

Ray Chinese School SAT Math Syllabus (PreSAT included)

Teacher: Albert Wei

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Schedule: Saturday

8 th	12:00 pm – 12:50 pm	Room:130
7 th	1:00 pm – 1:50 pm	Room:133
6 th	2:00 pm – 2:50 pm	Room:133
8 th	3:00 pm – 3:50 pm	Room:133
9 th	4:00 pm – 4:50 pm	Room:133

This SAT Math course is designed to provide students with maximum exposure to the concept that appear on the SAT Math test. It will entertain, inspire, motivate and ultimately help the students to master the test. Depending on the majority grade and knowledge level of all students, the topic coverage can range from the basic SAT General Math test to the advanced methodologies and problem solving skills.

The course will cover the following math topics:

Algebra

Approximation

Averages

Complex Numbers

Coordinate Geometry (Linear Equation, Circle, Parabola, Hyperbola, Ellipse)

Equations (Quadratic, Radical, Exponential)

Exponents

Factors and Multiples

Fractions

Functions (Domain and Range, Graphing, Roots, Degree)

Inequalities

Inverse Functions

Logarithms

Logic and Proof

Number Theory (Prime, Odd, Even, Positive, Negative)

Percentages

Plane Geometry (Lines, Angles, Triangles, Quadrilaterals, Polygons, Circles)

Polynomial Multiplication and Division

Probability and Statistics (Permutations, Combinations, Factorial)

Quadratics
Roots
Sequences and Limits
Sets (Union and Intersection)
Simultaneous Equations
Solid Geometry (Prisms, Rectangular Solids, Cubes, Spheres, Pyramids)
Trigonometry (Trigonometric Identities, Graphing, Polar Coordinates)
Variations (Direct and Inverse)
Vectors
Verbal Problems
Miscellaneous Topics

Due to the changes every year by ETS and college board to the SAT tests, Reference books are changing accordingly for each grade. Most of the time Kaplan's SAT, Princeton Review and Barron's SAT are the

Students should bring (1) pencil, (2) eraser, (3) TI Calculator 83 or 84, (4) notebook with plenty of papers (5) Completed SAT math assignment due if any.

Parents are expected to support the teacher to accomplish the following goal.

Our goal and expectation of the classes are:

“Learn actively, solve problems smartly, practice with efficiency, preview and review for each class, extend every concept and skill to the limit of the students”.
Doing practice tests in the spare time and share experience and joy of the learning with others.

These Sessions will cover all the topics of SAT Math, with Detailed Explanation and Practice Worksheets

Number and Operations

Arithmetic word problems (including percent, ratio, and proportion)

Properties of integers (even, odd, prime numbers, divisibility, etc.)

Rational numbers

Sets (union, intersection, elements)

Counting techniques

Sequences and series (including exponential growth)

Elementary number theory

Algebra and Functions
Substitution and simplifying algebraic expressions
Properties of exponents
Algebraic word problems
Solutions of linear equations and inequalities
Systems of equations and inequalities
Quadratic equations
Rational and radical equations
Equations of lines
Absolute value
Direct and inverse variation
Concepts of algebraic functions
Newly defined symbols based on commonly used operations
Geometry and Measurement
Area and perimeter of a polygon
Area and circumference of a circle
Volume of a box, cube, and cylinder
Pythagorean Theorem and special properties of isosceles, equilateral, and right triangles
Properties of parallel and perpendicular lines
Coordinate geometry
Geometric visualization
Slope
Similarity
Transformations
Data Analysis, Statistics, and Probability
Data interpretation (tables and graphs)
Descriptive statistics (mean, median, and mode)
Probability

Addition for Pre-SAT class (6th grade)

Motivate the students to get ready for SAT the following year, help students build solid foundation using advanced method of teaching. Help students build correct and smart method of learning, learn how to manage time efficiently.

Coverage:

Algebra, Geometry, Trigonometry, Exponentials, puzzled math and many fun topics.

Primarily the basic topic of SAT

Reference: Olympic Math and Hua Longgeng's Math