



2011 Advanced SAT Math Camp (entering grades 11-12)

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GENERAL INFORMATION

Mercer Education's *ADVANCED SAT MATH CAMP* for students entering grades 11-12 meets for 2.5 hours per day, twice a week for a total of 20 hours of instruction and exercises. There are two one-month sessions, and students may attend just the first session, just the second session, or both. Enrollment is limited to 1) students who can provide a copy of recent SAT test results in which they received a score of 680 or higher on the Math Sections, as well as evidence of enrollment in or completion of a Pre-Calculus course, or 2) students who meet those criteria on an SAT assessment test provided by Mercer Education. Students are scheduled in groups of approximately the same proficiency, and the small classes, not exceeding eight students, allow teachers to tailor sessions to each student's needs. Over the course of four weeks, students complete six practice SAT Subject Level 1 and 2 tests as part of their homework and have the opportunity to take seven Subject tests under testing conditions similar to those of the real SAT.

This group is for students who wish to prepare for Math SAT Subject Tests, ACT Math and to raise their performance on the regular SAT Math section to the highest level. To qualify for this course, students must have already scored at or above the 95th percentile ranking of students who have taken the SAT. This means that qualifying students, as stated above, must have scored at least 680 on the Math Sections on one of ME's assessment or practice SAT tests (which ME administers by appointment) or on a real SAT test, and must provide evidence of enrollment in or completion of a Pre-Calculus course. Students must provide a copy of their test results to Mercer Education.

The curriculum in this course provides a thorough review of the main topics required by the SAT Math Subject Test and the ACT Math subject material, experience with the varieties of questions that may be asked, and opportunity to gain a complete understanding of test-taking strategies. Additional emphasis is placed on competency in calculator skills and the derivation of multiple analytical approaches to problems. Students continue to strengthen time management skills, take multiple tests, identify areas of weakness, and receive feedback and score analysis from experienced instructors. At the end of each session, parents receive a progress report appraising students' work in the course and offering suggestions for additional academic improvement.

ADVANCED MATH REVIEW (1 hour each class; total 8 hours)

Every student receives focused instruction in all of the areas required to successfully take a SAT Subject Test in Math and an ACT Math section. Typically, this will involve a review of Math material from Algebra 1, comprehensive review of Algebra 2 and relevant Pre-Calculus material, along with relevant strategies and approaches to problem solving aimed towards prompt and successful completion of archetypal questions. Subjects covered include: Functions, Parametric Equations, Coordinate Geometry, Polar Coordinates, Vectors, Complex Numbers, Sequences, Permutations and Matrices.

ADVANCED TEST TAKING STRATEGIES (1.5 hour each class; total 12 hours)

The SAT Subject Tests are usually one hour long with multiple choice questions addressing most of the topics mentioned above. Students will have many opportunities to practice a wide variety of test questions and sections which will be thoroughly reviewed with methodical analysis of each student's work to pinpoint further areas for review and weaknesses in understanding. The material will be targeted to students' gaining a complete understanding of question phraseology, precision in reading the question, and the development of several strategies for solving the problem and checking answers.

A STUDENT'S TYPICAL DAY (TOTAL 2.5 HOURS INSTRUCTION EACH CLASS, TWICE A WEEK)

Preparing for a Math SAT Subject Tests or an ACT/regular SAT Math section involves multiple skills and problem types to which each group of students brings different strengths and weaknesses. Because of this overlap of skills and student diversity, times dedicated to various components may vary depending on the needs of the class.

- ▶ Extensive Problem Solving practice with emphasis on clear understanding of the problem and the fastest successful method of solution
- ▶ Fast Paced, Thorough Review of all topics required for SAT Math Subject Tests 1, 2, and ACT Math
- ▶ Development of Time Management skills to allow for checking of solutions and alternative approaches to problems
- ▶ Review of Calculator short cuts and the use of technology to aid test-taking
- ▶ Methodical Test Analysis with focus on strategies and identifying weak areas for review
- ▶ Supplemental advanced exercises for maximizing test results