payment form will be included with your AIME material, if you have AIME qualifiers. All AIME answer forms must be returned by "express mail" so that they arrive in the AMC office by April 9, 2004.

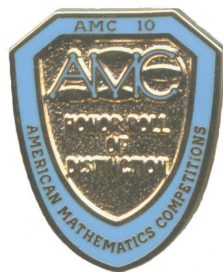
Email requests for the second AIME may be sent to:

AIMEQUAL@AMC.UNL.EDU

Or, you can call the AMC office at 1-800/527-3690. Please have your school identification number (CEEB) and charge card information available before calling. E-Mail requests should include the school's CEEB#, and complete mailing address.

Under no circumstances can a student take both AIME's.

We currently have no scholarship funding for high scores on the AIME.



## XI. Participant Selection for the USAMO and IMO

The USA Mathematical Olympiad (USAMO) is a two day, nine-hour, six-question, essay-proof examination. Selection for the USAMO will be made according to the following rules:

1. The goal is to select about 250 of the top scorers from the prior AIME and AMC 12A, AMC 12B, AMC 10A and AMC 10B contests to participate in the USAMO.
2. Selection will be based on the USAMO index which is defined as 10 times the student's AIME score plus the student's score on the AMC 12 or the AMC 10.
3. The first selection will be the approximately 160 highest USAMO indices of students taking the AMC 12A or AMC 12B contest.
4. The lowest AIME score among those 160 first selected will determine a floor value. The second selection of USAMO participants will be from the highest USAMO indices among students who took the AMC 10A or AMC 10B and the AIME, and got an AIME score at least as high as the floor value.
5. The student with the highest USAMO index from each state, territory, or U.S. possession not already represented in the selection of the first and second groups will be invited to take the USAMO.
6. To adjust for variations in contest difficulty, the number of students selected from A & B contests will be proportional to the number of students who took the (A & B) Contests.
7. The selection process is designed to favor students who take the more mathematically comprehensive AMC 12A and AMC 12B contests.

The USAMO is scheduled for Tuesday and Wednesday, April 27 & 28, 2004 at your school. If you feel you may have a qualifier, please arrange for a space and proctor for these dates.

The top 12 scoring students on the USAMO will be invited to attend an award ceremony held in Washington, D.C., June 20-21, 2004. The USA International Mathematical Olympiad (IMO) Team will be chosen at the Mathematical Olympiad Summer Program (MOSP, June 13-July 3, 2004) after further testing (see Section XII, for more details).



## XII. The MOSP Program

The top 12 USAMO students will be invited to attend MOSP regardless of their school grade.

During the first week of MOSP a final “IMO” type exam will be given to the top 12 USAMO students with the goal of identifying the USA IMO Team. This exam will replicate an actual IMO and will consist of 6 problems to be solved over two 4 1/2 hour sessions. The 12 equally weighted problems (6 on USAMO and 6 on this exam) will determine the tentative USA Team.

In order to assure that the strongest possible team has been formed, the MOSP Director/IMO Team Leader reserves the right to appoint up to one IMO team member. This appointment would happen only in a circumstance where a student's performance during the first two weeks of MOSP clearly surpasses that of an existing team member.

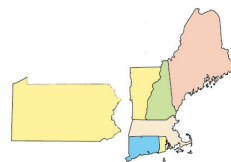
Seniors who did not earn a spot on the IMO Team will have the option to return home after the first two weeks of MOSP.

## XIII. Contest Regions of the AMC 10/AMC 12

The USA and Canada are partitioned into the following regions. National Awards are given to a minimum of 10 high scoring students and 5 schools (based on the team score) in each of these regions.

### REGION

- 0 Connecticut, Maine, Massachusetts, New Hampshire, Pennsylvania, Rhode Island, Vermont



- 1 New Jersey, New York



- 2 Delaware, District of Columbia, Maryland, North Carolina, South Carolina, Virginia, West Virginia



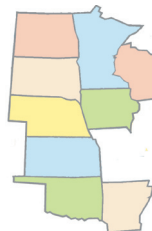
- 3 Alabama, American Embassy and APO/FPO Schools, Florida, Georgia, Puerto Rico, Virgin Islands



- 4 Indiana, Michigan, Ohio



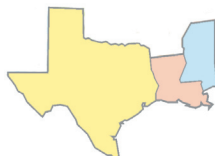
- 5 Arkansas, Iowa, Kansas, Minnesota, Nebraska, North Dakota, Oklahoma, South Dakota, Wisconsin



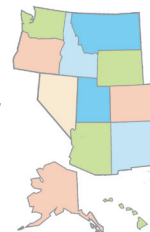
- 6 Illinois, Kentucky, Missouri, Tennessee



- 7 Louisiana, Mississippi, Texas



- 8 Alaska, Arizona, Colorado, Guam, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming



- 9 California




- 10 Canada




## XIV. Intramural and National Awards


### Intramural Awards


Intramural awards will be sent to you from the Lincoln Office, along with your school results. Your registration fee entitles you to pins, medals, certificates, and a copy of the National Summary of Results and Awards. An order form for additional intramural awards will be included with your results.


 Winner Pin — given to the top scoring student in your school for both the AMC 10 and AMC 12. Medals will be given for consecutive wins in both contests mentioned above. Details of how medals are awarded will be included with your school's results.


 Certificate of Distinction — awarded to all students who qualify for the AIME.

 Honor Roll of Distinction Pin — given to the top 1% of the AMC 12 and to the top 1% of AMC 10 participants.

 AMC 12 Certificate of Achievement — given to students in grade 10 and below who score 90 or above on the AMC 12 Contests


 AMC 10 Certificate of Achievement — given to students in grade 8 and below who score 90 or above on the AMC 10 Contests

 School Certificate of Honor — awarded to schools with a team score (AMC 12) of 400 or greater.

 School Certificate of Merit — awarded to schools with a team score (AMC 12) of at least 300.


### State/Provincial Awards

Some State/Provincial Directors offer various awards or scholarships in addition to the plaques.

 Plaques — Top Scoring Student Plaque awarded to a student in each state or province.

### NATIONAL AWARDS

In each of the eleven regions into which the United States and Canada are divided, the five schools with the highest team scores (sum of the highest three scores by participants) are recognized by Donor or Committee Awards. The highest scoring team in each region will receive a Cup, the remaining four teams will receive one of the following three awards:

 Charles T. Salkind Memorial Silver Cup — silver cup awarded to the school with the highest team score over all, donated by the L.G. Balfour Company, Attleboro, MA,.



William H. Fagerstrom Memorial Silver Cup — silver cup awarded to the school with the second highest team score over all, donated by the L.G. Balfour Company, Attleboro, MA..



Committee Bronze Cups — in each of the regions in which a silver cup is not awarded the Committee on the American Mathematics Competitions provides a Bronze Cup to the school with the highest team score.

Schools not receiving a cup are eligible for these awards

The four remaining schools in each region will receive one of these awards. Distribution of awards is arranged so that schools do not receive duplicates of awards made to them in prior years.



CAMC Mathematics Books — in each of the eleven regions, five books are donated by the Committee on the American Mathematics Competitions to one school having a high team score.



W. H. Freeman Books — in each of the eleven regions, a set of books, donated by W. H. Freeman Company, San Francisco, CA is awarded to one school having a high team score.



Mathematics Magazine — in each of the eleven regions, a one-year subscription is donated by the Committee on the American Mathematics Competitions to two or more schools having a high team score

### Most Improved Team Score Award

Pedagoguery Award -- awarded to one school in each of the 50 states, US Territories, Military Schools abroad, and Canada with the "Most Improved" Team Score on the AMC10 and AMC 12.