



ACTM Math Contest Policy Manual

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ACTM State High School Mathematics Contest Guidelines and Procedures

State Contest Director

It is the responsibility of the State Director to coordinate the Regional Contests and the State Contest. This responsibility includes the following:

1. Procure Regional Contest Directors.
2. Set the dates for the Regional Contests and the State Contest and get them placed on the Arkansas Activities Association calendar (Regional Contests will be scheduled in March and the State Contest scheduled in April).
3. Procure contest authors for both the Regional Contests and the State Contests.
4. Review Regional Contests and State Contests for accuracy and clarity.
5. Produce a clean copy of all contests.
6. Provide the Regional Directors with all the necessary materials to administer the Regional Contests.
7. Invite participants to the State Contest.
8. Prepare all regional and state contest and keys and arrange for posting of those documents on the ACTM Contest Web Site within one week after the contest date.
9. Prepare score distributions from the State Contests and post those distributions on the ACTM Contest Web Site and post top ten places from each contest.
10. Administer the State Contest.
11. Prepare a list of the winners of the State Contest to be sent to the Editor of the ACTM Newsletter and posted on social media.
12. Prepare a final report including a list of winners and a financial statement to be sent to the ACTM President and ACTM Financial Officer.

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Regional Contest Directors

It is the responsibility of the Regional Directors to administer the Regional Contests. This includes:

1. Notification of teachers in the region of the date and the location of the Regional Contests.
2. Send a student registration form to teachers in their region.
3. Collect student registration fees.
4. Prepare copies of each contest based on pre-registration of students.
5. Provide proctors and graders for each contest.
6. Inform teachers that all contests and keys will be posted on ACTM Contest Web Site within one week following the exam.
7. Send the results, including score distributions, to the State Director on provided forms.
8. Send a financial report, on provided form, to the State Director and ACTM Finance Officer.
9. Send collected registration fees to the ACTM Finance Officer.
 - a. Regional Contest locations may deduct their expenses for copies & postage from their collected registration fees. The ACTM Financial Officer may approve other contest expenses.

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Area Contests and Eligibility

1. Competitions will be in six subject areas:
 - a. Algebra I
 - b. Geometry
 - c. Algebra II
 - d. Trigonometry & Precalculus
 - e. Calculus
 - f. Statistics
2. To be eligible to participate in any competition, a student must be enrolled in a course or have completed a course during the current school year, described by the title of the area contest.
3. Students in AP or IB classes are eligible to participate in a competition of the same name only.
4. To be eligible to participate in any competition, a student must be enrolled in an Arkansas school during the current school year.
5. Under no circumstance will a student be eligible to take any area contest if that student placed 1st, 2nd, or 3rd in either the Regional or State contest for that subject in a previous year.
6. Students who are designated as 1st, 2nd, or 3rd place winners at the Regional Contest will be invited to compete in the State Contest during that academic year. Others may be invited at the discretion of the State Contest Director.

Contest Construction

1. Each contest will consist of no fewer than 20 and no more than 25 multiple choice questions. Each contest will have three additional constructed response tie-breaker items.
2. Contest questions should have at least four, preferably five, answer choices. (One of these choices can be “none of the above” or similar wording.)

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3. Contests will reflect the vision set forth by the NCTM Principles and Standards for School Mathematics and the Arkansas Department of Education adopted frameworks and should reflect problem solving and conceptual understanding rather than routine manipulation.

Technology

Use of calculators that do not contain a subset of a computer algebra system (CAS) will be permissible.

- TI-83, TI-84, & TI-Nspire series are permissible.
- TI-89 and TI-92 and TI-Nspire CAS are NOT allowed.
- Calculators on smart devices, such as GeoGebra, Desmos, or similar, are not allowed.

Contest Administration

1. The Regional Director(s) will be the final authority in settling any disputes concerning the Regional Contest.
2. The State Director will be the final authority in settling any disputes concerning the State Contest.
3. The length of each contest will be one hour.
4. Students are required to stay in the room in which they are taking the test for the entire hour.
5. Copies of the Tests and Keys (Regional and State) will be posted on the ACTM Contest Web Site no later than one week following the administration of the tests.
6. Tie-breaker questions will be graded only in the event of ties for the top three positions. The tie-breaker questions will be graded sequentially until ties are broken. Every effort will be made to break ties.

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Awards

1. In the Regional Contests
 - a. 1st, 2nd, or 3rd place winners of all area contests will be given awards.
 - b. Honorable Mention certificates may be awarded to
 - i. participants eliminated from the top three places by the tie-breaker questions.
 - ii. Other participants who scored just below 3rd place.
 - iii. All honorable mentions should be given responsibly, to maintain the spirit of the competition.
 - c. Regional Directors may present “certificates of participation” at their discretion.
2. In the State Contest
 - a. 1st, 2nd, and 3rd place winners of all contest areas will be given awards.
 - b. The ACTM Board may award monetary prizes to the top placing students in the state contest. The specific award amounts will be decided prior to each year’s contest, in consultation with the ACTM Financial Officer.
 - c. The ACTM Financial Officer will develop forms and procedures for the top placing students to receive their monetary award.
3. The State Director is responsible for coordinating the purchase and distribution for all awards for the Regional and State Contests.
4. The State Director is responsible for providing an Honorable Mention template for the Regional and State Contests.

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Available Materials

1. Complete sets of all area contests and keys will be posted on the ACTM Contest Web Site and made accessible to teachers, students, and mentors. No paper copies of exams or other contest documents will be provided.
2. Score distribution on the State Contest will be posted on the ACTM Contest Web Site.
3. Individual participants will not be notified of their scores.

Regional Contest Sites

The following locations have been contest sites in the recent past.

1. Arkansas State University (Jonesboro)
2. ASU Mid-South (West Memphis)
3. Harding University (Searcy)
4. Lyon College (Batesville)
5. Southern Arkansas University (Magnolia)
6. University of Arkansas Fayetteville
7. University of Arkansas Fort Smith
8. University of Arkansas Little Rock
9. University of Arkansas Monticello
10. University of Central Arkansas (Conway)

Other locations used in the past:

- University of Arkansas Pine Bluff
- East Arkansas Community College

Selecting Contest Dates

For the Regional Contests

Preferred Dates

First (preferred) or second Saturday in March.

For the State Contests

Preferred Dates

Fourth (preferred) or Third Saturday in April.

Conflicts to Avoid

Some potential conflicts to look for:

- Spring Break
 - Harding's and Lyon's spring break are potentially different.
 - Some private schools are different, like Thaden School (Bentonville) or West Memphis Christian.
- ACT & SAT Exam Dates
- State Basketball Tournaments (but nearly every weekend has some kind of conflict this time of year)
- Band Conflicts
- Choir conflict
- Quiz Bowl Conflicts
- Daylight Saving Time changes
- Availability of Facilities (especially for State Contest)
- Easter Holiday

Securing Arkansas Activities Association Sanctions

The Arkansas Activities Association needs to approve of the contest dates because the contest involves a competition between schools.

<http://www.ahsaa.org/>

Contest Author Qualifications

Individuals writing a regional or state contest exam should:

- Have familiarity with the Arkansas Frameworks for that exam.
- Be skilled in the content for that exam.
- Work in higher education (ideally).
 - The contest author should avoid any potential conflict of interest where any contest participants have an unfair advantage over others.
- Be able to create quality exams, with similar format and difficulty level to previous exams, by the deadlines.

Contest Exam Format

All contest authors should use the Arkansas Frameworks to determine the content that is included in each contest.

All contest exams should consist of

1. Between 20 and 25 multiple choice questions. Ideally, 25 multiple choice questions.
 - a. Each question should have 5 answer options. One of these choices can be “None of the above” or similar wording.
 - b. These should include a mixture of easy and hard problems.
 - c. Minimize the number of problems where a student can blindly enter results in a calculator to get a correct result.
2. Three free-response tie breaker questions
 - a. These should be harder problems with multi-step solutions.
 - b. Tie-breaker questions should be open-ended, where students must show their work over several steps.
 - c. Each successive tie breaker question should be harder.

The State contest exam should be harder than the Regional contest exam.

The due date for the draft Regional contest exam is approximately mid-February, two weeks before the contest.

The due date for the draft State contest exam is approximately mid-April, two weeks before the contest.

Inclement Weather and Public Health Policy

These will be decided on a case-by-case basis.