

BERKELEY HEIGHTS PUBLIC SCHOOLS
BERKELEY HEIGHTS, NEW JERSEY

**GOVERNOR LIVINGSTON HIGH SCHOOL
MATHEMATICS DEPARTMENT**

SAT REVIEW: MATHEMATICS
0336

Curriculum Guide

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This curriculum may be modified through varying techniques,
strategies, and materials, as per an individual student's
Individualized Educational Plan (IEP).

Approved by the Berkeley Heights Board of Education
at the regular meeting held on _____.

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 New Jersey Core Curriculum Content Standards can also be viewed at www.state.nj.us	

PHILOSOPHY/RATIONALE

SAT Review Math is a one marking period, 1.25 credit course which is offered to 10th, 11th, and 12th grade students as a mathematics elective.

This course is specifically designed to prepare students for taking the mathematics section of the SAT. Tips and techniques for successfully completing the different question types are thoroughly covered, and students are given a chance to monitor their progress by practicing on several SAT sample tests.

This course not only enhances the student's SAT score, it also relieves many of the anxieties associated with taking the SAT 1: Reasoning Test. Standards from the New Jersey Core Curriculum Content Standards for Mathematics, Technological Literacy and Career Education and Consumer, Family and Life Skills have been integrated throughout the curriculum.

COURSE PROFICIENCIES

COURSE OBJECTIVES

1. To increase the student's abilities for successfully completing the mathematics sections of the SAT.
 - A. Increase student's knowledge of process skills in: General Math, Algebra I, Geometry and Algebra II topics. (4.1, 4.2, 4.3, 4.4, 4.5)
 - B. Become familiar with the directions for each section of the SAT test and the specific guidelines for gridding in the student-produced response questions. (4.5/E1; 8.1/B9; 9.1/B2,4)
 - C. Understand the SAT scoring system. (8.1/B9)
 - D. Review test-taking strategies such as: time management, assessing the difficulty of the question, and educated guessing. (4.5/A3, D2,3, F4; 8.1/B9,11; 9.1/B4)
 - E. Complete a minimum of three sample SAT tests (a base-line pretest, a mid-term test, and an end of quarter test).

STUDENT PROFICIENCIES

The student will be able to:

1. Follow oral directions while preparing for and taking a test. (8.1/B9)
2. Practice and develop test-taking skills, such as timing and making high percentage guesses. (4.5/A3, B4, D3; 8.1/B11)
3. Determine whether an answer makes sense. (4.5/D2,4, E1,2, F4; 8.1/B9)
4. Substitute numbers for variables or plug in the answers to back-solve the problem. (4.5/A3, B4, D3 F4; 8.1/B9)
5. Eliminate incorrect answers. (4.5/A3, B4, D2, D3)
6. Grid answers accurately and according to grid-in rules. (4.5/D4, E1,2, F4)

METHODS OF EVALUATION

Methods of evaluation that are used in SAT Review-Math include the following:

1. Attendance.
2. Student effort as evidenced by daily time on task.
3. Sample tests and progress of scores.

SCOPE AND SEQUENCE
COURSE OUTLINE/STUDENT OBJECTIVES

The student will be able to:

N. J. Core Curriculum Standards	Indicators	Course Outline/Student Objectives *see note at end of outline
4.5	A2 C1 D5 F3,4	I. Complete a Base-Line SAT Practice Test
8.1 9.1 9.1	B9 B2 B4	II. Become Familiar with the Unique Structure of the SAT Test A. Directions for Each Section B. Specific Guidelines for Recording Answers in the Student Produced Questions C. Scoring System
4.5	A1,2,3	III. Develop and Practice the Following Test Taking Strategies A. Substitution B. Back-Solving C. Educated Guessing D. Using Calculator to Check
4.1 4.2 4.3 4.4 4.5 9.2	A1,2 B1-4,2 A1-4 B1-4 C1 E1 A1 B2,4 C1 D2 A1,3 B2 C1-4 A2 C3 E1,2,3 A1	IV. Review and Practice Math Skills A. General Math 1. Perform numerical operations 2. Solve problems involving ratios, proportions, and percent 3. Analyze and interpret data using graphs, scatterplots, and matrices B. Algebra I Topics 1. Solve simultaneous equations 2. Solve and graph linear equations/inequalities 3. Solve radical, rational, and quadratic equations 4. Use coordinate geometry to model problems 5. Use Venn diagrams and set theory to solve problems C. Geometry Topics 1. Solve problems using special triangles 2. Interpret diagrams and combination figures to solve problems 3. Understand and use geometric notation 4. Evaluate geometric probabilities 5. Use properties of tangent lines

		<p>IV. Review and Practice Math (continued)</p> <p>D. Algebra II Topics</p> <ol style="list-style-type: none">1. Solve problems involving absolute value2. Evaluate negative and rational exponents3. Use direct and inverse variation4. Understand functions as models and evaluate Functions5. Solve problems involving trigonometry6. Solve sequences involving exponential growth7. Graph functions and their transformations
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Note: The New Jersey Core Curriculum Standards can be accessed at www.state.nj.us

RESOURCES/ACTIVITIES GUIDE

1. Preparing for the SAT I – Mathematics

A. Exercises to review previously learned material will be given by skill area.

2. 10 Real SAT's and The New SAT 2005 Edition

A. Sample SAT tests will be administered and scored to monitor student progress.

SUGGESTED AUDIO VISUAL/COMPUTER AIDS

1. Texas Instruments TI-34 scientific and TI-82 graphing calculators.
2. Overhead projector.

SUGGESTED MATERIALS

Resources for Students

10 Real SAT's

New York, NY: College Entrance Examination Board, 1997

Resources for Teacher

10 Real SAT's

New York, NY: College Entrance Examination Board, 1997

Preparing for the SAT 1 – Mathematics. Andres, Richard J., Bernstein, Joyce.

New York, NY: Amsco School Publications, Inc., 1997

Mastering the Math SAT/PSAT, Lawrence, Paul, Paul, Douglas J.

New York, NY: Great Source Education Group, Houghton Mifflin Co., 1998

The New SAT- 2005 Edition. Staff of Kaplan Test Prep and Admissions

New York, NY: Kaplan Publishing, 2004