

课程/Course:心算速算

老师/Teacher: 唐军平

学生/Students: Grade 4th-5th

为期/Duration: 1 hours a week,

数学预备知识：熟练记住乘法口诀。

课程说明/Course Description:

本课程训练学生将运算技能建立在对运算性质与规律的理解之上，如加法的同一律、交换律、结合律、乘法的交换律、结合律，分配律，括号的运用，从而熟练的掌握运算。特别帮助学生将**9x9**乘法表扩展到**99x99**乘法表，使得学生能够对两位数的运算进行心算速算。

減 法

- Subtraction_Skills_0_Turn subtraction to addition;
- Subtraction_Skills_1_No borrowing
- Subtraction_Skills_5_by over-subtracting;
- Subtraction_Skills_6_by under-subtracting;
- Subtraction_Skills_7_subtracting from a power of 10;
- Introduction to 99 x 99 table;
- Multiplying by applying commutative rule;
- Multiplying by applying associative rule;
- Multiplying by applying distributive rule (break apart);
- Multiplying with no carrying;
- Multiplying with factors
- Multiplying by 11, 21, 31...
- Multiplying by 9, 19, 29.....
- Multiplying by multiples of 9
- Multiplying by multiples of 11
- Multiplying number which digits has multiplied relationship
- Multiplying same number (square)_5_Perfect square
- Multiplying same number (square)_6_Perfect square
- Multiplying same number (square)_7_Perfect square
- Multiplying same number (square)_8_Perfect square
- Multiplying same number (square)_9_Perfect square
- Multiplying same number (square) ending with 1
- Multiplying same number (square) ending with 9
- Multiplying numbers just under 100



加 法

- 同一律 (Identity law) 及在加法中的运用;
- 互补数 (Complement numbers) 与交换律 (commutative law);
- 交换律在加法中的运用;
- 数字重组与结合律 (associative law)
- 结合律在加法中的运用;
- Addition skills_ adding complements first;
- Addition skills_ breaking apart a number;
- Addition skills_ picking a point of reference;
- Addition skills_ No carrying;
- Addition skills_ based on patterns;

教师介绍/About The Teacher: 唐军平 博士

Dr. Tang has background in Physics, Biophysics. He obtained his Ph. D in engineering from UT Austin。唐老师在华夏任教多年，是华夏基础数学老师，教学中认真负责，帮助孩子们把知识点掌握好，巩固住，为孩子们初中数学课的学习奠定了扎实的数学基础。

课程/Course: 代数 1/Algebra I

老师/Teacher: Ziping Lin 林子平

学生/Students: Grade 6th-8th

为期/Duration: 2 hours a week, 2 semesters

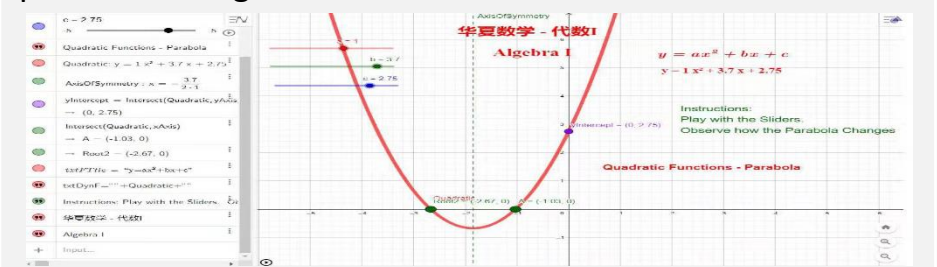
先决必修课/Pre-requisites: Pre-Algebra

准备为/Prepare for: Geometry, Algebra II, and SAT Math

课程说明/Course Description:
Algebra I makes up the Heart of Algebra in SAT Math. This course helps students to explore the tools of Algebra. Students learn to comprehend fundamental Algebra Concepts such as Factoring Technique, Completing the Squares, Quadratic Equations, Rational Expressions, and master the ability to use Logical Reasoning and Solving problems using different methods.

课程内容/Course Content:

- Solving Linear Equations.
- Functions and Patterns.
- Analyzing Linear Equations.
- Solving Systems of Linear Equations.
- Solving Linear Inequalities.
- Polynomials.
- Factoring.
- Quadratic and Exponential Functions.
- Radical Expressions and Triangles.
- Rational Expressions and Equations.



教师介绍/About The Teacher: Teacher Lin is meticulous and responsible in teaching, focusing on students' understanding of concepts, emphasizing students' expressive ability, advocating interaction in the classroom, and fully combining modern technology and his practical work experience in engineering, computer, mathematics, statistics, investment, and teaching. In the Huaxia big family, Teacher Lin is deeply loved by students and recognized by parents. Mr. Lin has been passionately teaching Pre-Algebra, Algebra I, Geometry, Algebra II, SAT Math, Pre-Calculus, and Calculus to middle & high school students for more than 10 years. Benefitted from his education and research in Signal Processing and Statistics, plus his work experience as an electronics engineer and a software developer for 中科院光机所, Halliburton, Exxon, and BMC Software, Mr. Lin is a seasoned stock investor & option trader and a passionate math teacher.

林老师教学认真负责，注重学生对概念的理解，强调学生的表达能力，倡导课堂中的互动，充分结合现代科技以及他在工程，计算机，数学，统计，投资，教学各领域的实际工作经验，进行数学教学，在华夏这个大家庭，深受学生喜爱和家长的认可。

Geometry 几何

课程/Course: 几何/Geometry

老师/Teacher: Ziping Lin 林子平

学生/Students: Grade 7th-9th

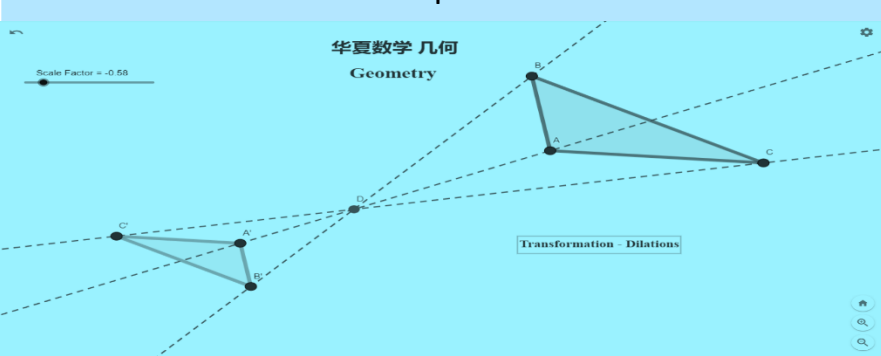
为期/Duration: 2 hours a week, 2 semesters

先决必修课/Pre-requisites: Algebra I

准备为/Prepare for: Algebra II, SAT Math

课程说明/Course Description:

Geometry Concepts make up a significant portion of SAT Math. This course helps students to recognize and work with geometric concepts. They build on ideas of inductive and deductive reasoning, logic, concepts, and postulates and theorems of Euclidean plane and solid.



课程内容/Course Content:

- Reasoning and Proof.
- Parallel and Perpendicular Lines.
- Congruent Triangles.
- Relationships in Triangles.
- Quadrilaterals.
- Proportions and Similarity.
- Right Triangles and Trigonometry.
- Transformations.
- Circles.
- Areas of Polygons and Circles.
- Extending Surface Area.
- Extending Volume.
- Euclidian vs. Non-Euclidian Geometry.



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课程/Course: 代数 2/Algebra II

老师/Teacher: Ziping Lin 林子平

学生/Students: Grade 8th-10th

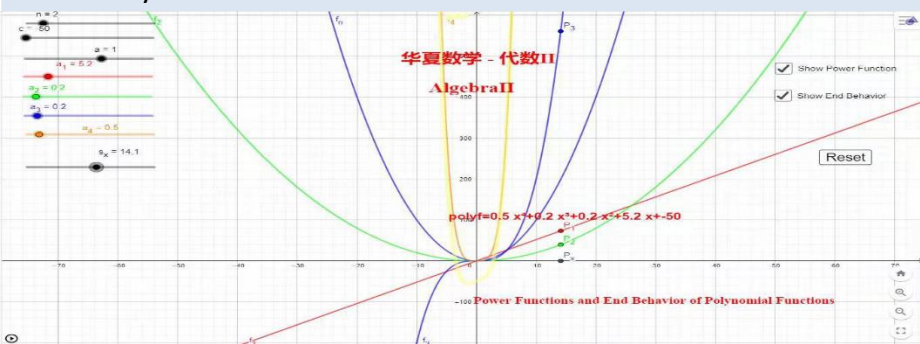
为期/Duration: 2 hours a week, 2 semesters

先决必修课/Pre-requisites: Algebra I, Geometry

准备为/Prepare for: Pre-Calculus and SAT Math

课程说明/Course Description:

Algebra II and Algebra I makeup Passport to Advanced Math in SAT Math. This course will progressively and systematically teach student some of the more difficult and advanced concepts in Algebra. The class will use a software to help student visualizing some of the concepts and building solid foundation for Pre-Calculus and eventually Calculus.



课程内容/Course Content:

- Equations and Inequalities.
- Linear Relations and Functions.
- Systems of Equations and Inequalities.
- Matrices.
- Quadratic Functions and Inequalities.
- Polynomial Functions.
- Radical Equations and Inequalities.
- Rational Expressions and Equations.
- Exponential and Logarithmic Relations.
- Conic Sections.
- Sequences and Series.



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Pre-Calculus

预备微积分

华夏中文学校总校春季**周末班**ZOOM网课

星期六/星期日: 9:00-11:00Am

点击链接注册: www.houstonhuaxia.org

联系电话: 281-798-3016

课程/Course: 预备微积分 Pre-calculus

老师/Teacher: Ziping Lin 林子平

学生/Students: Grade 10th-12th

为期/Duration: 2 hours a week, 2 semesters

先决必修课/Pre-requisites: Algebra II, Geometry

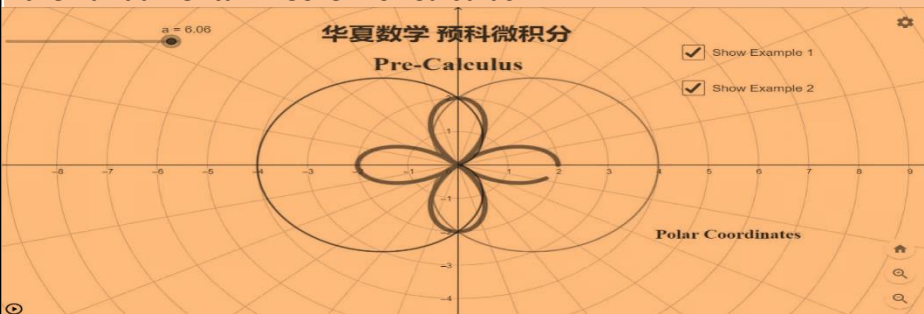
准备为/Prepare for: Calculus, SAT Subject Test in Math Level 2

课程说明/Course Description:

Calculus developed by Isaac Newton and others has wide applications in Physics and other natural sciences, Engineering, and Economics. HuaXia Pre-Calculus is aimed to help student prepared for the All-Important Calculus. This course will progressively and systematically teach student some of the advanced concepts in Pre-Calculus and introduce Limits, Derivatives and Antiderivatives, and the Fundamental Theorem of Calculus.

课程内容/Course Content:

- Linear Equations & Inequalities and Piecewise Functions.
- Systems of Linear Equations & Inequalities and Matrices.
- Families of Graphs – Symmetry, Continuity, and End Behavior.
- Polynomial, Rational, and Radical Functions & Inequalities.
- The Trigonometric and Periodic Functions.
- Trigonometric Identities and Equations.
- Vectors and Parametric Equations.
- Polar Coordinates and Complex Numbers.
- Introduction to Analytic Geometry and Conics.
- Exponential and Logarithmic Relations.
- Arithmetic, Geometry, and Special Sequences & Series.



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