Prealgebra Part 1, Fall 2025

(Part 2 was offered in Spring 2026)

CONTACT: 214-907-8310, meimei.shengxu@gmail.com,
webchat: tsinghua954251
TO REGISTER: **https://xumath.org**

WHEN, WHERE AND HOW MUCH?

Term: Aug 24, 2025 – Jan 8, 2026
In-Person (at PolyEducation) and Virtual (live zoom) Lecture: 6:30pm-8:00pm (CT), Sun
Live zoom Homework Solving: 7:00pm-8:00pm (CT), Thu
In-Person Address: PolyEducation, 4116 W Spring Creek Parkway, Suite C500, Plano, TX 75024
Format:

- 20 1.5-hour in-person or live zoom lectures + 20 1-hour live zoom homework solving
- 18 homework assignments (to be graded) + 2 take-home exams (to be graded)

Note: A student can request the video of a class if the class has to be missed.
Tuition: **$930** (register by July 13, 2025), **$960** (register after July 13, 2025)

WHO TEACHES?

Dr. Sheng Xu: Associate professor of math at Southern Methodist University

- Received Ph.D. from Cornell and did post-doc at Princeton and Cornell;
- Taught 12 different undergraduate and graduate math courses at SMU in past 19 years;
- Received Betty McKnight Speairs Endowed Teaching Excellence Award
- Recommended by K12 students and parents in anonymous testimonials on https://xumath.org/testimonial/
- Published an undergraduate textbook *Introduction to Scientific Computing with Matlab and Python Tutorials*, Taylor Francis, 2022

COURSE INFO

Syllabus, Sample Notes and Videos: **https://xumath.org**
Required Textbooks:

- **[1]** Customized notes by Prof. Xu with reference to various books (available before each class)
- **[2]** R. Rusczyk, D. Patrick and R. Boppana, The art of Problem Solving (AoPS) Prealgebra

References:

- **[3]** Ron Larson et al., *Pre-algebra*, McDougal Littell

TOPICS

- Integers; Powers with integer exponents
- Basics of number theory: Divisibility, Prime factorization, LCM and gcd
- Fractions; Rational numbers
- Decimal numbers; Scientific notation
- Variables; Expressions; Equations; Inequalities
- Ratios; Proportions; Percents; Rates
- Square Roots; Irrational numbers; Real numbers
- Counting; Probability
- Data; Statistics
- Basics of Euclidean geometry: Common shapes; Perimeter; Area
- Basics of analytical geometry: Cartesian coordinates; Graphs of equations