



Building NeXTGen **Responsible AI & Quantum Leaders**

Empowering the Next Generation
with AI-Ready Programs and
Future-Forward Skills



The World Is Changing, So Must **the Way We Learn!**

The world is changing rapidly from self-driving cars to AI-generated content, from algorithms that diagnose diseases to smart assistants simplifying our everyday lives.

This transformation brings exciting opportunities for the next generation. To truly prepare them, we must nurture:

- Strong math foundations
- Creative, logic-based coding skills
- Deep understanding of AI and hands-on possibilities

This shift isn't just important, it's essential. And the earlier we begin, the stronger their future becomes.



Here's How, We Help You Grow

{igebra.ai} is a US-based AI research, development, and education company founded by Srinivasa Vemula—an educator and technologist based in the United States.

He is joined by a team of co-directors and a growing network of 50+ global partners. Together, they bring deep expertise in education, technology, and innovation, delivering the knowledge, tools, and passion needed to help students become truly AI-ready.



math

School Math + Concept Clarity + Exam Confidence

Program Details:

- ✓ Live Online Classes for Grades 1 to 10
- ✓ 100% aligned with US, Canada, IB school standards
- ✓ 1 Hour Class Per Week
- ✓ High Quality Video Backup to Revise Anytime
- ✓ Supplementary Live Math Classes for Additional Support
- ✓ Highly Qualified, Passionate & Trained Math Tutors
- ✓ Regular PTMs

\$129 Per Month



math Topics

Grade 1

Number & Place Value

- Counting up to 120
- Forward & Backward Counting
- Reading and writing numbers
- Skip counting by 2s, 5s, and 10s
- Before/After Numbers
- Comparing two-digit numbers using $>$, $<$, and $=$
- Ascending & Descending Numbers
- Intro to Odd/ Even
- Understanding place value up to 3 digits
- Number Names
- Standard Form & Expanded Form
- Number Patterns

Addition & Subtraction

- Addition up to 2 digits
- Visualization of Addition and Subtraction
- Solving one step word problems
- Subtraction up to 2 digits
- Subtraction up to 2 digits with regrouping

Measurement & Data Handling

- An Introduction to Measurement
- Measuring Volume, Weight, and Capacity
- Using standard and non-standard units of measurement
- Time: Am/ Pm, basic clock introduction
- Calendar: Months, week
- Organize, represent, and interpret data

Geometry

- Identifying and classifying 2D shapes
- Identifying and classifying 3D shapes
- Understanding partitioning of shapes
- Exploring Spatial Vocabulary (above, below, beside, behind, etc.)



math Topics

Grade 2

Number Systems

- Introduction to 3-Digit Numbers (Upto 1000)
- Working with 3-Digit Numbers (Upto 1000)
- Odd / Even Number
- Ordinal Numbers
- Roman Numerals (up to 20)

Addition and Subtraction

- Addition and Subtraction of 3-Digit Numbers
- Mental Arithmetic
- Two step Word Problems
- Input/Output Tables

Multiplication and Division

- Repeated Addition
- Equal Groups
- Arrays
- Number Line Jumps
- Introduction to Multiplication Tables using Grids
- Properties and Ideas
- One - Step Problems of Multiplication & Division

Geometry

- Lines and Shapes
- Plane and Solid Shapes
- Explaining Faces, edges, vertices for 3D
- Divide shapes into halves, thirds, fourths
- Understand equal parts
- Perimeter and grid based Area for rectangles
- Understand Symmetry & Spatial Vocabulary

Measurement & Data Handling

- Measurement of Length
- Measurement of Weight
- Measurement of Capacity
- Work with Time and Money
- Calendar: Recognizing day of the week from calendar table
- Collect & Organize Data
- Read & Interpret Picture Graphs & Bar Graphs
- Comparing & reasoning: more than, fewer than, equal to



math Topics

Grade 3

Number Systems

- An Introduction to 4-Digit Numbers (Up to 1 million)
- Working with 4-Digit Numbers (Up to 1 million)
- Parity and Ordinality
- Estimation & Rounding to nearest 10, 100, & 1,000
- Roman Numerals (Up to 100)

Addition & Subtraction

- Addition and Subtraction of 4-Digit Numbers
- Mental Arithmetic

Multiplication

- Introduction: Equal Groups, Array, Number line model
- Multiplication Tables using the grid
- Multiplication Tables - (0-10)
- Word Problems
- Multiplication Tables (11 - 20)
- Multiplying with Multiples of 10
- Properties of Multiplication
- Areas - Application of Multiplication

Division

- Understanding Division as Equal Sharing & Grouping
- Division as Repeated Subtraction
- Division and Multiplication Connection (Fact Families)
- Division Using Arrays
- Using Number Lines to Divide
- Dividing with and without remainders
- Solving Multi-Step Multiplication/Division word Problems

Fractions

- Understand Fractions as Part of a Whole and a Group
- Represent Fractions on Number Lines
- Compare and Order Fractions
- Types of Fractions: proper, improper, equivalent fractions
- Generate Simple Equivalent Fractions
- Introduction to Fraction Operations: Add, Subtract, Multiply, Divide

Measurement & Data Handling

- Measurement of Length, Weight & Capacity
- Time to the nearest minute & elapsed time
- Understand area as the no. of square units covering a surface
- Connect area to multiplication
- Use area models
- Perimeter of polygons
- Tally Charts
- Scaled Pictographs & Interpret pictographs
- Bar Graph & Line Plots (Introduction)
- Data Thinking

Geometry

- Lines, Segments, and Rays
- Understanding Quadrilaterals and Their Shared Attributes

math Topics

Grade 4

Number Systems

- Read & Write Large Numbers
- Place Value
- Compare and Order Numbers
- Standard & Expanded Form
- Rounding to the nearest 1,000 and 10,000
- Roman Numerals (up to 1,000)
- Introduction
- Integers on number line
- Only Addition/Subtraction

Operations & Algebraic Thinking

- Add & Subtract Multi-Digit Numbers (Upto 1M)
- Multiply 3 & 4 Digit Numbers by 1 or 2 digit
- Multi-step multiplication word problems
- Long Division (1 & 2 Digit)
- Solve word problems: multiplication & division
- Introduction: Exponents & Order of Operations
- Prime Numbers, Divisibility Rules
- Factors, Multiples: HCF / LCM
- Introduction to Algebraic Expressions
- Balanced Equations & Patterns

Fractions

- Introduction to Fractions
- Equivalent Fractions (Visuals)
- Mixed \leftrightarrow Improper Fractions
- Add & Subtract (Unlike Denominators)
- Compare & Order Fractions
- Multiply & Divide Fractions
- Fractions on Number Line

Decimals

- Introduction to Decimals
- Tenths & Hundredths
- Fractions and Decimals(Conversion)
- Compare and Order Decimals
- Decimal Operations
- Real-Life Decimal Use (Money)

Measurement

- Length (customary and metric)
- Weight (customary and metric)
- Capacity(customary and metric)
- Time Problems- Hrs & Mins Conversion
- Money and Temperature

Geometry

- Lines: Parallel, Perpendicular, & Intersecting Lines
- Types of Angles
- Measure Angles with Protractor
- Classify Triangles, Parts of a Circle
- Classify Quadrilaterals
- Perimeter and Area
- 3D Geometry
- Introduction to Volume, Congruent Shapes
- Symmetry & Transformations

Coordinate Geometry

- Understand Coordinate Plane (x and y axes)
- Plot Ordered Pairs
- Describe Position & Movement

Data, Statistics & Probability

- Collect and Organize Data
- Line Plot with Fractions & Decimals, Bar Graphs, Double Bar Graphs, Pie Charts, .
- Mean, Mode, Median, and Outliers
- Introduction to Probability & Experimental Activities

math Topics

Grade 5

Integers

- Introduction to Integers (Positive & Negative Numbers)
- Number Line Representation
- Integer Operations
- Word Problems with Integers

Fractions

- Mixed & Improper Fractions
- Compare & Simplify
- Add & Subtract Fractions
- Multiply & Divide Fractions
- Interpret multiplication as scaling
- Signed Fractions

Decimals

- Introduction to Decimals
- Estimating & Rounding
- Add, Subtract, Multiply & Divide Decimals
- Multiply/Divide by Powers of 10
- Signed Decimals
- Real-Life Decimal Applications
- Fractions to Decimals

Introduction to Pre- Algebra

- Numerical expressions
- Patterns & Functions
- Expressions and Variables
- Evaluate Expressions
- Simple Equations
- Solving Equations

Ratios, Proportions & Percent

- Introduction to Ratios
- Introduction to Percentage.
- Numbers to Percent Conversion and percentage to number
- Real-Life Percent Applications

Measurement & Volume

- Unit Conversion
- Time, Weight, Length, Volume, Temperature
- Conversion Tables
- Add and Subtract units
- Understand & Measure Volume using Unit Cubes
- Volume Formulas & Real-Life Applications

Geometry & Coordinate Plane

- Identify & Classify 2D and 3D Shapes Using Properties
- Circle Parts: Radius, Diameter, Circumference
- Perimeter, Area & Volume Concepts
- Graph Points on Coordinate Plane
- Solve Real-World Problems using Coordinates
- Congruent Figures & Symmetry

8. Data & Probability

- Mean, Median, Mode, and Range
- Reading Graphs: Line Plots with fractions, Bar, Line Graph, Pie
- Probability Basics (Certain, Likely, Impossible)
- Probability as Fractions, Decimals, Percents
- Solving Probability Problems
- Real-Life Probability Tasks

math Topics

Grade 6

Numbers & Operations

- LCM and GCD
- Operations with Decimals & Fractions (Recall)
- Rational Numbers
- Multi-step Problems

Ratios & Proportional Relationships

- Understanding Ratios
- Solving with Ratio Reasoning
- Customary Units Of Measurements
- Rates
- Proportional Relationships
- Using Tables and Diagrams
- Solve Multi-Step Proportional Reasoning Problems

Algebraic Thinking

- Numeric Expressions
- Algebraic Expressions
- Introduction to Equations
- Solving One-Step Equations
- Introduction to Inequalities
- Functions

Law of Exponents

- Powers of Ten
- Exponents with Decimals, Fractions, Negatives
- Exponent Rules
- Simplifying Exponential Expressions

Geometry

- Area of Triangles and Quadrilaterals
- Circumference and Area of Circle
- Circles And Compound Figures
- Nets of 3D Shapes
- Surface Area Using Nets
- Volume of Rectangular Prisms
- Area and Perimeter of Squares and Rectangles
- Graph Triangles and Quadrilaterals

Statistics & Data Analysis

- Identify Statistical Questions
- Mean, Median, Mode, and Range
- Understand Variability and Distributions
- Frequency Table, Dot Plots, Histograms, stem & leaf plot, Box Plots
- Mean Absolute Deviation (MAD);

Probability

- Probability as a Number (0 to 1)
- Experimental vs. Theoretical Probability
- Basic Probability Models
- Predict Likelihood of Events
- Compare Outcomes with Results
- Real-World Chance Problems

Financial Literacy

- Debit vs. Credit
- Budgeting & Saving
- Smart Spending Decisions
- Real-Life Financial Choices

math Topics

Grade 7

Number System

- Operations with Rational Numbers
- Apply Order of Operations
- Real-World Application of Rational Number Operations

Ratios & Proportional Relationship

- Ratios
- Rates
- Analyze Proportional Relationships using Tables, Graphs, Equations
- Identify Constant of Proportionality
- Scale Drawings and Maps

Percentages

- Basics of Percentage
- Conversion of Percentages to Fractions & Decimals
- Percentage Change
- Understand & Solve Tax, Tip, Discount, Percent Errors
- Simple and Compound Interest

Algebraic Thinking

- Numerical Expressions
- Simplify Expressions using Properties & Like Terms
- Solve One, Two, and Multi-Step Equations & Inequalities
- Translate Words into Algebraic Equations
- Solve Real-World Problems

Geometry

- Solve Angle Problems & Circle Measurements
- Analyze Scale Drawings & Proportional Figures
- Triangle Inequality
- Supplementary, complementary, vertical, and adjacent angles
- Ratio in a Circle
- Ratio in a Straight line
- Cross Section of 3D shapes
- Surface Area & Volume of Prisms, Pyramids

Statistics & Data Analysis

- Infer About Populations Using Samples
- Compare and Analyze Populations
- Interpret Dot, Box, Histogram & Line Plots

Probability

- Understand Chance Processes
- Theoretical vs. Experimental Probability
- Build and Evaluate Models
- Run Probability Simulations
- Compare Predicted and Actual Outcomes
- Simple and Compound Events
- Independent and Dependent Events

math Topics

Grade 8

The Number System

- Rational vs. Irrational Numbers
- Locating Irrational Numbers
- Rational Approximations
- Compare Real Numbers
- Square and Cube roots

Exponents & Scientific Notation

- Laws of Exponents
- Negative & Zero Exponents
- Simplify with Exponents
- Scientific Notation Basics
- Operations with Scientific Notation
- Real-Life Use of Scientific Notation

Equations & Algebraic Thinking

- Solve Multi-step Equations
- Modeling Real-World Problems
- Solve System of Equations
- Find the Slope
- Slope-Intercept Form
- Interpreting Solutions

Functions

- Defining and Using Functions
- Function Notation ($f(x)$)
- Linear vs. Nonlinear Functions
- Representing Functions with Tables, Graphs, Equations
- Piecewise and Contextual Functions

Geometry

- Transformations: Translations, Reflections, Rotations, Dilations
- Congruence and Similarity
- Lines and Angles (Transversal of parallel lines)
- Pythagorean Theorem & its converse
- Distance Between Two Points Using Pythagorean Theorem
- Volume & Surface Area of Cylinders, Cones, and Spheres
- Special Triangles and Quadrilaterals
- Compare Volume and Surface Area of Solids

Statistics & Data Analysis

- Patterns in Bivariate Data
- Scatter Plots and Trend Lines
- Types of Correlation
- Predictions Using Linear Models
- Two-Way Tables
- Central Tendency and Spread

math Topics

Algebra I

Expressions, Equations & Quantitative Reasoning

- Interpret expressions and Write expressions in equivalent forms to solve problems
- create equations
- Solve linear and quadratic equations
- Graph and analyze equations and inequalities
- Connections to Expressions, Equations, Modeling, and Coordinates.

Linear and Exponential Functions

- Represent functions with tables, graphs, and equations
- Compare linear and exponential functions

Descriptive Statistics

- Interpret and summarize data
- Use standard deviation and IQR to describe data spread

Quadratic Functions and Modeling

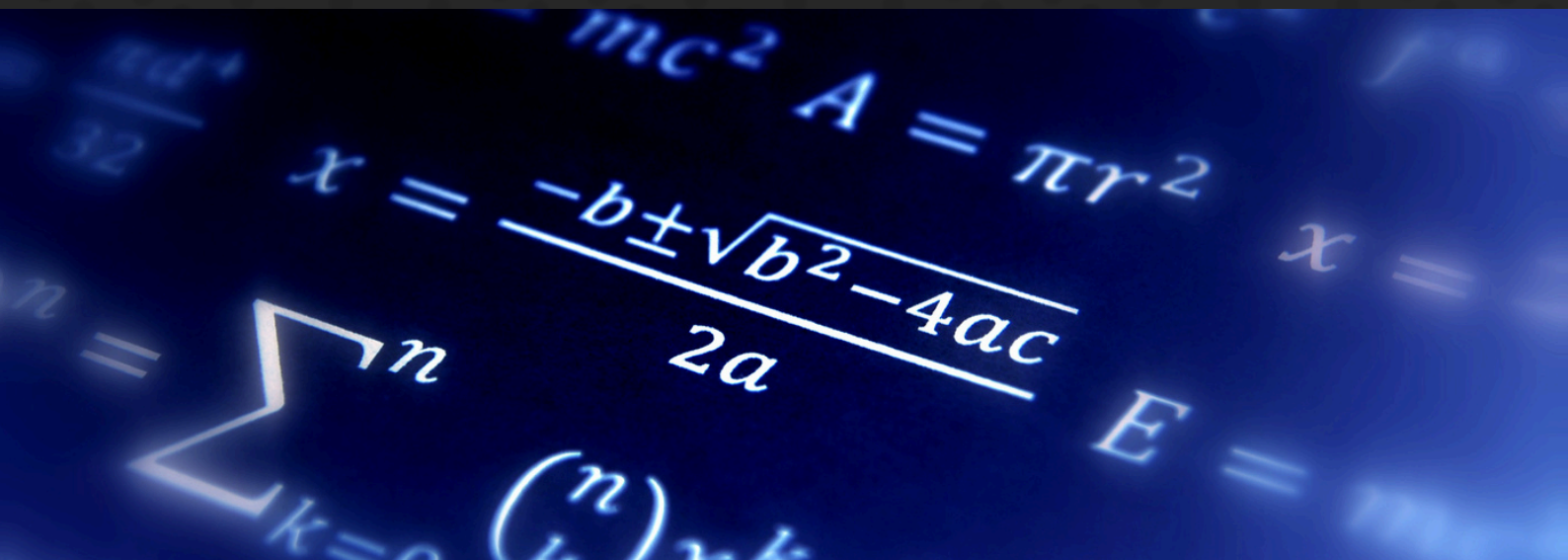
- Solve quadratic equations using various methods
- Graph parabolas and analyze key features
- Linear, Quadratic, and Exponential Models

Algebra–Geometry Connections

- Prove geometric theorems using coordinates
- Solve geometry problems with algebra

Additional Concepts

- Explore piecewise and transformed functions
- Assess model accuracy with residuals



math Topics

Algebra II

Number Systems & Exponents

- Real & Complex Numbers
- Exponent Rules (laws, negative, zero)
- Scientific Notation
- Rational Exponents & Radicals

Equations & Inequalities

- Multi-Step Linear Equations & Inequalities
- Absolute Value Equations & Inequalities
- Quadratic Equations (factoring, completing square, formula)
- Radical and Rational Equations
- Reasoning with Equations and Inequalities

Functions

- Function Notation & Evaluation
- Domain and Range
- Types of Functions: Linear, Quadratic, Absolute Value, Piecewise
- Operations with Functions
- Inverse Functions
- Function Transformations
- Connections to Functions and Modeling.

Systems of Equations & Inequalities

- Solve Systems (Substitution, Elimination, Graphing)
- Linear & Quadratic Systems
- Graphing Inequalities & Linear Programming
- Represent and solve equations and inequalities graphically

Polynomials

- Add, Subtract, Multiply Polynomials
- Factoring (GCF, trinomials, special products)
- Polynomial Functions
- Remainder and Factor Theorems

Rational Expressions & Functions

- Simplifying, Multiplying, Dividing Rational Expressions
- Solving Rational Equations
- Graphing Rational Functions (asymptotes, holes)

Exponential & Logarithmic Functions

- Graphs of Exponential & Logarithmic Functions
- Log Laws
- Solve Exponential & Logarithmic Equations
- Applications: Growth & Decay

Conic Sections

- Parabolas (vertex form, axis of symmetry)
- Circles (center, radius)
- Ellipses & Hyperbolas (standard forms, graphs)

Sequences, Series & Probability

- Arithmetic & Geometric Sequences and Series
- Summation Notation
- Probability & Conditional Probability
- Using Probability to Make Decisions

Statistics & Data Analysis

- Interpreting Categorical & Quantitative Data
- Scatter Plots & Correlation
- Bivariate Data and Regression
- Making Inferences & Justifying Conclusions

math Topics

Geometry

Congruence, Proof, and Constructions

- Understand geometric definitions, constructions, and theorems
- Prove geometric relationships using formal reasoning
- Experiment with transformations in the plane
- Understand congruence in terms of rigid motions
- Prove geometric theorems

Similarity, Proof, and Trigonometry

- Understand similarity in terms of similarity transformations
- Understand similarity in terms of similarity transformations
- Define trigonometric ratios and solve problems involving right Triangles
- Apply trigonometry to general triangles

Extending to Three Dimensions

- Calculate volume of cylinders, cones, and spheres
- Use geometric modeling in three-dimensional space

Connecting Algebra and Geometry

- Prove theorems using coordinate geometry
- Represent geometric figures algebraically
- Expressing Geometric Properties with Equations

Circles With and Without Coordinates

- Understand arc length and sector area
- Apply angle and segment relationships in circles
- Understand and apply theorems about circles



math Topics

Precalculus

Functions and Graphs

- Domain, range, transformations
- Inverse & piecewise functions

Polynomial and Rational Functions

- Graphs, roots, end behavior
- Simplify & divide expressions
- Asymptotes & discontinuities

Exponential and Logarithmic Functions

- Solve exponential and logarithmic equations
- Apply properties of logarithms
- Growth & decay models

Trigonometric Functions

- Define sine, cosine, tangent on the unit circle
- Graph trigonometric functions, identify period, amplitude, phase shift
- Use inverse trig functions and solve real-world applications

Trigonometric Identities and Equations

- Prove and apply fundamental identities
- Solve trigonometric equations algebraically

Vectors, Matrices, and Parametrics

- Perform matrix operations
- Parametric equations
- Vector magnitude & direction

math Topics

AP Calculus AB

Limits & Continuity

- Evaluate limits
- One-sided/infinite limits & asymptotes
- Continuity and Intermediate Value Theorem

Differentiation – Definitions & Rules

- Derivative definition & interpretation
- Basic derivative rules: power, product, quotient
- Derivatives of $\sin x$, $\cos x$, e^x , $\ln x$

Advanced Differentiation

- Chain rule, implicit differentiation
- Derivatives of inverse trig functions

Contextual Applications of Derivatives

- Rates of change & related rates problems
- Linear approximation & L'Hôpital's Rule

Applications of Integration

- Areas between curves
- Volume via disks, washers, cross-sections

Differential Equations

- Separable equations, slope fields, initial-value problems

Analytical Applications of Derivatives

- Curve sketching, critical points, concavity
- Optimization (maximum/minimum problems)

Integration & Accumulation

- Definite/indefinite integrals & Riemann sums
- Fundamental Theorem of Calculus

AP Calculus BC

Advanced Techniques of Integration

- Integration by parts, partial fractions, trigonometric substitution
- Use tables and strategy selection for complex integrals

Parametric, Polar, and Vector Functions

- Model motion using parametric equations
- Analyze curves defined in polar form
- Calculate arc length and area in polar coordinates

Infinite Sequences and Series

- Test convergence/divergence using ratio, root, comparison tests
- Use Taylor and Maclaurin series for approximations

math Topics

AP Statistics

Exploring One-Variable Data

- Graphical displays (dot plots, histograms, box plots)
- Measures of center and spread

Exploring Two-Variable Data

- Interpret scatterplots and correlation
- Perform linear regression and assess model fit

Collecting Data

- Understand sampling methods and biases
- Design surveys, experiments, and observational studies

Probability

- Use sample spaces and rules of probability
- Model discrete and continuous random variables
- Calculate expected value and standard deviation

Sampling Distributions

- Understand Central Limit Theorem
- Interpret standard error and sampling variability

Inference for Quantitative Data: Means

- Conduct t-tests for one and two samples
- Build confidence intervals for means

Inference for Categorical Data: Proportions

- Construct and interpret confidence intervals
- Perform significance tests for proportions

Inference for Categorical Data: Chi-Square

- Apply chi-square tests for independence and goodness-of-fit

Inference for Slopes

- Conduct inference procedures for regression slopes
- Interpret standard error of the slope and related statistics



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