



# JUMP START MATH

## Kindergarten -Part 1



Kindergarten

June 12-16

June 19 - 23

9:00 - 10:00 AM EST

### MONDAY: Numbers and Skip Counting

Understand the relationship between numbers and quantities. Demonstrate ability to read, write and recognize numbers from 1-100. Identify the numbers followed by and before a given number. Practice skip counting by 5's and 10's

### TUESDAY: Comparing Numbers

Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group. Learn to match and count strategies to put the numbers in order

### WEDNESDAY: Money

Recognize money coins such as penny, nickel, dime and quarter. Add money amounts less than \$1 using multiple coins.

### THURSDAY: Addition

Understand the concept of addition. Learn to use strategies such as counting on; Demonstrate ability to make a number (e.g. what makes 5? ); learn and recognize the relationship between numbers, learn to add doubles (e.g.  $2+2$ ,  $4+4$ )

### FRIDAY: Week in review and assessment

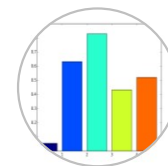
ZOOM-based  
Max 5 students

\$100



# JUMP START MATH

## Kindergarten -Part II



Kindergarten

July 10 - 14

July 17 - 21

9:00 - 10:00 AM EST

### MONDAY: Concept of Time

Tell and write time in hours using analog and digital clocks, identify am and pm in word problems, understand days of months and demonstrate the ability to calculate elapsed days

### TUESDAY: Introduction to Graphs

Organize, represent, and interpret data with multiple categories; ask and answer questions based on the data represented in a graph, how many in each category, and how many more or less are in one category than in another

### WEDNESDAY: Learning Fractions

Identify equal parts, understand halves, thirds and fourths. Make halves, thirds and fourths using various shapes. Identify fractions shaded on various shapes

### THURSDAY: Subtraction

Understand the concept of subtraction. Understand the relationship between addition and subtraction (e.g., knowing that  $2 + 4 = 6$ , one knows  $6 - 2 = 4$ ). Demonstrate ability to work on mixed review word problems for addition and subtraction

### FRIDAY: Week in review and assessment

ZOOM-based

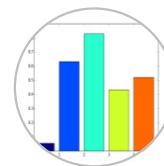
Max 5 students

\$100



# JUMP START MATH

## Grade 1 -Part I



Grade 1

June 19 - 23

Or

July 24 - 28

2 - 3 pm EST

### MONDAY: Addition & Subtraction

Add and subtract, demonstrate fluency for addition and subtraction. Use strategies such as counting on; making ten (e.g.,  $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$ ); decomposing a number leading to a ten (e.g.,  $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$ ); using the relationship between addition and subtraction (e.g., knowing that  $8 + 4 = 12$ , one knows  $12 - 8 = 4$ ); and creating equivalent but easier known sums (e.g., adding  $6 + 7$  by creating known equivalent  $6 + 6 + 1 = 12 + 1 = 13$ )

### TUESDAY: Data & Graph

Organize, represent, and interpret data with multiple categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another

### WEDNESDAY: Concept of Money

Recognize money coins such as penny, nickel, dime and quarter. Add & subtract money amounts. Find correct change after money transactions. Compare amounts

### THURSDAY: Concept of Time

Tell and write time in hours and half-hours using analog and digital clocks, find elapsed time in minutes, recognize a.m. and p.m. Understand days of months and demonstrate the ability to calculate elapsed days

### FRIDAY: Week in Review & Assessment

ZOOM-based

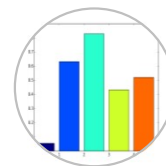
Max 5 students

\$100



# JUMP START MATH

## Grade 1 -Part II



Grade 1

June 26 - 30

Or

July 31 - August 4

2 - 3 pm EST

### MONDAY: Add & Subtract with regrouping

Learn to add and subtract with regrouping, understand regrouping with blocks of tens, demonstrate fluency for addition and subtraction with regrouping. Identify true/false addition and subtraction sentences. Compare addition and subtraction sentences. Find missing numbers in addition and subtraction

### TUESDAY: Word Problems

use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.

### WEDNESDAY: Fractions

Identify equal parts, understand halves, thirds and fourths. Make halves, thirds and fourths using various shapes. Identify fractions shaded on various shapes

### THURSDAY: Place Value

Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases: a. 10 can be thought of as a bundle of ten ones — called a “ten.” b. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.

### FRIDAY: Weekly review and assessment

ZOOM-based

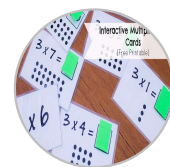
Max 5 students

\$100



# JUMP START MATH

## Grade 2 -Part 1



Grade 2

June 19 - 23

Or

July 24 - 28

2 - 3 pm EST

### MONDAY: Addition Subtraction with regrouping

Add and subtract, demonstrating fluency for addition and subtraction. Use strategies such as counting on; making ten (e.g.,  $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$ ); decomposing a number leading to a ten (e.g.,  $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$ ); using the relationship between addition and subtraction (e.g., knowing that  $8 + 4 = 12$ , one knows  $12 - 8 = 4$ ); and creating equivalent but easier or known sums (e.g., adding  $6 + 7$  by creating known equivalent  $6 + 6 + 1 = 12 + 1 = 13$ )

### TUESDAY: Multiplication

Work with equal groups of objects to gain foundations for multiplication. Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends

### WEDNESDAY: Division

Work with equal groups of objects to gain foundations for division. Use distribution of objects in groups to understand division. Understand the concept and work on examples to attain speed and accuracy

### THURSDAY: Concept of Time

Tell and write time in hours and half-hours using analog and digital clocks, find elapsed time in minutes, recognize a.m. and p.m. Understand days of months and demonstrate the ability to calculate elapsed days

### FRIDAY: Weekly review and assessment

ZOOM-based

Max 5 students

\$100



# JUMP START MATH

## Grade 2 -Part II



Grade 2

June 26 - 30

Or

July 31 - August 4

2 - 3 pm EST

### MONDAY: Add & Subtract with regrouping

Learn to add and subtract with regrouping, understand regrouping with blocks of tens, demonstrate fluency for addition and subtraction with regrouping. Identify true/false addition and subtraction sentences. Compare addition and subtraction sentences. Find missing numbers in addition and subtraction

### TUESDAY: Word Problems

use addition and subtraction to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.

### WEDNESDAY: Fractions

Identify equal parts, understand halves, thirds and fourths. Make halves, thirds and fourths using various shapes. Identify fractions shaded on various shapes

### THURSDAY: Place value

understand that the two digits of a two-digit number represent amounts of tens and ones. understand the following as special cases: a. 10 can be thought of as a bundle of ten ones — called a “ten.” b. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.

### FRIDAY: Weekly review and assessment

ZOOM-based

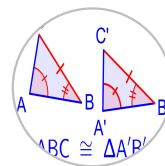
Max 5 students

\$100



# JUMP START MATH

## Grade 3 - Part 1



Grade 3

June 19 - 23

Or

July 24 - 28

1 - 2 pm EST

### MONDAY: Multiplication

Interpret products of whole numbers, e.g., interpret  $4 \times 3$  as the total number of objects in 4 groups of 3 objects each. For example, describe a context in which a total number of objects can be expressed as  $4 \times 3$ .

### TUESDAY: Division

Interpret whole-number quotients of whole numbers, e.g., interpret  $64 \div 8$  as the number of objects in each share when 64 objects are partitioned equally into 8 shares, or as a number of shares when 64 objects are partitioned into equal shares of 8 objects each. For example, describe a context in which a number of shares or a number of groups can be expressed as  $64 \div 8$ .

### WEDNESDAY: Estimation and Rounding

Understand rounding of 3- and 4-digit numbers and estimating answers. Solve the number sentence and recognize the estimated answer is close to the actual answer. Use this technique to verify answers when solving number sentences.

### THURSDAY: Geometry

Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals.

### FRIDAY: Weekly review and assessment

ZOOM-based

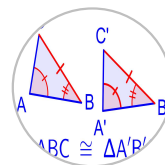
Max 5 students

\$100



# JUMP START MATH

## Grade 3 -Part II



Grade 3

June 26 - 30

Or

July 31 - August 4

1 - 2 pm EST

### MONDAY: Fractions

Understand a fraction  $a/b$  as the quantity formed by  $a$  parts when a whole is partitioned into  $b$  equal parts. Understand a fraction as a number on the number line; represent fractions on a number line. Explain equivalence of fractions in special cases and compare fractions by reasoning about their size.

### TUESDAY: Fraction operations

Review comparing fractions and equivalent fractions. Add, subtract fractions with like denominators

### WEDNESDAY: Logical Reasoning

Work on number riddles and mathematics puzzles to gain understanding of even and odd numbers, 2- and 3-digit numbers. Understand balancing equations with 1- and 2-digit numbers. Find missing numbers using algebraic strategies

### THURSDAY: Geometry

Recognize area as an attribute of plane figures and understand concepts of area measurement. Work on examples to find area and perimeter of composite figures

### FRIDAY: Weekly review and assessment

ZOOM-based

Max 5 students

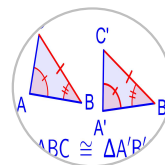
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# JUMP START MATH

## Grade 4 -Part I



Grade 4

June 19 - 23  
Or

July 24 - 28

1 - 2 pm EST

### MONDAY: Multiplication & Division

Interpret a multiplication equation as a comparison, e.g., interpret  $24 = 6 \times 4$  as a statement that 24 is 6 times as many as 4 and 4 times as many as 6. Represent verbal statements of multiplicative comparisons as multiplication equations

### TUESDAY: Multi-step word problems

Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding

### WEDNESDAY: Statistics and Data Analysis

Make a line plot to display a data set of measurements in fractions of a unit ( $\frac{1}{2}$ ,  $\frac{1}{4}$ ,  $\frac{1}{8}$ ). Solve problems involving addition and subtraction of fractions by using information presented in line plots. Find mean median mode and range

### THURSDAY: Geometric Measurement

Recognize angles as geometric shapes that are formed wherever two rays share a common end point and understand concepts of angle measurement. Recognize 2-D and 3-D shapes. Find area and perimeter of composite figures.

### FRIDAY: Week in review and assessment

ZOOM-based

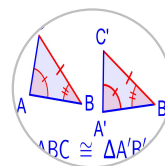
Max 5 students

\$150



# JUMP START MATH

## Grade 4 - Part II



Grade 4

June 26 - 30

Or

July 31 - August 4

1 - 2 pm EST

### MONDAY: Fractions

Add and subtract fractions with unlike denominators

Express a fraction with denominator 10 as an equivalent fraction with denominator 100 and use this technique to add two fractions with respective denominators 10 and 100. Learn and understand equivalent fractions, develop strategies for adding and subtracting fractions with unlike denominators.

### TUESDAY: Fraction operations

Simplify, multiply and divide fractions on a number line. Understand and master techniques to multiply and divide fractions by eliminating common factors

### WEDNESDAY: Decimals

Add, subtract decimals. Rounding of decimals. Understand decimal notation for fractions. Compare decimal fractions. Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals.

### THURSDAY: Geometry

Understand and recognize polygons, angles, triangles and quadrilaterals. Understand parallel and perpendicular lines and lines of symmetry. Master geometric measurements such as area and perimeter of composite figures

### FRIDAY: Week in review and assessment

ZOOM-based

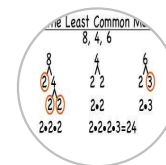
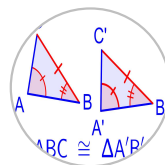
Max 5 students

\$150



# JUMP START MATH

## Grade 5 - Part 1



Grade 5

June 19 - 23

Or

July 24 - 28

11 - 12 pm EST

### MONDAY: Factoring GCF and LCM

Find LCM or GCF of two numbers. Understand prime factorization and use the technique to find the LCM and GCF. Recognize GCF of two natural numbers  $n$  and  $m$  is the greatest natural number  $k$  that is a factor of both  $n$  and  $m$ . Understand the LCM of two natural numbers  $n$  and  $m$  is the smallest valued number  $h$  so that  $h$  is a multiple of both  $n$  and  $m$ .

### TUESDAY: Ratios Percent Discount Tax

Calculate ratio, percent, discount tax, markup, and unit prices. Work on word problems to solve percent examples.

### WEDNESDAY: Geometry Area Volume Perimeter Surface Area

Master area, perimeter, volume, and surface area of composite figures. Understand and recognize to relate these parameters to the properties of addition and multiplication and solve problems requiring application of these operations.

### THURSDAY: Data and Graph Bar graph, line plot, pictograph, frequency chart

Graph points on the coordinate plane to solve real-world and mathematical problems. Represent mathematical problems by graphing points on the coordinate plane, and interpret coordinate values of points in the context of the situation.

### FRIDAY: Week in review and assessment

ZOOM-based

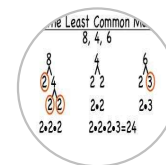
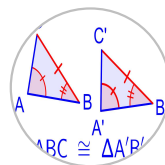
Max 5 students

\$150



# JUMP START MATH

## Grade 5 - Part II



Grade 5

June 26 - 30

Or

July 31 - August 4

11 - 12 pm EST

**MONDAY: Probability and Data Analysis**

Interpret graphs and charts to find mean, mode, median and range. Understand and find probability.

**TUESDAY: Variable expressions and equations**

Solve equations with decimals, 2 variables and decimals. Apply and extend previous understandings of variables and equations. Solve multistep equations.

**WEDNESDAY: Geometry**

Learn and master angles of 90, 180, 270 and 360 degrees. Study types of angles, triangles, and quadrilaterals. Introduction to symmetry and transformation. Solve geometric measurement word problems

**THURSDAY: Money**

Multi step money problems, word problems, sale, tax and tip. Calculate unit prices, understand differences between various discount percents. Solve word problems involving fractions and decimals.

**FRIDAY: Week in review and assessment**

ZOOM-based

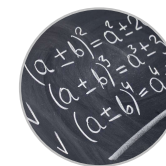
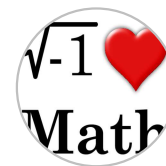
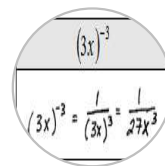
Max 5 students

\$150



# JUMP START MATH

## Grade 6 - Part I



Grade 6

June 19 - 23  
Or

July 24 - 28

11 am - 12 pm EST

### MONDAY: Algebra

Apply and extend previous understandings of arithmetic to solve algebraic equations and inequalities. Reason about and solve one and two variable equations and inequalities. Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number; or, depending on the purpose at hand, any number in a specified set

### TUESDAY: Consumer Math

Understand ratio concepts and use ratio reasoning to solve problems. Solve word problems to calculate discount sale, tax, percent and simple interest. Use ratio reasoning to convert measurement units. Transform units appropriately when multiplying or dividing quantities.

### WEDNESDAY: Data Analysis

Display numerical data in plots on a number line, including bar graph, frequency chart, dot plots, histograms, and box plots. Summarize and describe distributions.

### THURSDAY: Exponents

Understand order of operation. Evaluate expressions at specific values of their variables. Include expressions that arise from formulae. Perform arithmetic operations, including those involving whole-number and exponents

### FRIDAY: Week in review and assessment

ZOOM-based

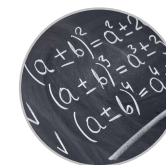
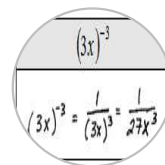
Max 5 students

\$150



# JUMP START MATH

## Grade 6 - Part II



Grade 6

June 26 - 30

Or

July 31 - August 4

11 am - 12 pm EST

### MONDAY: Data Analysis

Develop understanding of statistical variability. Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center, spread, and overall shape. Giving quantitative measures of center (median and/or mean) and variability (interquartile range and/or mean absolute deviation), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context the data were gathered.

### TUESDAY: Factorization (GCF, LCM)

Find LCM or GCF of two numbers. Understand prime factorization and use the technique to find the LCM and GCF. Recognize GCF of two natural numbers  $n$  and  $m$  is the greatest natural number  $k$  that is a factor of both  $n$  and  $m$ . Understand the LCM of two natural numbers  $n$  and  $m$  is the smallest valued number  $h$  so that  $h$  is a multiple of both  $n$  and  $m$ .

### WEDNESDAY: Fractions and mixed numbers

Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions, e.g., by using visual fraction models and equations to represent the problem.

### THURSDAY: Equations and Inequalities

Reason about and solve one and two variable equations and inequalities. Represent and analyze quantitative relationships between dependent and independent variables.

### FRIDAY: Week in review and assessment

ZOOM-based

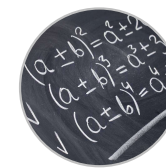
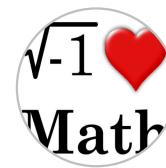
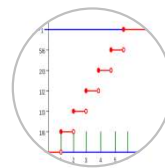
Max 5 students

\$150



# JUMP START MATH

## Grade 7 - Part I



Grade 7

June 19 - 23

Or

July 24 - 28

10 - 11 am EST

### MONDAY: Algebra

Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies.

### TUESDAY: Linear Functions

Introduction to Linear Functions, find constant of proportionality, find slope, identify the missing point using slope

### WEDNESDAY: Probability

Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Larger numbers indicate greater likelihood. Find probability of mutually exclusive events. Identify compound events.

### THURSDAY: Exponents and Square roots

Solve expressions involving exponents and square roots. Practice solving expression, equations and inequalities. Demonstrate mastery on simplifying equations.

### FRIDAY: Week in review and assessment

ZOOM-based

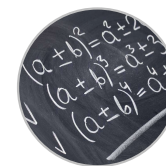
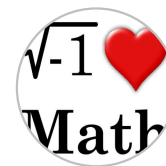
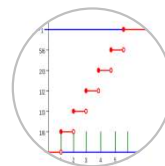
Max 5 students

\$200



# JUMP START MATH

## Grade 7 - Part II



Grade 7

June 26 - 30

Or

July 31 - August 4

10 - 11 am EST

**MONDAY: Introduction to transformation**

Identify reflection, rotation, and translation. Graph the image after translation, reflection, and rotation. Understand dilation scale factor and classification

**TUESDAY: Geometry**

Understand Pythagorean Theorem. Solve problems based on Pythagorean Theorem. Identify types of triangles, and quadrilaterals. Learn angle measurement between Parallel lines.

**WEDNESDAY: Two variable equations and inequalities**

Identify dependent and independent variables, find value using 2-variable equations, write a 2-variable equation using the data table. Graph a 2-variable equation, interpret a graph and solve word problems.

**THURSDAY: Geometric measurement**

Demonstrate the mastery of area of triangle, circle, rectangle, area of composite figures, area between shapes. Solve problems with volume and surface area.

**FRIDAY: Week in review and assessment**

ZOOM-based

Max 5 students

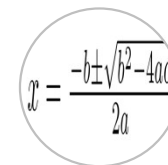
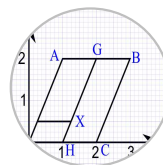
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# JUMP START MATH

## Grade 8 -Part I



Grade 8

June 19 - 23

Or

July 24 - 28

10 - 11 am EST

### MONDAY: Data Analysis

Investigate patterns of association in bivariate data. Use the equation of a linear model to solve problems in the context of bivariate measurement data, interpreting the slope and intercept. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.

### TUESDAY: Quadratic Equations

Introduction to quadratic equations. Find factors and verify the answers using FOIL method. Identify the standard and non-standard quadratic equations.

### WEDNESDAY: Probability

Understand probability of simple events. Solve probability word problems for mutually exclusive events. Identify dependent and independent events. Find probability of compound events.

### THURSDAY: Introduction to Functions

Identify linear and non-linear functions. Construct a function to model a linear relationship between two quantities. Define, evaluate, and compare functions. Interpret the equation  $y = mx + b$  as defining a linear function, whose graph is a straight line; give examples of functions that are not linear.

### FRIDAY: Week in review and assessment

ZOOM-based

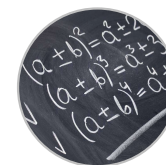
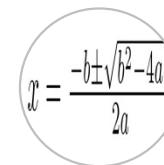
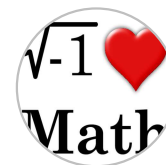
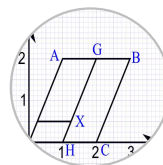
Max 5 students

\$200



# JUMP START MATH

## Grade 8 -Part II



Grade 8

June 26 - 30

Or

July 31 - August 4

10 - 11 am EST

### MONDAY: Function transformation

Describe sequence of transformations. Perform reflection, rotation and translation of given functions. Understand congruence of triangles. Identify dilation scale factor and classification

### TUESDAY: System of equations

Solve system of equation by graphing, substitution and elimination. Solve system of equation word problems.

### WEDNESDAY: Statistics

Calculate mean, median, mode, and range. Interpret charts and graphs to get data insight. Calculate quartile and interquartile range

### THURSDAY: Pythagorean Theorem

Find the hypotenuse or the missing side. Find the perimeter using the Pythagorean Theorem. Applications of Pythagorean Theorem.

### FRIDAY: Week in review and assessment

ZOOM-based

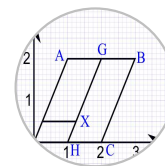
Max 5 students

\$200

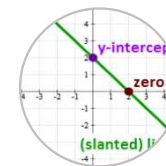


# JUMP START MATH

## Grade 9 - Part 1



$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$



Grade 9

June 5 - 9  
Or

July 10 - 14

10 - 11 am EST

### MONDAY: Functions Linear, quadratic and exponential

Construct and compare linear, quadratic, and exponential models and solve problems. Solve a system of a linear and a quadratic equation. Interpret the parameters in a linear or exponential function in terms of a context.

### TUESDAY: Problem Solving (Weighted average & distance and speed)

One type of average problems involves the weighted average - which is the average of two or more terms that do not all have the same number of members. To find the weighted term, multiply each term by its weighting factor, which is the number of times each term occurs. Demonstrate proficiency in distance and speed word problems.

### WEDNESDAY: Conditional Probability

Understand independence and conditional probability and use them to interpret data. Construct and interpret two-way frequency tables of data when two categories are associated with each object being classified. Recognize and explain the concepts of conditional probability and independence in everyday situations

### THURSDAY: Quadratic Equations

Solve quadratic equations using square root, zero product property, factoring, completing the square and using the formula. Understand quadratic functions, graph and describe properties.

### FRIDAY: Week in review and assessment

ZOOM-based

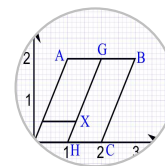
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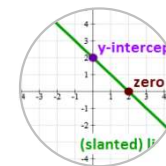


# JUMP START MATH

## Grade 9 -Part II



$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$



Grade 9

June 12 - 16

Or

July 17 - 21

10 - 11 am EST

### MONDAY: Exponential Functions

Evaluate exponential functions. Develop understanding of exponential functions to match functions to the graph. Find domain and range, growth and decay functions. Apply knowledge of exponential functions to real world situations and solve problems.

### TUESDAY: Data Analysis

Interpret and understand graphs (bar graph, line graph, box and whisker plot, steam plots and histograms). Understand, solve and interpret information from graphs.

### WEDNESDAY: Quadratic Functions

Identify quadratic functions in terms of the direction it opens up, vertex and axis of symmetry. Practice transformation of quadratic functions. Solve and graph the transformed function.

### THURSDAY: Matrices II

Demonstrate mastery with advanced matrix operations e.g., multiply matrices, solve matrix equations, determinant of a matrix, and inverse of a matrix.

### FRIDAY: Week in review and assessment

ZOOM-based

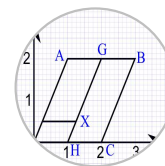
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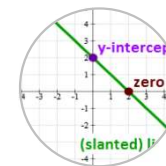


# JUMP START MATH

## Pre-Calculus -Part I



$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$



Pre-Calculus

June 5 - 9

Or

July 10 - 14

11 am - 12 pm EST

**MONDAY: Exponential and Logarithmic Functions**

Solve exponential and logarithmic equations, Graph exponential and logarithmic functions, exponential growth and decay word problems

**TUESDAY: Matrices**

Matrix operations (add, subtract, multiply), Properties of matrices, Solving matrix equations

**WEDNESDAY: Trigonometry**

Unit circle, find trigonometry ratios, reference angles, inverse trigonometry ratios

**THURSDAY: Systems of inequalities**

Solving systems of linear inequalities

**FRIDAY: Week in review and assessment**

ZOOM-based

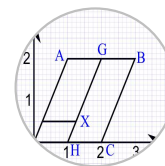
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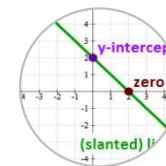


# JUMP START MATH

## Pre-Calculus -Part II



$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$



Pre-Calculus

June 12 - 16

Or

July 17 - 21

11 am - 12 pm EST

**MONDAY: Rational Functions**

Solve Rational equations, asymptotes and excluded values, graph rational functions

**TUESDAY: Vectors**

Finding a magnitude of a vector, component form of a vector, finding direction of a vector, vector operations (add, subtract, multiply), finding resultant vector, vector applications

**WEDNESDAY: Limits**

Finding limits using graphs, finding one sided limits, addition, subtraction, multiplication and division limit laws, power and root laws, finding limits of polynomial and rational functions

**THURSDAY: Sequence and series**

Arithmetic and geometric series, finding sum of a series, partial sums, convergent and divergent series, writing a repeating decimal as a fraction

**FRIDAY: Week in review and assessment**

ZOOM-based

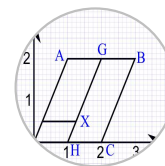
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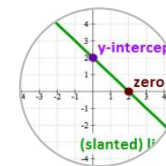


# JUMP START MATH

## Calculus -Part I



$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$



Calculus

June 5-9

Or

July 10-14

1-2 pm EST

### MONDAY: Trigonometric Functions

Finding Trigonometric ratios using unit circle, inverse trigonometric functions, graphing trigonometric functions and transformations

### TUESDAY: Limits

Calculating limits using addition, subtraction, multiplication, and division laws, finding limits using power and root laws, limits involving infinity

### WEDNESDAY: Derivatives

Average rate of change, instantaneous rate of change, finding slope of a tangent line, finding velocity using derivative, derivative rules (sum and difference rules, quotient rules, power and product rule), finding derivatives of polynomials

### THURSDAY: Derivatives continued

Derivatives of rational, trigonometric, exponential, logarithmic functions, chain rule

### FRIDAY: Week in review and assessment

ZOOM-based

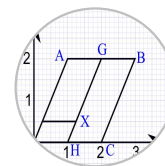
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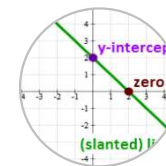


# JUMP START MATH

## Calculus -Part II



$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$



Calculus

June 12 - 16

Or

July 17 - 21

1 - 2 pm EST

**MONDAY: Integration**

Infinite integrals, finding integrals, definite integrals, calculating integrals using substitution rule

**TUESDAY: Integration continued**

Review Integration and practice problems

**WEDNESDAY: Application of Integration**

Average function value, area under a curve,

**THURSDAY: Application of Integration**

Volume using integration, volumes of solids of revolution

**FRIDAY: Week in review and assessment**

ZOOM-based

Max 5 students

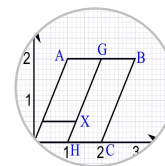
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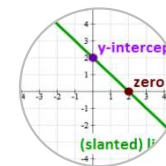


# JUMP START MATH

## AP-Calculus -Part 1



$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$



AP-Calculus

June 5-9  
Or

July 10-14

2-3 pm EST

MONDAY: Limits

Defining limits, estimating limits, finding limits using algebraic properties of limits

TUESDAY: Derivatives

Derivative rules, average and instantaneous rate of change, applying derivative rules

WEDNESDAY: Implicit Differentiation and Related Rates

Chain rule, implicit differentiation, practice problems

THURSDAY: Applications of Differentiation

Straight line motion, rate of change, related rates

FRIDAY: Week in review and assessment

ZOOM-based

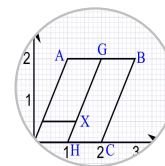
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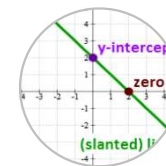


# JUMP START MATH

## AP-Calculus -Part II



$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$



AP-Calculus

June 12 - 16

Or

July 17 - 21

2 - 3 pm EST

**MONDAY: Integration**

Integration laws review, approximating area using Riemann sums, Fundamental theorem of Calculus

**TUESDAY: Integration and Accumulation**

using integration for accumulation of change, applying properties of definite integral

**WEDNESDAY: Differential Equation**

Modeling situations using differential equations

**THURSDAY: Area/Volume of Revolution**

Area, volume, velocity, acceleration using integration

**FRIDAY: Week in review and assessment**

ZOOM-based

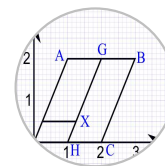
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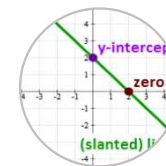


# JUMP START MATH

## SAT/ACT Math



$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$



SAT/ACT Math

June 5 - 9

Or

July 31 - 4

3 - 4 pm EST

**MONDAY:**

Practice Test 1 No Calculator section Topics: Linear Equations, Linear inequalities, Linear functions

**TUESDAY:**

Practice Test 1 Calculator section Topics: Quadratic Equations, Rational Expressions, Polynomial Factors and Graphs

**WEDNESDAY:**

Practice Test 2 No Calculator section Topics Ratio, rates and proportions, Percents, Data Collection and Conclusions

**THURSDAY:**

Practice Test 2 Calculator Section Topics: Volume, Right Triangle word problems, Circle equations

**FRIDAY:** Week in review and assessment

Problem solving strategies and time management during the test

ZOOM-based

Max 5 students

\$200