

Results of the 2002 Statewide Contest

BY JEFF DODD

Structure of the Contest

The Alabama Statewide Mathematics Contest is a high school mathematics contest conducted in two rounds. The first round consists of three, 50-question, multiple choice, written tests: Algebra II with Trigonometry, Geometry, and Comprehensive, which are administered at eight sites scattered throughout the state. This round is open to all Alabama high schools, and each school may send any number of students to participate; though each student may take only one of the three tests. It is both an individual and team competition; a school's team score for a test is the sum of its four highest individual scores. The second round is a culmination of the team Comprehensive competition in the form of a "ciphering" (Jeopardy-style) tournament, to which only high scoring teams from the first round written Comprehensive test are invited.

Each school competes in one of three divisions. The Division One competition is for public schools, which are large enough to be classified as 6A in athletics, and private schools, which offer at least two years of mathematics beyond both Algebra II with Trigonometry and Geometry. The Division Two competition is for public schools, classified as 5A or 4A in athletics, and private schools, which offer only one year of mathematics beyond both Algebra II with Trigonometry and Geometry. The Division Three competition is for public schools, classified as 3A, 2A, or 1A in athletics, and private schools, offering no mathematics beyond Algebra II with Trigonometry and Geometry.

Participation

The first round of the contest took place on March 2, 2002. This year, a total of 1168 students participated, representing 61 schools. Compared to last year, the number of students participating rose a bit (from 1132), but the number of participating schools was essentially unchanged (from 62). Participation continues to be well below the peak participation of 2,021 students and 128 schools in 1988. The second round of the contest took place on Saturday, April 6 at Jacksonville State University in Jacksonville, Alabama. Invited to the second round were 16 teams in Division One, 16 teams in Division Two, and 13 teams in Division Three. Accepting this invitation were 8 teams from Division One, 7 teams from Division Two, and 7 teams from Division Three. Participation in the second round was adversely affected by a late change in its date. (This was necessitated by a late change in the schedule of Talladega Superspeedway. We have to avoid race weekend when scheduling the second round because there are no lodging accommodations available near Jacksonville on that weekend.)

The Algebra II with Trigonometry Competition

This competition involves only the first round written test. The names of this year's top-scoring teams and individuals are displayed in Table 1.

For the second year in a row, the Algebra II with Trigonometry Test provided an ample challenge for all participating teams. In the Division One Algebra II with Trigonometry competition, Vestavia Hills claimed first place by scoring 783 out of 1000 possible points. Grissom took second place with a score of 693, and the Alabama School of Fine Arts took third place with a score of 677. (Vestavia's 90 point margin of victory was the largest in any of the nine first round team competitions this year.) Comprising the top 25% of the individual scores were 7 students from Grissom, 15 from Vestavia, 7 from the Alabama School of Fine Arts, 1 from Sparkman, 1 from Randolph, 1 from Jefferson County I. B., 5 from Hoover, and 1 from Briarwood Christian.

In the Division Two Algebra II with Trigonometry competition, Homewood won the team competition with a score of 639. Cullman took second place with a score of 557, and Bradshaw took third place with a score of 528. Comprising the top 25% of the individual scores were 8 students from Homewood, 5 from Bradshaw, 12 from Cullman, 3 from Oak Mountain, 3 from Muscle Shoals,

2 from West Point, and 1 each from Spain Park, Albertville, and Dallas County.

In the Division Three Algebra II with Trigonometry competition, there were only 9 teams. First place honors went to Calera for a score of 426. Comprising the top 25% of the individual scores were 5 students from Calera, 4 from Vinemont, 1 from Lauderdale County, 1 from Holly Pond, 1 from Clay County, and 2 from St. Clair County.

The Geometry Competition

This competition involves only the first round written test. The names of this year's top-scoring teams and individuals are displayed in Table 2.

In the Division One Geometry competition, Vestavia Hills won first place by scoring 833 out of a possible 1000 points, and Alabama School of Fine Arts and Briarwood Christian finished neck-and-neck with scores of 772 and 771 to take second and third place respectively. Comprising the top 25% of the individual scores were 17 from Vestavia, 6 from the Alabama School of Fine Arts, 8 from Briarwood Christian, 5 from Grissom, 2 from Clay-Chalkville, 2 from Hoover, and 1 from Randolph.

In the Division Two Geometry competition, Cullman won first place by scoring 778 (which would have been good for second place in Division I). Albertville won second place with a score of 694, and West Point won third place with a score of 678. Comprising the top 25% of the individual scores were 12 students from Cullman, 3 from Dallas County, 5 from Albertville, 3 from West Point, 2 from Muscle Shoals, 2 from Oak Mountain, 1 from Fairview, 1 from Winfield City, and 4 from Homewood.

In the Division Three competition, there were only 10 teams. First place honors went to Plainview with a score of 591; second place went to Lexington with a score of 558; and there was a tie for third place as Holly Pond and Vinemont both scored 520. Comprising the top 25% of the individual scores were 5 students from Plainview, 4 from Lexington, 3 from Vinemont, 3 from Holly Pond, and 2 from New Century Technology High School.

The Comprehensive Competition

The results of the first round written test are displayed in Table 3. (When reviewing the results, bear in mind that there is a different version of the written Comprehensive test for each of the three Divisions.) The results of the second round ciphering tournament,

which determined the final team placings in the Comprehensive competition, are displayed in Table 4.

In the first round Division One competition, Vestavia Hills took first place with a score of 917 out of 1000 possible points (completing a sweep of all three of the first round competitions); Grissom took second place with a score of 866; and Hoover took third place with a score of 824. Comprising the top 25% of the individual scores were 1 student from Central, 14 from Grissom, 26 from Vestavia, 8 from Hoover, and 1 each from the Alabama School of Fine Arts, Briarwood Christian, Bob Jones, Alma Bryant, and Pelham. (We congratulate Pradeep R. Baliga of Central High school who scored a perfect 250 on the Division One Comprehensive Test!)

In a close first round Division Two competition, West Point won the team competition with a score of 657, Dallas County took second place with a score of 641, and Cullman took third place with a score of 628. Comprising the top 25% of the individual scores were 5 students from Muscle Shoals, 8 from West Point, 4 from Dallas County, 2 from Bradshaw, 5 from Oak Mountain, 6 from Cullman, 3 from Guntersville, 5 from Homewood, 2 from Albertville, and 1 from Oxford.

In an even closer first round Division Three competition, there were only 13 teams. First place honors went to Sylvania for a score of 602. Sand Rock came in just 7 points behind with a score of 595 to take second place, and Calera just 1 point lower with a score of 594 to take third place. Comprising the top 25% of the individual scores were 3 students from Calera, 5 from Sand Rock, 5 from Sylvania, 2 from Good Hope, 2 from Hanceville, 3 from Plainview, 3 from Holly Pond, and 1 each from Lexington, New Century Technology, and Lauderdale County.

Based on the team scores for the written Comprehensive test, selected schools were invited to the second round ciphering tournament. Seedings for the tournament were also determined from these scores. The format of the tournament (which is described in the Spring 1999 issue of this *Journal*) is a combinatorial arrangement accommodating up to 16 teams which allows each team to play each other team exactly once *in only five rounds*, followed by a tie breaker for first place if necessary. So the scoring can be done very much as in a standard round robin tournament.

In the Division One tournament, top-seeded Vestavia won all of its matches to take first place. Third-seeded Hoover took second place, losing only to Vestavia in a very close match. Third place went to fourth-seeded Central, whose only losses of the day were narrow (2-point) losses to Vestavia and Hoover. The fourth place trophy went to second-seeded Grissom.

In the Division Two tournament, fourth-seeded Muscle Shoals won all of its matches to take first place. Top-seeded West Point took second place, losing only to Muscle Shoals. Third place went to second-seeded Dallas County, whose only losses of the day were to Albertville and Muscle Shoals. At the end of the day, third-seeded Cullman and sixth-seeded Albertville were tied for fourth place with three losses each. Cullman took the fourth place trophy by virtue of its victory over Albertville. (We note that Homewood, the 2001 Comprehensive champion, was unable to defend its title in 2002 due to scheduling problems.)

In the Division Three tournament, second-seeded Calera won all of its matches to take first place. Fourth-seeded Hanceville took second place, losing only to Calera and Lauderdale County. At the end of the day, third-seeded Holly Pond, top-seeded Sand Rock, and seventh-seeded Vinemont were tied for third place, having suffered 3 losses each. Holly Pond took the third place trophy by virtue of its victories over Sand Rock and Vinemont, and Sand Rock took the fourth place trophy by virtue of its victory over Vinemont.

Comments

Every school that participated in the contest is to be congratulated on its efforts. We hope that the contest questions will prove interesting and useful to teachers and students long after the contest is over. Our editors are continuing to work on adjusting the level of difficulty of all the tests and the ciphering questions to yield optimal results (plenty of challenges for all, yet an overall level that is not too frustrating for the average participant). Specific comments and suggestions regarding our questions are welcome.

We feel strongly that any motivated student can benefit from participating in the contest, and would like to see more participation, particularly among smaller schools. We remind everyone that a school does not need to field teams for all three tests and there is no minimum number of students required to field a team for any of the three written tests! (For example, a school can send just one student to take just one test!) Of course, a team of fewer than four students will be at a serious disadvantage in team competition. But every student competes on an equal footing with every other student in individual competition. Hundreds of awards (trophies, plaques, and certificates) are given to individuals and teams at the district (i.e., regional) and state levels. These can provide competitive motivation, and (friendly!) cross-town rivalries can provide even more. (Challenge a fellow teacher today!)

Table 1
Results of 2002 Algebra II with Trigonometry Contest

| <u>Division One</u> | | <u>Division Two</u> | | <u>Division Three</u> | |
|---|--|--|--|---|--|
| <ol style="list-style-type: none"> Sergey S. Sarkisov, Grissom Swati Bansal, Vestavia Hills Stuart X. Jones, Vestavia Hills Chris P. Terndrup, Vestavia Hills Jonathan B. Landham, Alabama School of Fine Arts | | <p>Top Individuals Statewide</p> <ol style="list-style-type: none"> Hamilton C. Simpson, Homewood Andrew A. Garfrick, Bradshaw Eric James Westbrook, Homewood Meghan E. Smith, Cullman Julie H. Ellison, Cullman | | <ol style="list-style-type: none"> Kathryn O. McGlawn, Calera Mallory R. Terry, Calera Jared E. Hembree, Vinemont Daniel M. Warren, Calera Ryan Horton, Vinemont | |
| <ol style="list-style-type: none"> Elizabeth B. Crawford, St. Paul's Episcopal Peyton S. Mathis, Saint James School Dale C. Vandagriff, Central | | <p>Other District Leaders (Alphabetical)</p> <ol style="list-style-type: none"> Kenneth B. Andrews, Citronelle Valerie A. Boyd, Handley Robert J. Coley, Dallas County John D. Pritchett, Greenville Michael E. Smith, Oxford Jonathan Yeatman, Albertville | | <ol style="list-style-type: none"> James B. Foster, Clay County Lauren R. Lee, St. Clair County | |
| <ol style="list-style-type: none"> Vestavia Hills Grissom Alabama School of Fine Arts Hoover Briarwood Christian Randolph | | <p>Top Teams Statewide</p> <ol style="list-style-type: none"> Homewood Cullman Bradshaw Oak Mountain West Point Muscle Shoals | | <ol style="list-style-type: none"> Calera Vinemont Holly Pond Clay County Lexington Cold Springs | |
| <ol style="list-style-type: none"> St. James School St. Paul's Episcopal | | <p>Other District Leaders (Alphabetical)</p> <ol style="list-style-type: none"> Albertville Dallas County Oxford | | | |

Table 2
Results of 2002 Geometry Contest

Division One

Division Two

Division Three

Top Individuals Statewide

| | | |
|---|-------------------------------------|-----------------------------------|
| 1. Jonathan X. Waite, Vestavia Hills | 1. Claire E. Vinson, Cullman | 1. Thomas E. Dawson, Plainview |
| 2. Fan Yang, Alabama School of Fine Arts | 2. Sarah E. Hamm, Cullman | 2. Tyler N. House, Lexington |
| 3. Chris J. Louis, Vestavia Hills | 3. Trey J. Barnes, Cullman | 3. Erica M. Reel, Plainview |
| 4. Shannon X. Lisenbee, Briarwood Christian | 4. Amy M. Williamson, Dallas County | 4. Brian C. Roberson, Vincemont |
| 5. Ellie S. Barr, Vestavia Hills | 5. Leah K. Miller, Cullman | 5. Corey J. Ledbetter, Holly Pond |

Other District Leaders (Alphabetical)

| | | |
|--|---------------------------------|--|
| Ben J. Jedlovec, Grissom | Kyle J. Gainer, Winfield City | Jessica G. Jackson, New Century Technology |
| Jesse J. Lind, Montgomery Academy | Andrew D. Hartman, Greenville | |
| Noel A. Whitehurst, St. Paul's Episcopal | Michelle L. McGaha, Albertville | |
| | Alston H. Pike, Handley | |
| | Amar Tiwari, Oak Mountain | |

Top Teams Statewide

| | | |
|--------------------------------|------------------|---------------------------|
| 1. Vestavia Hills | 1. Cullman | 1. Plainview |
| 2. Alabama School of Fine Arts | 2. Albertville | 2. Lexington |
| 3. Briarwood Christian | 3. West Point | 3. Holly Pond |
| 4. Grissom | 4. Dallas County | 3. Vincemont |
| 5. Hoover | 5. Homewood | 5. New Century Technology |
| 6. Clay-Chalkville | 6. Muscle Shoals | 6. St. Clair County |

Other District Leaders (Alphabetical)

| | | |
|------------------------|---------------|--|
| The Montgomery Academy | Winfield City | |
| St. Paul's Episcopal | | |

Table 3
Results of 2002 Comprehensive Written Test

Division One

Division Two

Division Three

| Top Individuals Statewide | |
|------------------------------------|------------------------------------|
| 1. Pradeep R. Baliga, Central | 1. Andrew B. Newman, Muscle Shoals |
| 2. Andy C. Eadon, Grissom | 2. Joseph D. Barnes, West Point |
| 3. Anjana S. Madan, Vestavia Hills | 3. Austin F. Taylor, Dallas County |
| 4. Sharat Bhat, Grissom | 4. Rebekah Rogers, Bradshaw |
| 4. Avinash K. Murthy, Hoover | 5. Jeremy T. Gaskins, Oak Mountain |
| | 5. Kimberly Free, West Point |

Other District Leaders (Alphabetical)

| | | |
|------------------------------|-----------------------------------|---------------------------------------|
| Mustafa Ali, Auburn | Richard R. Feltman, Winfield City | Evelyn T. Lut, New Century Technology |
| Chad E. Versiga, Alma Bryant | Cary L. Hackworth, Citronelle | |
| | Mark C. Michelson, Oxford | |
| | Dimple R. Patel, Greenville | |
| | Clay V. Smith, Guntersville | |

Top Teams Statewide

| | | |
|--------------------------------|------------------|----------------------|
| 1. Vestavia Hills | 1. West Point | 1. Sylvania |
| 2. Grissom | 2. Dallas County | 2. Sand Rock |
| 3. Hoover | 3. Cullman | 3. Calera |
| 4. Central | 4. Muscle Shoals | 4. Good Hope |
| 5. Alabama School of Fine Arts | 5. Oak Mountain | 5. Plainview |
| 6. Briarwood Christian | 6. Homewood | 6. Holly Pond |
| 7. Bob Jones | 7. Guntersville | 7. Hanceville |
| 8. Alma Bryant | 8. Bradshaw | 8. Lauderdale County |

Other District Leaders (Alphabetical)

| | |
|--------|--------|
| Auburn | Oxford |
|--------|--------|

Table 4
Final Team Placings in 2002 Comprehensive Contest

| DIVISION ONE | DIVISION TWO | DIVISION THREE |
|------------------------|---------------------|-----------------------|
| 1. Vestavia Hills | 1. Muscle Shoals | 1. Calera |
| 2. Hoover | 2. West Point | 2. Hanceville |
| 3. Central | 3. Dallas County | 3. Holly Pond |
| 4. Grissom | 4. Cullman | 4. Sand Rock |
| 5. Bob Jones | 5. Albertville | 5. Vinemont |
| 6. Clay-Chalkville | 6. Guntersville | 6. Lauderdale County |
| 7. Alma Bryant | 7. Oxford | 7. Lexington |
| 8. Briarwood Christian | | |

Acknowledgements

Many people worked on the 2002 contest. We thank everyone who helped — your efforts were valuable and much appreciated. Here we can list only some of those who made special contributions.

Diane Porter of Troy State University prepared the brochures and supervised the printing and distribution of the written tests. Martha Knight of Jacksonville State University handled registration. The written tests were constructed by Susan P. Slattery of Alabama State University (Algebra II with Trigonometry), Scott Brown of Montgomery, Alabama (Geometry), and Laurie Edler of JSU (Comprehensive). The Algebra II with Trigonometry test was edited by Jeff Dodd, Jason Huffman, Tom Leathrum, Steve White, and Jan Case and typeset by Tom Leathrum and Jeff Dodd, all of JSU. The Geometry test was edited by Jeff Dodd, Ed Smith, and Steve White, and typeset by Steve White, all of JSU. The Comprehensive tests were edited by Jimmy Nanney, William Nowell, Yafang Song, and Pantelimon Stanica, and typeset by William Nowell, all of Auburn University at Montgomery. The ciphering problems were written by Scott Brown of Montgomery, AL and Jeff Dodd of JSU, compiled and edited by Jeff Dodd, and typeset by Steve White of JSU, with additional checking and editing by Steve White, Jan Case, Laurie Edler, Jason Huffman, Martha Knight, Deborah Primm, and Ed Smith, all of JSU. Steve White and Jeff Dodd of JSU did the scoring and score reporting for the written tests and prepared the certificates. Jason Huffman of JSU arranged for the trophies. The site contacts for the contest were Oscar Beck of the University of North Alabama, Lanita Presson of the University of Alabama at Huntsville, Zhijian Wu of the University of Alabama Tuscaloosa, Bruce Atkinson of Samford University, Martha Knight of Jacksonville State University, Jimmy Nanney of Auburn University at Montgomery, Suzanne McGill of the University of South Alabama, and Paige Davis of Lurleen B. Wallace State Junior College. Jeff Dodd and the faculty of the Mathematical, Computing and Information Sciences Department of JSU hosted the final round ciphering tournament.

The contest is administered by a joint committee of the Alabama Council of Teachers of Mathematics and the Alabama Association of College Teachers of Mathematics. The committee continues to be in need of assistance from present or former teachers of secondary or post-secondary mathematics. If you would like to help, if you would like to obtain further information of any kind about the contest, or if you have comments or suggestions regarding the contest, please feel free to contact the contest director (the

author of this article). You can also look at the contest web site: <http://mcis.jsu.edu/mathcontest>, which contains a wealth of information about the contest.

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