



STEM (Math & CS) Pathway Exploring Problem Solving & Competition Math (UL)*

Instructor: Philip Vuong

Section 1

June 16 - July 30 (Wednesdays & Fridays)
10:40-12:10 pm

Section 2

June 16 - July 30 (Wednesdays & Fridays)
2:40-4:10 pm

Course Description

Problem solving is an essential skill in the study of math. In this class, students learn how to tackle a variety of math problems, while learning how to work individually and in groups to create solutions. Students don't just learn math concepts through rote drilling. Rather, they learn how to be intuitive and creative in working with mathematical concepts. This course is designed for advanced 8th grade students and advanced 7th grade students.

Program Objectives

This course teaches students the critical thinking and reasoning skills necessary for competition math and standardized test prep (PSAT, SSAT, SAT, ACT). In addition, they learn how to be more efficient in applying their mathematical thinking. A great course for students looking to bridge the gap between mathematical practice and computation to mathematical application and word problems.

Topics will include:

- Drawing a Picture or Diagram
- Making an Organized List, Solving a Simple Problem
- Trial and Error, Acting Out the Problem
- Working Backwards, Writing an Equation, Using Deduction
- Algebra: Common Factorization, Polynomials, Vieta's Formula
- Number Theory: Prime Factorization, Euclidean Algorithm, Modular Arithmetic
- Counting and Probability: Combinatorics, Probability
- Geometry: Angle Chasing, Triangles and Quadrilaterals

Course Curriculum (provided)

- FLEX Math Problem Solving Strategies
- AMC 8 & 10 Practice Tests

Tuition**

- \$1,495
- Curriculum: \$50

FREE 4 Week Preparation Course:

- Register by 4/17
- Classes on 5/13, 5/20, 5/27, 6/3
- Thursdays (4:30 - 6 pm)

Instructor Background: Philip Vuong (FLEX College Prep Principal Instructor)

- 10+ years teaching competition and standard math topics at the middle and high school level
- Stanford University Math Camp (SUMaC): Former Curriculum Developer, Instructor and Admission Officer
- Stanford Online High School: Former AP Calculus Instructor
- Education: Stanford University, BS in Mathematics and BS in Electrical Engineering

*Because of variations in their knowledge and experience with mathematics, students signing up for the mathematics Pathway will take a **placement exam** to assess the appropriate course for their mathematical abilities. **Take here:** <https://forms.gle/ikb4tf5Me4gwmACw6>

- You will be emailed your score in 1-2 weeks, with a decision to see which section you'll be placed in.

**Ask about our early registration and group discounts.

For more information or to register, please contact headstart@flexcollegeprep.com or call **(408) 252- 7742**.