INFINITY
Enrichment Center

GRADE LEVEL MATH COURSES for elementary and middle school

Level 1A : Addition & Subtraction 1
- Single digit addition and subtraction
- Place values
- Multi digit addition and subtraction without regrouping
- Word Problems

Level 1B : Addition & Subtraction 2
- Multi digit addition and subtraction with regrouping
- Length, Weight, Capacity, Time, Money and their Units
- One-step and Two-step Word Problems

Level 2A : Multiplication & Division 1
- Multiplication tables of 1, 2, 3, 5, 10
- Division by 1, 2, 3, 5, 10
- Multiplication tables of 4, 6, 7,8,9
- Division by 4, 6, 7, 8, 9
- Word Problems

Level 2B : Multiplication & Division 2
- Multiplying multi-digit numbers by 1-digit numbers (without/ with regrouping)
- Quotient and Remainder
- Dividing multi-digit numbers by 1-digit numbers (without/ with remainders)
- Multiplication and division by powers of 10
- Multiplication by 2-digit numbers
- Word Problems

Level 3A : Fractions 1
- Factors and Multiples
- GCF and LCM
- Introduction of Fractions
- Equivalent Fractions
- Simplifying Fractions
- Comparing Fractions

Level 3B : Fractions 2
- Proper and Improper Fractions, Mixed Numbers
- Addition and Subtraction of like fractions
- Fraction of a number

Level 3C : Fractions 3
- Addition and Subtraction of unlike fractions
- Multiplication of Fractions
- Division of fractions
- Word problems with fractions

Level 4A : Decimals
- Tenths, Hundredths, Thousandths
- Converting Fractions to decimals and vice versa
- Comparing decimals
- Rounding off decimals
- Addition and Subtraction of Decimals
- Multiplying decimals by whole numbers/ decimals
- Dividing decimals by whole numbers
- Long division (Dividing whole numbers with decimal quotient)

Level 4B : Geometry for Elementary

- Two and three dimensional geometric figures
- Different types of angles and triangles
- Area and Perimeter of Rectangles and Squares
- Square numbers and Square roots
- Volume of rectangular prisms and cubes

Level 5A : Percentages
- Introducing Percentages
- Expressing percentages as fractions and decimals
- Writing fractions and decimals as percentages
- Percentage of a quantity
- Word problems
- Ratio, Proportion

- Rate, Speed
- Average (Mean), Median, Mode, Range
- Triangles : Sum of the angles, Sum of the sides, Exterior angles, Area

Level 5B : Pre-Algebra
- Four operations with positive and negative Integers
- Order of operations (PEMDAS)
- Writing Variable expressions
- Evaluating Algebraic expressions
- Like and unlike terms
- Simplifying (combining) variable expressions
- Distributive property

Level 6A : Linear Equations and Inequalities
- Solving one step linear equations by adding/ subtracting/ multiplying/ dividing
- Solving two step and multi step linear equations
- Solving word problems by writing linear equations
- Graphing single variable inequality
- Solving one step/ two step/ multi step inequalities

Level 6B : Linear Functions
- Slope and Intercepts of a line
- Finding Slope from graph/ two points/ equation
- Slope Intercept form/ Point Slope form/ Standard form of a linear equation
- Writing linear equations
- Slope of parallel and perpendicular lines

Level 7A : System of Equations
- Solving system of equations by Graphing, Substitution and Elimination methods
- System of equations word problems
- Graphing system of inequalities
- Absolute value equations
- Compound inequalities and absolute value inequalities

Level 7B : Exponents and Radicals
- Properties of Exponents (multiplication/ Division/ Power Rules)
- Scientific Notation
- Simplifying Square Roots/ Radicals
- Pythagorean Theorem and Classification of Triangles
- Distance Formula, Midpoint Formula, Parallel lines and transversal
- Circles : Radius, Diameter, Chord, Arc, Circumference, Area, Tangent

Level 8A : Polynomials, Factoring Quadratics
- Naming Polynomials

- Addition, Subtraction and multiplication of polynomials
- Multiplication of special case polynomials
- Factoring quadratic polynomials
- Dividing polynomials

Level 8B : Quadratic Functions
- Graphing Quadratic Equations
- Properties of Parabolas
- Vertex form/ Standard form/ Intercept form of quadratic equations
- Solving Quadratic Equations by taking square roots/ factoring/ completing the square
- Quadratic formula and the discriminant
- Rational and Radical expressions

Level 8C : Advanced Topics
- Trigonometry
- Complex Numbers
- Logarithms
- Matrix

HIGH SCHOOL MATH COURSES

One-to-one sessions to help solving high school Math homework on the following topics
- Algebra 1
- Geometry
- Algebra 2
- Pre-Calculus
- Calculus AB
- Calculus BC

COMPETITIVE MATH COURSES

These courses are for advanced elementary and middle school students who would like to have a good practice on solving word problems and to participate in various math competition programs. These courses will prepare the students to be successful in MathLeague, Math Kangaroo, Mathcounts, Math Olympiad, AMC and many other math competitions.

- Comp Math1 - Elementary Students (Grade 4&5)
- Mathcounts Beginner - Grade 6
- Mathcounts Intermediate - Grade 7
- Mathcounts Advanced - Grade 8

ACT / SAT MATH COURSES

- ACT Math Beginner - Grade 8/9
- ACT Math Intermediate - Grade 10
- ACT Math Advanced - Grade 11
- SAT - Grade 9-11