

**SAT Prep
Mathematics
Essential Curriculum**

UNIT I: Know the Test

Goal. The student will demonstrate knowledge of best practices recommended for success on the SAT test.

Objectives- The student will be able to:

- a. State the skills measured by the SAT test.
- b. State general SAT test taking rules.
- c. Explain the general format of the SAT test: types of questions, allotted time, and directions for each type of question.
- d. List the mathematics content and types of mathematical questions on the SAT test.
- e. Select appropriate relaxation techniques to assist in establishing positive mind set for the SAT test day.
- f. Explain the importance of pacing and guessing.
- g. Complete the first pre-test.

Note: The objectives of the opening unit are infused throughout the entire course.

UNIT II: Arithmetic

Goal. The student will demonstrate the ability to identify and apply test-taking strategies to solve arithmetic and miscellaneous mathematical problems.

Objectives – The student will be able to solve arithmetic and miscellaneous mathematical problems involving:

- a. Addition, subtraction, multiplication, and division.
- b. Integers and the properties of integers.
- c. Fractions, decimals and percents.
- d. Arithmetic averages, median and mode.
- e. Ratio and proportion.
- f. Counting, ordering and numberlines.
- g. Solving simple word problems.
- h. Probability and data interpretation.

UNIT III: Geometry

Goal. The student will demonstrate the ability to identify and apply test-taking strategies to solve geometry problems.

Objectives – The student will be able to solve geometry problems involving:

- a. Properties of parallel and perpendicular lines.
- b. Angle relationships: vertical angles and angles within geometric figures.
- c. Properties of triangles: right, isosceles, equilateral, special right triangles, similarity, and Pythagorean Theorem
- d. Polygons: perimeter, area and angle measures.
- e. Circles: circumference, area, radius, and diameter
- f. Volume and surface area of solids.
- g. Coordinate geometry

UNIT IV: Algebra

Goal. The student will demonstrate the ability to identify and apply test-taking strategies to solve algebra problems.

Objectives – The student will be able to solve algebra problems involving:

- a. Operations with signed numbers.
- b. Word problems: translating verbal statements to algebraic expressions.
- c. Simplifying and evaluating algebraic expressions.
- d. Elementary factoring and solving simple quadratic equations.
- e. Solving equations and inequalities
- f. Manipulation of positive integer exponents and roots.