

先后就学于浙江大学、上海交大、University of California, Davis、UH 等多名校，毕业于上海交大和 UH 的林子平双硕士具有多年美国初高中数学和计算机方面的教学及辅导实践经验，继续于总校周六、周日教授 **Pre Algebra**、**Algebra I**、**Algebra II** 和 **Geometry**

Pre Algebra

This course provides students a solid foundation in algebra and prepares them for future study of algebra, geometry and math competition.

It helps students to learn computational and problem-solving skills and the language of algebra. Students translate word phrases and sentences into mathematical expressions; analyze geometric figures; solve problems involving percentages, ratios, and proportions; graph different kinds of equations and inequalities; calculate statistical measures and probabilities; apply the Pythagorean theorem; and explain strategies for solving real-world problems.

Topics include

- Integers
- Equations
- Factors and Fractions
- Rational Numbers
- Ratio, Proportion, and Percent
- Functions and Graphing
- Equations and Inequalities
- Real Numbers and Right Triangles
- Two-Dimensional Figures
- Three-Dimensional Figures
- Statistics and Probability

- Polynomials and Nonlinear Functions

Algebra I

This course helps students to explore the tools of algebra. Students learn to identify the structure and properties of the real number system; complete operations with integers and other rational numbers; work with square roots and irrational numbers; graph linear equations; solve linear equations and inequalities in one variable; solve systems of linear equations; use ratios, proportions, and percentages to solve problems; use algebraic applications in geometry, including the Pythagorean theorem and formulas for measuring area and volume; complete an introduction to polynomials; and understand logic and reasoning.

Topics include

- 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
- Statistics and Probability

Algebra II

This course teaches students the key concepts in Algebra II and prepares them for Pre-Calculus and eventually Calculus.

It is designed to build on algebraic and geometric concepts. Students learn advanced algebra skills such as systems of equations; advanced polynomials; imaginary and complex numbers; quadratics, and concepts; and Exponential and Logarithmic Relations. It also introduces matrices and their properties.

Topics Include

- 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
- Probability and Statistics

Geometry

This course covers key concepts of Geometry and enables students to achieve high level of mathematical skills and to understand the interdependence among geometric and algebraic concepts.

It helps students to recognize and work with geometric concepts in various contexts. They build on ideas of inductive and deductive reasoning, logic, concepts, and techniques of Euclidean plane and solid geometry and develop an understanding of mathematical structure, method, and applications of Euclidean plane and solid geometry. Students use visualizations, spatial reasoning, and geometric modeling to solve problems. Topics of study include points, lines, and angles; triangles; right triangles; quadrilaterals and other polygons; circles; coordinate geometry; three-dimensional solids; symmetry; the use of transformations and Trigonometry.

Topics Include

- 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