

NUMBER SENSE

Target Students

4th - 6th graders with no experience or basic skill.

Objectives

Number sense is a person's ability to understand, relate, and connect numbers. Children with strong number sense think flexibly and fluently about numbers. They can visualize and talk comfortably about numbers, compute mentally, and relate numbers to real-life problems. The course is designed to stimulate students' curiosity with numbers through challenging and fun problems, to develop mental math strategies and improve calculation speed & accuracy. This course also aims to help motivated students to prepare for various math competitions such as TMSCA, Math Counts, and Math League.

Course Content (subject to adjustment based on students' levels & needs):

- Introduction
- Arithmetic Rules
- Rounding and Estimation
- Decimals, Fractions, and Percents
- Common Factors (GCD) and Common Multiples (LCM)
- Prime Numbers
- Remainders
- Power of Numbers (Squares, Cubes, Exponent Laws)
- Square Roots and Cube Roots
- Base Conversion
- Roman Numerals
- Ratios and Proportions

- Inequalities
- Mean, Median, and Mode
- Simple Equations
- Consumer Type (Money) Problems
- Word Problems
- Sets and Subsets
- Sequences and Series
- Factorial
- Counting and Probability
- Unit Conversion
- Basic Geometry (Angles, Perimeters, Areas, Volumes, Coordinate)
- Other Advanced Topics and Special Problems

In-Class Exercise and Homework

Problems on each specific topic and packets from past contests.

Instructor

Edison Lu, an enthusiastic young scholar with passion for mathematics & science and strong problem-solving skills

- Completed Algebra I, Algebra II, Geometry, Biology in middle school with GPA 4.5
- Won notable titles at various contests: 1st Place at Math League Greater Houston Championship, 4th Place at Math League State Championship, 23rd Place at Math League National Championship, 1st Place in Math and 2nd Place in Number Sense at PSIA State Championship, 5th Place in Number Sense at TMSCA State Meet, 12th Place in Math at TMSCA State Meet, etc.
- Vice President of the Student Council at The Honor Roll School (THRS)
- Tutor for Contest Math class
- Team Captain for THRS Science Bowl Team