

SAT Math: Advanced

(Fall 2023)

This program aims to prepare students (9th grade and up) for the SAT/ACT Math Test and to offer student an opportunity to learn and build a solid foundation in solving math problems. It covers algebra, geometry, data analysis and problem solving skills. Thirty percent of class time will be spent on reviewing contents or introducing new concepts, 70% of time will be on problem solving skills. We will focus on learning and applying efficient ways and short-cut to solve math problems accurately and easily.

During the SAT Math preparation class, we will

- review the topics and contents required for SAT/ACT math exam
- learn and enhance skills/methods/tactics for solving math questions easily
- practice various questions in the four areas: Heart of Algebra, Problem Solving and Data Analysis, Passport to Advanced Math and Additional Topics in Math
- Identify your areas that need improvement by doing diagnostic tests and SAT exams
- Increase your interest in Math, confidence in test taking, and improve SAT score 50-200+ or close to a perfect score
- connect elementary concepts to advanced math

There are 14 lessons in the fall of 2023. In each lesson we will review the contents and then do questions with various difficulty levels. Students are encouraged for class discussion. Students are required to do homework (approximately 10 questions after each lesson) and do 4 SAT practices. Errors from exams and homework will be analyzed and discussed in class.

Tentative Syllabus (No class on 9/3).

Class 1 on 8/13/2023: Set, numbers and operations

Class 2 on 8/20/2023: Algebraic expression and operations

Class 3 on 8/27/2023: Comprehensive arithmetic questions

Class 4 on 9/10/2023: Linear equation system, linear inequalities, and their geometric presentation

Class 5 on 9/17/2023: Quadratic equation and geometric presentation

Class 6 on 9/24/2023: Other equations, sequences and functions

Class 7 on 10/1/2023: Geometry - lines, angles and triangles, trigonometry

Class 8 on 10/8/2023: Geometry - quadrilaterals, circles

Class 9 on 10/15/2023: Geometry – solid geometry, coordinate geometry

Class 10 on 10/22/2023: Graphs of functions

Class 11 on 10/29/2023: Probability, statistics and data analysis

Class 12 on 11/5/2023: Comprehensive SAT questions

Class 13 on 11/12/2023: Comprehensive SAT questions/ Final review

Class 14 on 11/19/2023: Final Exam

Reference books:

1. 48 New SAT Math Lessons to improve Your Score in 48 Days, Dr. Steve Warner, (available at Amazon.com)
2. Barron's New SAT
3. College Board SAT STUDY GUIDE
4. Any other SAT preparation materials from Kaplan, Princeton Review etc.