



THE MATHEMATICAL ASSOCIATION OF AMERICA
American Mathematics Competitions

AMC 10 B / AMC 12 B

10th/60th Annual Contests

Colleges and Universities

General Instructions

and Information

for the

AMC 10 B and AMC 12 B

DATES OF THE 2009 EXAMINATIONS

AMC10 A/AMC12 A - Tuesday, February 10, 2009

AMC10 B/AMC12 B - Wednesday, February 25, 2009 (College Date)

AIME - Tuesday, March 17, or Wednesday, April 1, 2009

USAMO - April 28-29, 2009

AMC 8 - Tuesday, November 18, 2008

General Information

Format

There are two official dates for the AMC 10 & AMC 12.

- The AMC 10 A/12 A date is on TUESDAY, February 10, 2009. Do not concern yourselves with this contest or date. College Registration is not offered on the A date.
- The AMC 10 B/12 B date is on WEDNESDAY, February 25, 2009. This is the date Colleges and Universities will be giving the AMC 10 B/12 B Contests. We will ship the B contest beginning February 10, 2009.

The AMC 10 B and AMC 12 B are to be given at the same time within each participating school, during a convenient 75-minute interval, preferably in the morning. Both contests consist of 25 questions. Each correct answer scores 6 points, a blank scores 1.5 points and an incorrect answer scores 0 points. The AMC 10 B and AMC 12 B have several questions in common. The students in grades 10 and below should choose between the AMC 10 and AMC 12. Students in grades 11 and 12 may only take the AMC 12. All rules and awards apply to both contests for all schools and students. Any student who missed the exam may take it unofficially, and we will be happy to grade it. Students may take the contest and solution booklets home with them the day of the contest.

Answer Forms

The AMC 10 B and AMC 12 B each have their own color coded answer form (AMC 10-orange and AMC 12-red). Contest B answer forms have instructions in black ink. Please be careful to match the answer form with the appropriate contest when passing out the papers.

AIME Qualification

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 on the AMC 10 are invited to participate in the American Invitational Mathematics Examination.

Results

We will send your school's results by email, and first class mail as soon as the answer forms are scored. If you have not received your results from our office within 30 days after the contest, please contact us to verify that your answer forms were in fact received. We recycle student Answer Forms 90 days after the exam date.

Costs

Costs to participate will be as follows:

Registration of your Institution (includes 2-day shipping) . . . \$50.00

One bundle of ten AMC 10 B contests \$21.00

One bundle of ten AMC 12 B contests \$22.00

One "bundle" of contests includes 10 contests, 10 answer forms, and 10 solution booklets.

Detailed Instructions

I. Preliminary Instructions for Administering the AMC 10 B/AMC 12 B

1. Once we have received your Registration, we will add your Institution to a list of participating Colleges and Universities, available on our web site. We will gather this information from the Registration form. We will post:
 - a. School name
 - b. Contact person
 - c. Contact phone number
 - d. Contact email address
 - e. School address
 - f. Time you plan on holding your contest
 - g. A comments box for any special information you wish to have posted, to be provided to our webmaster as needed. (rroyer@maa.org or rroyer1@unl.edu)
2. When we receive a “contest” request from an individual student in your area, we will refer them to your institution’s contact person.
3. Arrange for:
 - a. The room or rooms you will need to give the contest. and any other talks or seminars you may be offering
 - b. Volunteers to stay in the rooms to give directions, and proctor the contests
 - c. If you decide to give immediate prizes for your group, you will need to make copies and have volunteer staff quickly hand score the answer sheets
 - you will need to plan some sort of activity to keep the students occupied while this grading occurs
 - you will want to have a room available which will accomodate all the students for the presentation of these awards. The official AMC awards will be sent in the mail to you later, when we have finished grading
 - d. Set up a schedule for the event, and be prepared to make adjustments as the date arrives
 - e. At the end of January, fill in the **Contest Order Form** you received with your Registration confirmation, and be sure to get it to us by January 31, 2009. When ordering, be sure you have a few extra contest sets to use for last minute students.
4. Send a confirmation (email) to the high schools and individual students who have signed up with you to take the AMC 10 B/12 B.
 - a. Inform them about the **date, place and time** of the AMC 10 B/AMC 12 B. Tell them that they may use scratch paper, graph paper, ruler,

AMC10B/12B Preliminary Instructions continued

compass, and protractor. **NO CALCULATORS ARE ALLOWED.** No problems on the contest require the use of a calculator. Remind students to bring a supply of #2 pencils.

- b. Tell them your plan if the school should suddenly close due to weather, etc.
- c. Tell them to review past AMC tests and solutions on line, or inform your high schools and individual students how to order copies for themselves. The Publications Order Form can be downloaded from the AMC Web page at www.unl.edu/amc/, www.amc10.org or www.amc12.org (or call, fax or write to the AMC Office for a copy).

Many high schools offer practice sessions before they give these contests. You could offer this, in addition to giving the contests, as a way of personally meeting prospective high-ability students.

- d. If you have students who you feel may qualify for the American Invitational Mathematics Examination (AIME), stage two in the AMC Contests sequence, you will need to preliminarily reserve a small room for at least 3.5 hours for one of the two AIME dates (Tuesday, March 17 or Wednesday, April 1, 2009). See section VII for AIME details. Please relate the following information to those who may qualify for the AIME:
 - i. The AMC office will include all materials relating to the AIME examination (including proctoring instructions for the exam) with the AMC 10/AMC 12 results sent to your institution.
 - ii. All questions or problems concerning the AIME should be directed to the AMC office (800-527-3690).
 - iii. The AIME questions format requires a three digit integer answer and each correct answer will receive one (1) point.
 - iv. Answers will be posted on the AMC web site within a few days of the contest.
 - v. The AIME Answer Forms are sent directly to the AMC office for grading and processing.
 - vi. Each participating school will receive a report of their results, an AIME solution pamphlet, and a list of students who qualify for the USAMO.
 - vii. All AMC 10/AMC 12 procedures for disqualification, follow-up inquiries and reexamination apply to the AIME as appropriate.
 - viii. Please tell students to order prior year AIME exams and solutions for practice now. This way they will have these practice materials on hand when they receive your AMC 10/AMC 12 results.
- d. Encourage participation by high schools and individual 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 last year at their grade level. Show students the national statistics

AMC10B/12B Preliminary Instructions continued

found on our web site from last year. Tell them to set appropriate goals for themselves.

5. Create a spreadsheet listing of students who will be participating with you, to be sent to us, for cross checking student names and information. This should include:
 - a. Student name
 - b. Student grade
 - c. Student age
 - d. Student gender
 - e. Student home address
 - f. Student home phone
 - g. Student email address
 - h. Students regular School Name
 - i. Students regular School CEEB#
6. Send a follow-up email reminder to high schools and individual students one week before the contest and again the day before the contest about the date, time and place of the AMC 10 B/AMC 12 B they have signed up to participate in. Also remind them of 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 proctor.
7. 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.

II. Instructions For The Day of The AMC10 B/ AMC12 B

If today is not yet WEDNESDAY, February 25, 2009. 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 Departmental office to certify that the package was opened within an hour before the contest. Have a department official there sign the Certification Form at that time.
2. Gather the participating students, and get them situated in their testing room(s). Seat them so they are separated by an empty space, if possible.
3. Hand out the student Answer Forms (AMC 10-orange/AMC 12-red), and have the students complete the non-answer sections on the front and back. Give them 15 minutes to do this. Have students pay special attention to marking their name and address accurately -remind them that the names listed in the National Summary come from this form. The AMC Office will not do any editing of the information provided.

AMC10B/12B Instructions for the “Day” continued

4. The name of your institution, 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 stick-on labels to provide this information.
5. As you hand out the contests, tell the students not to open the contest booklet. They should then read the entire front cover. Give them 5 minutes to do this.
6. Inform the students to, “Carefully read instructions 3 and 4 on the contest cover.” 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.” Six points are given for a correct answer, 1.5 points for a blank answer and 0 points for an incorrect answer. If a student can reduce to 3 possible answers by eliminating 2 of the possibilities, then it is advantageous to guess.
7. Inform the participants that they may not talk or ask any questions during the contest, and that they must do their own work.
8. Remind students that they have 75 minutes, then tell them to BEGIN.
9. Students who finish the contest early may be dismissed provided they will be under supervision during the remainder of the contest period.
10. 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.
11. Announce when there are 30 minutes remaining and when there are 5 minutes remaining.
12. 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.
13. Please do not grade or add extraneous marks to the **official marksense answer forms**. They are to be sent to the AMC office for grading. If you wish to provide unofficial results and institutional awards, make copies of the originals and use them for grading. We can provide a transparency template to aid in the grading process. Students may also circle their answers on their own contest booklet. However, the official answers will be the ones blackened on the **official marksense answer form**.
14. 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 AMC10 B/AMC12 B answer forms.

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

AMC10B/12B Instructions for the “Day” continued

15. 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 (trackable recommended) (please affix the proper postage before mailing) within 24 hours or as soon as possible.
16. Email us a copy of the Excel spreadsheet with the student information to: amcinfo@unl.edu
17. Please note: After the Answer Forms have been collected, sealed in their envelope(s), and delivered to the school office to be mailed, you may discuss the contest with the 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. Students may keep the contest booklets and solutions and take them home after the test has been completed.
 - b. **However** - inform the students that the contest may not be discussed with anyone outside of your group either orally, via email, www, copier or media of any type until the next day.

III. Eligibility

Any student who is officially enrolled in high school (or below) and is taking at least one course at the high school level, and has not graduated, is eligible to take the AMC 10 or AMC 12 or AIME (with qualifying score). *Please note: 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

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 and AIME (with qualifying score).

International Students & Non-Citizens in USA Schools

US and Canadian Citizens and Students residing in the United States (with qualifying scores) are eligible to take the USAMO.

Students who are “English Language Learners” (ELL) may use a book or electronic 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 an official of the cooperating institution a minimum of an hour before the contest. The official will then examine and retain the dictionary until the start of 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.

IV. Team Score Identification

Cooperating Institutions will not have a team score.

V. School Results

The AMC office will send official results by email and 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.

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

VI. Policy Statements

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-B/AMC 12-B will be given officially on Wednesday, February 25. Only official participants, are eligible for National Awards. In addition, official participants are eligible for all group administration awards and for participation in the AIME.

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

Unofficial Administration

If you are unable to give the Contest B on February 25 because:

- a. your school is closed,
- b. your school has an academic conflict,

You may still give the Contest B exam unofficially on later 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 group administration awards.

It is important to note that the only day eligible for official participation is Wednesday, February 25, 2009.

Student Participation

A student may take only one exam on a given day but can participate on both contest dates - in their school for Contest A, and at the Host Institution for Contest B. The higher score will be used for national awards.

Students with Visual or Learning Disabilities

The AMC 10/AMC 12 time limit set by the CAMC for students who are visually impaired or learning disabled is 120 minutes. A teacher or a school administrator may read the questions to the student and mark the answers as directed by the student. The cost of a Braille or Large Print exam is \$7.00 shipping and handling (shipped separately) plus \$1.60 per exam for the AMC 12 and \$1.50 per exam for the AMC 10. They are mailed separately and must be ordered no later than January 26, 2009.

AMC10B/12B Policy Statements continued

Sickness and Other Special Situations

A student who is sick on the day of the contest may take Contest B unofficially, on a later date.

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 AMC Office.

Follow-up Inquiries and Reexamination

The results of this contest 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. Reexamination will be requested when, after an inquiry, there is a reasonable basis to disbelieve a score. Official status will not be granted if a student or school does not agree to a requested retesting.

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.

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.

Request for Student Names Policy

The following statement appears on the student answer forms for the AMC 10 and AMC 12:

The American Mathematics Competitions (AMC) receives requests from educational institutions and organizations for the names, addresses and grade levels of high scoring students. This information is used for recruiting and other academic purposes.

Blacken this circle if you give the AMC permission to release this information to these organizations. (Your score will not be affected if you do not blacken the circle.)

Receiving information is an "opt-in" decision for each individual student. The AMC handles requests from institutions and organizations on a case-by-case basis and evaluates each individually for appropriateness. We provide

AMC10B/12B Policy Statements, continued

legitimate educational institutions of all levels, both secondary and collegiate/university level, with one-time use of selected names and addresses for postal mailings. We also provide professional and scholarly organizations such as those listed as contributors to the AMC with one-time use of names and addresses for postal mailings, generally for professional or career information.

The only information we provide is the name, grade level, address, city, state, and zip code necessary for a postal mailing. We do not list individual scores or awards.

VII. AIME Instructions

The 27th annual American Invitational Mathematics Examination (AIME) will be held on TUESDAY, March 17, 2009 with a second alternate exam given on the date of WEDNESDAY, April 1, 2009. These are the only days the exam may be taken officially. You may give the exam for practice (unofficially), on one of the two days following the AIME. We will be pleased to grade it for you but your students will not be eligible to take the USAMO. Students qualify for the AIME level by scoring in the qualifying range on the AMC 10 or AMC 12. **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 on the AMC 10 are invited to participate in the American Invitational Mathematics Examination.

PLEASE relate the following participation rules to the students who will take the AMC 10 B/AMC12 B, as soon as you receive the AMC 10/AMC 12 package so potential AIME students will be able to plan accordingly.

AIME Institution Manager

1. The AMC office will include all materials relating to the AIME examination (including proctoring instructions for the exam) with your AMC 10/AMC 12 results.
2. All questions or problems concerning the AIME administration should be directed to the AMC 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 AMC 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

AIME Information, continued

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

Situations in which a student may take a second version of the AIME to be held on WEDNESDAY, April 1, 2009, keeping their USAMO eligibility open are:

1. Host Institution is closed on March 17th (i.e. spring break, weather).
2. Student is unavailable the entire day due to attendance at an academic/school related event.
3. Student is ill on March 17th.

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 II answer forms must arrive in the AMC office by April 3, 2009.

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.

VIII. USAMO Participant Selection

The USA Mathematical Olympiad (USAMO) is a two day, nine-hour, six-question, essay-proof examination. Selection for the USAMO will be explained in the AIME Teacher Manual. The goal is to select about 500 of the top scorers from the prior AIME and AMC 12 A, AMC 12 B, AMC 10 A and AMC 10 B contests to participate in the USAMO.

The USAMO is scheduled for Tuesday and Wednesday, April 28-29, 2009 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., in late spring.

IX. The MOSP Program

The Mathematical Olympiad Summer Program (MOSP) is a 3-week, academic program designed to broaden participants' view of mathematics while fostering excitement toward further math study. It is held each year at the

MOSP Information, continued

University of Nebraska-Lincoln in June-July. Invited students include the top 12 USAMO winners, 12-18 high-scoring USAMO participants, who are current juniors and below, 12 females, training for the Chinese Girls Math Olympiad, and an additional 25-30 ninth-grade USAMO participants, grant funding permitting.

Watch for further details to be announced in the 2009 AIME/USAMO Teachers' Manual and on the AMC website at www.unl.edu/amc.

X. Intramural and National Awards

Intramural Awards

The AMC Office will send you Intramural awards, 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.

State/Provincial and National Awards

Students participating in these Institutions of Higher Learning group administrations of the AMC 10 B/12 B will not be eligible for state/provincial, regional or national awards.