

# 2005 Alabama Statewide Mathematics Contest - A Review of the Geometry Exam

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## Introduction

The annual Alabama Statewide Mathematics Contest was directed for the first time by the Mathematics Department of the University of Alabama at Tuscaloosa. The first round was conducted in March 2005, consisting of three, 50-question, multiple-choice tests in Algebra II with Trigonometry, Geometry, and Comprehensive Mathematics. These tests were administered at eight sites located throughout Alabama. A total of 39 teams and 136 students from three divisions competed in the Geometry portion of the contest. Both team and individual scores were determined, with team scores being based on the sum of the highest individual scores. This article will discuss the contents and results of the Geometry test.

The intent of the Geometry test was to assess the student's ability to perform at three levels. The first level consisted of computational problems, which required finding segment length, perimeter, area, and angle measures. Students had to understand basic geometric concepts to solve these problems. The next level was composed of application problems, which included finding edge length, surface area, and volume. An intermediate background in geometric properties of three-dimensional objects was necessary to solve these problems. Finally, the highest level was comprised of fairly difficult problems targeted at students thinking creatively and using more advanced problem-solving strategies. Overall, the Geometry test appeared to have an appropriate balance of questions.

According to the team scores in the Division I category, the winner scored 961 points, a 109-point margin of victory. There was only a nine-point difference between the second and third place teams. In the individual competition, the top score was 250 points with a nine point difference between the first and second place students. The top ten students scored above 225 points. In the Division II category, the first place team scored 664 points, an impressive 80-point margin of victory. The individual competition resulted in a top score of 192 points, which was 12 points higher than the second place student. The scores of the top ten students were above 140 points. In the Division III category, the winning team scored 616 points, a commanding 268-point margin of victory. The individual competition resulted in the top performer scoring 185 points, which was only a nine-point margin over the student in second place. As a whole, both teams and individuals displayed superb problem solving talent.

The results of the Geometry test show that our students are receiving an outstanding foundation in this area of mathematics in our schools. Our mathematics teachers and coaches are continuing to do a great job of preparing their students to be successful problem solvers. Finally, we would like to express our gratitude to the new course director for accepting the position and taking on the monumental amount of tasks at hand. The course director and his administrative assistants performed superbly throughout every aspect of preparing, conducting, and evaluating the test for the contest. Thank you again for allowing us to contribute to an extremely valuable portion of the Alabama Mathematics Education Program.

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