

REPORT CARD CHUGACH SCHOOL DISTRICT

Name: _____

Mathematics Graduation = Level X	Key: * Advanced + Proficient Developing — Emerging
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Level I:

Numeration:
 MA 1.1 Understands that a number represents a quantity.
 MA 1.2 (A1.1.1) Recognizes numbers to 100. Can count to 100.
 MA 1.3 (A2.1.2) Understands concept of <, >, = at a concrete level.
 MA 1.4 Utilizes a number line to solve problems.

Measurement:
 MA 1.5 (A2.1.2) Use non-standard units to measure and compare lengths.
 MA 1.6 Differentiates between morning, afternoon, and evening.

Estimation and Computation:
 MA 1.7 (A1.1.3, A3.1.3) Understands addition and subtraction at a concrete level.

Functions and Relationships:
 MA 1.8 (A2.1.1, A4.1.1) Continues a pattern using various attributes (e.g., shape, color, and size).
 MA 1.9 (A2.1.1) Sorts and classifies.

Geometry:
 MA 1.10 (A5.1.1) Identifies basic geometric shapes in classroom and environment.
 MA 1.11 Draws line segments.
 MA 1.12 Shows understanding of symmetry by cutting or folding patterns along a single line of symmetry.

Statistics and Probability:
 MA 1.13 After sampling, predicts outcomes of spinner colors.

Problem Solving:
 MA 1.14 Draws pictures to represent problems using physical objects.

Communication and Reasoning:
 MA 1.15 Demonstrates equal sharing of 20 objects.

Connections:
 MA 1.16 Uses 3 skills in level 1 in real life scenarios (e.g.- pattern necklaces, student store).

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Level II:

Numeration:
 MA 2.1 (A1.1.1) Reads, writes, models, orders, counts, and demonstrates 1 to 1 correspondence with whole numbers to 100.

Measurement:
 MA 2.2 Tells time to the hour.
 MA 2.3 (A2.1.4) Understands the concept of length, width and height, weight, time, money and temperature and how they are measured.
 MA 2.4 Names days in order and recognizes calendar patterns.

Estimation and Computation:
 MA 2.5 Understands basic operation of a calculator.
 MA 2.6 (A3.1.1) Uses estimation to enhance number concept.
 MA 2.7 (A3.1.2) Memorizes and explains the process of basic addition and subtraction facts to 10.
 MA 2.8 (A3.1.4) Understands multiplication and division at concrete level (repeated addition and equal sharing).
 MA 2.9 (A1.1.5) Adds and subtracts fractions of halves, thirds, fourths in various situations at the concrete level.

Functions and Relationships:
 MA 2.10 (A1.1.6) Continues a number pattern (skip counts by 2's, 5's, 10's, even and odd, adding and subtracting by 10's).

Geometry:
 MA 2.11 (A5.1.6) Expresses spatial relationships (above, below, left, right, and middle).
 MA 2.12 (A5.1.3) Understands properties of similarities, differences, and scaling of circles, squares, and triangles.
 MA 2.13 Identifies line segments.

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Level II (Continued)
Statistics and Probability:
 MA 2.14 Reads simple graphs.
 MA 2.15 (A6.1.6) *Collects and organizes data using tally marks.*
 MA 2.16 (A6.2.1) *Constructs simple graphs and tables (bar, line, pictographs).*
 MA 2.17 Correctly uses 50-50 chance, un/likely.
Problem Solving:
 MA 2.18 Becomes familiar with practical problem solving strategies (guess & check, drawings, extending patterns).
Communication and Reasoning:
 MA 2.19 (C1.2.1) *Identifies and understands key words in simple problem solving (e.g. in all, how many more).*
Connections:
 MA 2.20 (E1.1.1) *Applies mathematical skills and processes to other disciplines and everyday life.*

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Level III:
Numeration:
 MA 3.1 (A1.1.2) *Identifies place value in 4-digit number.*
Measurement:
 MA 3.2 (A2.1.3) *Tells time to a quarter of an hour.*
 MA 3.3 Distinguishes number of days in each month, writes proper dates of the year, and names the months of the year.
 MA 3.4 (A2.2.1) *Estimates length and weight of objects and measures to check for reasonability.*
Estimation and Computation:
 MA 3.5 (A4.1.3) *Uses calculator as a tool to solve simple problems.*
 MA 3.6 Understands basic multiplication and division facts.
 MA 3.7 Multiplies and divides 2-digit numbers by 1-digit numbers.
 MA 3.8 Finds missing addends to the sum of 50.
 MA 3.9 (A4.1.5) *Understands and applies <, > and = signs.*
 MA 3.10 Makes reasonable estimates of groups of objects to the nearest 10's - 100's, and basic sums and differences.
 MA 3.11 (A2.1.6) *Demonstrates adding and subtracting money using bills and coins.*
Functions and Relationships:
 MA 3.12 Skip counts by numbers through 100 forward and backward (2's, 5's, 10's).
 MA 3.13 (A4.1.2) *Identifies and applies addition and subtraction patterns to solve simple problems (5, 10, 15, __, __).*
Geometry:
 MA 3.14 (A5.1.5) *Describes and identifies spatial transformation (slides, flips, turns).*
 MA 3.15 (A5.1.3) *Draws and identifies basic geometric lines, angles, shapes, and solids (cubes, cylinders, spheres), and their relationships.*
 MA 3.16 (A5.1.4) *Demonstrates conservation of area using drawings or manipulatives.*
Statistics and Probability:
 MA 3.17 (A6.1.3) *Collects, organizes and describes data using terms maximum and minimum.*
 MA 3.18 (A6.2.1) *Records coordinates on line graphs.*
Problem Solving:
 MA 3.19 (B1.1.2) *Applies various problem-solving strategies to solve problems aligned to this level.*
Communication and Reasoning:
 MA 3.20 (C1.2.3, D1.1.3) *Communicates strategies and solutions by writing explanations.*
Connections:
 MA 3.21 (E1.1.2) *Applies mathematical skills and processes to other disciplines and everyday life.*

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Level IV: <u>Numeration:</u> MA 4.1 (A1.2.1) Understands concepts of negative numbers and exponents. MA 4.2 Interprets fractions and mixed numbers. MA 4.3 (A1.2.1) Orders, reads, and writes number from 0 to 1,000,000. MA 4.4 (A1.1.7, A1.2.7) Demonstrates the commutative ($a+b=b+a$) and identity ($1+0=1$, $4x1=4$) properties of addition and multiplication. <u>Measurement:</u> MA 4.5 (A2.2.5) Tells accurate time to the minute, and finds elapsed time. MA 4.6 (A2.2.1) Read scales and measurement devices in English and Metric. MA 4.7 (A2.2.3) Use a variety of measuring tools appropriately (protractor, compass, and thermometer). <u>Estimation and Computation:</u> MA 4.8 (A3.2.2) Memorizes multiplication and division facts to 12×12 . MA 4.9 (A3.2.3) Performs 4-digit addition and subtraction with place values, including rounding. MA 4.10 (A3.2.4) Performs 2-digit \times 2-digit multiplication and division, including estimating. MA 4.11 Makes a reasonable estimate of cost and distance. MA 4.12 Uses graph paper to estimate areas of irregular shapes. MA 4.13 Writes and solves number sentences to represent problems involving +, -, \times . MA 4.14 Estimates the fractional part of the whole. MA 4.15 (A2.2.2, A2.3.2) Identifies and uses equivalent measurements (e.g., meters to km, inches to feet, seconds to minutes) MA 4.16 (A2.2.6) Counts back change correctly from \$1.00. <u>Functions and Relationships:</u> MA 4.17 (A4.2.1, A4.2.4) Uses words, lists, numbers and tables to find a pattern, explains its rule and extends the pattern to make predictions and solve problems. MA 4.18 (A4.2.5) Explains the purpose of a variable. <u>Geometry:</u> MA 4.19 (A5.2.2) Sorts, classifies, describes and draws geometric figures including circle, triangle, square, rectangle, oval, cube, pyramid, and sphere. <u>Statistics and Probability:</u> MA 4.20 Describes and interprets data from a variety of visual displays (e.g., tallies, tables, pictographs, and bar graphs). <u>Problem Solving:</u> MA 4.21 Applies various problem-solving strategies to solve problems aligned to this level. <u>Communication and Reasoning:</u> MA 4.22 (C1.2.3, D1.2.3) Communicates strategies and solutions by writing explanations. <u>Connections:</u> MA 4.23 (E1.2.1) Applies mathematical skills and processes to other disciplines and everyday life.		
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Level V: <u>Numeration:</u> MA 5.1 Identifies Roman Numerals to 100. MA 5.2 Compares and orders fractions and decimals using models, pictures, symbols, and words. MA 5.3 (A1.2.2) Uses, models, and identifies place value positions from .001 to 1,000,000. <u>Measurement:</u> MA 5.4 (A5.2.4) Calculates perimeter and area of rectangles and squares. MA 5.5 (A2.4.2) Converts measurement between units of English and Metric. <u>Estimation and Computation:</u> MA 5.6 (A3.2.4) Performs 3 \times 2-digit multiplication and division and 4-digit addition and subtraction. MA 5.7 (A1.2.5) Performs addition and subtraction of fractions with like denominators and decimal numbers (including money). MA 5.8 (A3.2.5) Changes improper fractions to whole or mixed numbers and identifies equivalent fractions. MA 5.9 (A2.2.1) Estimate volume, length, width and temperature using metric and standard measurement. MA 5.10 (A3.2.1) Round numbers to appropriate place value to estimate/solve a variety of problems. MA 5.11 (A3.3.5) Recognizes fractional forms of common decimals (e.g. $1/4 = .25$). MA 5.12 (A2.3.4, A3.2.6) Develops and interprets scales and scale models. MA 5.13 Decides to which place it is reasonable to round given data.		
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Level V (Continued)		
<u>Functions and Relationships:</u>		
MA 5.14 (A4.2.5) <i>Writes and solves word problems that use equations containing a variable.</i>		
<u>Geometry:</u>		
MA 5.15 (A5.2.7) <i>Sketches and identifies segments, midpoints, intersections, parallel and perpendicular lines.</i>		
MA 5.16 (A5.2.6) <i>Locates and places points on a coordinate plane system.</i>		
MA 5.17 (A5.2.1) <i>Identifies geometric figures, and their components.</i>		
MA 5.18 <i>Classifies angles as right, obtuse, acute or straight.</i>		
MA 5.19 (A5.2.5) <i>Analyzes and models special transformations (sides, flips, and rotations).</i>		
<u>Statistics and Probability:</u>		
MA 5.20 (A6.2.3) <i>Determines mean, median, mode, and range from collection of data.</i>		
MA 5.21 (6.2.2) <i>Uses data to construct charts, tables, and graphs.</i>		
MA 5.22 <i>Makes predictions based upon and explains data from tables, charts, and graphs.</i>		
<u>Problem Solving:</u>		
MA 5.23 (B1.2.2) <i>Selects and applies appropriate strategies to solve 2 step word problems involving fractions, decimals, and the 4 basic operations.</i>		
<u>Communication and Reasoning:</u>		
MA 5.24 <i>Translates and successfully solves problems between everyday language and mathematical symbols.</i>		
<u>Connection:</u>		
MA 5.25 <i>Demonstrates ability for handling money, budgeting and shopping.</i>		
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Level VI:		
<u>Numeration:</u>		
MA 6.1 (A1.3.1) <i>Uses expanded notation with exponents in formulas where unit canceling can be performed.</i>		
<u>Measurement:</u>		
MA 6.2 (A5.3.4) <i>Uses a geometric formula with letters for unknown variables to determine volume of regular prisms and spheres.</i>		
MA 6.3 <i>Understands the concept of Pi.</i>		
MA 6.4 (A5.3.4) <i>Finds the area and circumference of a circle.</i>		
<u>Estimation and Computation:</u>		
MA 6.5 (A3.3.4) <i>Performs basic operations with signed numbers, fractions of unlike denominators, mixed numbers, and improper fractions.</i>		
MA 6.6 (A1.3.5) <i>Makes fraction, decimal, and percent conversions.</i>		
MA 6.7 (A1.3.6) <i>Uses and explains prime and composite numbers, divisibility rules, identity, commutative, associative, and distributive properties.</i>		
MA 6.8 (A3.3.4) <i>Finds the percent of a number.</i>		
MA 6.9 (A1.2.6) <i>Finds GCF and LCM of a set of numbers.</i>		
<u>Functions and Relationships:</u>		
MA 6.10 (A4.2.5) <i>Uses variables to express relationships and describes simple functions (2:6; 3:9; 4:12).</i>		
<u>Geometry:</u>		
MA 6.11 <i>Classifies polygons and uses a protractor to determine angular degrees.</i>		
MA 6.12 (A5.2.3) <i>Identifies and describes geometric figures that are congruent, similar, and/or symmetrical.</i>		
<u>Statistics and Probability:</u>		
MA 6.13 <i>Relates scales to various types of graphs.</i>		
MA 6.14 (A6.3.6) <i>Designs and experiments with given criteria, makes predictions, records results, and compares the predicted outcome with the actual results.</i>		
MA 6.15 (A6.2.6) <i>Presents a set of probability data using percents, ratios, and/or fractions.</i>		
<u>Problem Solving:</u>		
MA 6.16 <i>Applies various problem-solving strategies to solve problems aligned to this level.</i>		
<u>Communication and Reasoning:</u>		
MA 6.17 <i>Explains how to find the formula for the area of a triangle or rectangle.</i>		
MA 6.18 (C1.4.3, D1.2.3) <i>Defends conclusions with examples and applies to new situations.</i>		
<u>Connection:</u>		
MA 6.19 (E1.2.2) <i>Applies math skills and processes to everyday life.</i>		
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Level VII:

Numeration:
 MA 7.1 (A1.3.1) Uses powers of ten and applies scientific notation; names values through the hundred trillions and trillionths.
 MA 7.2 Recognizes and associates points with rectangular coordinates.
 MA 7.3 (A1.4.1) Defines, writes, and orders with the Real Number System and its subsets, selecting the appropriate one as a solution set.

Measurement:
 MA 7.4 (A2.2.1) Accurately measures length, weight, area, volume, and mass, using appropriate tool with English or Metrics.
 MA 7.5 Estimates, measures, and adds angles with a protractor.

Estimation and Computation:
 MA 7.6 (A3.2.5, A3.3.3) Performs all operations and converts improper fractions to whole and mixed numbers.
 MA 7.7 (A3.3.6) Sets up and solves rate, ratio and proportion problems using unit multipliers and conversions.
 MA 7.8 Calculates simple interest.

Functions and Relationships:
 MA 7.9 (A4.3.5) Recognizes and evaluates functions by evaluating unknown variables and expressions (including square roots).

Geometry:
 MA 7.10 (A5.2.3) Identifies and describes congruent and similar figures.

Statistics and Probability:
 MA 7.11 (A6.3.6) Sets up and solves probability problems.
 MA 7.12 (A6.3.2) Interprets complex graphs and charts.

Problem Solving:
 MA 7.13 Applies various problem-solving strategies to solve problems aligned to this level.

Communication and Reasoning:
 MA 7.14 Decides when estimates are adequate and when exact answers are necessary.
 MA 7.15 Communicates and explains in a written paragraph, strategies used to solve multi-step word problems.

Connections:
 MA 7.16 Understands the function of a checking account.
 MA 7.17 Reconciles a bank statement.

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Level VIII:

Numeration:
 MA 8.1 (A1.4.2) Applies basic operations with different base systems.
 MA 8.2 (A1.3.4) Translates between equivalent representations of the same number (fractions, decimals, percents, exponents, scientific notation).
 MA 8.3 (A1.3.7) Applies commutative, associative and distributive properties with variables.

Estimation and Computation:
 MA 8.4 Multiplies, divides, and performs the proper order of operations with signed numbers (with and without parentheses) and with scientific notations.
 MA 8.5 Applies the LCM using unit multipliers.
 MA 8.6 (A3.4.6) Uses proportions to solve percent problems greater than 100.
 MA 8.7 Calculates volumes of simple geometric solids and the area of complex figures and converges units of area.
 MA 8.8 Calculates gross pay vs. net pay.
 MA 8.9 Solves complex percentage problems.
 MA 8.10 Estimates products, quotients and square roots.
 MA 8.11 Calculates end of year federal income tax using short form.
 MA 8.12 (A3.3.2) Applies and defends a variety of estimation strategies.
 MA 8.13 (A3.3.5) Adds, subtracts, multiplies and divides rational and common irrational numbers forms (fraction, decimals, and percents).
 MA 8.14 (A1.4.4, A3.3.5) Converts between equivalent fractions, percents, proportions, and exponential forms of numbers.

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Level VIII (Continued)

Functions and Relationships:

MA 8.15 Recognizes, evaluates, and graphs inequalities and functions.

MA 8.16 Uses inverse operations and the properties of 1 and 0 to solve rational number problems.

MA 8.17 (A4.4.2) *Translates word problems into symbolic expressions, equations, or inequalities and solves (including linear and quadratic).*

MA 8.18 (A4.3.1) *Generalizes numeric and geometric patterns and sequences.*

MA 8.19 (A4.3.4) *Uses tables of ordered pairs, graphs, and linear equations to analyze patterns.*

MA 8.20 (A4.4.1) *Identifies and predicts the graphs of families of functions (linear, absolute value, quadratic, exponential).*

Geometry:

MA 8.21 (A5.3.3) *Uses similarity and congruence to find missing angles or sides of figures.*

MA 8.22 (A5.3.1) *Classifies, compares, and sketches regular and irregular polygons.*

MA 8.23 (A5.3.2) *Identifies and describes a variety of 3D figures.*

MA 8.24 (A5.3.4) *Estimates and calculates volume and surface area of solids.*

MA 8.25 (A5.3.5) *Draws and describes the results of transformations (slides, rotations, reflections, and dilations).*

MA 8.26 Performs basic geometry constructions (midpoint, angle bisector, parallel and perpendicular lines).

MA 8.27 (A5.4.6) *Applies geometric formulas to a variety of situations (midpoint, slope, area, and volume).*

Statistics and Probability:

MA 8.28 Samples and records data systematically.

MA 8.29 (A6.3.1) *Creates graphs, tables and charts from collected data with and without technology (histograms, scatter plots, frequency distribution).*

MA 8.30 (A6.3.4) *Makes projections based on available data and evaluates whether inferences can be made from the data.*

Problem Solving:

MA 8.31 Applies various problem-solving strategies to solve problems aligned to this level.

Communication and Reasoning:

MA 8.32 Evaluates measurements for accuracy, precision and error; explains acceptable range of error.

MA 8.33 (D1.3.3) *Defends conclusions with examples and applies to new situations.*

Connections:

MA 8.34 (E1.3.1) *Applies mathematical skills and processes to other disciplines and in everyday life.*

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Level IX

Estimation and Computation:

MA 9.1 (A3.4.3, A3.4.4) *Adds, subtracts, multiplies and divides in various forms including scientific notation, powers and roots.*

MA 9.2 (A1.3.4, A3.4.5.) *Selects, translates, and applies equivalent representations of numbers in various situations.*

Functions and Relationships:

MA 9.3 Represents real-world problems using polynomial equations, linear programming, algebraic functions, and graphs.

MA 9.4 (A5.4.2) *Understands how polar coordinates are used to graph 2 and 3 dimensional space.*

MA 9.5 (A4.4.5) *Performs addition, subtraction, multiplication and division of algebraic expressions and equations.*

MA 9.6 Calculates perimeters and area.

MA 9.7 (A4.4.4) *Uses structures such as finite graphs, matrices, sequences and iterations to analyze problems.*

MA 9.8 Identifies, graphs, and compares graphs of basic functions.

Geometry:

MA 9.9 Understands the relationship between parallel, perpendicular, and oblique lines used in geometrical congruence.

MA 9.10 (A2.4.4) *Solves real world problems involving the Pythagorean Theorem.*

MA 9.11 Draws 3D objects.

MA 9.12 (A5.4.3) *Uses similarity and congruence to solve problems (prove 2 triangles are congruent).*

MA 9.13 (A5.3.6) *Graphs linear equations, determines slope, identifies parallel and perpendicular lines, and finds solution sets using coordinate geometry.*

MA 9.14 (A5.4.7) *Constructs geometric models, transformations, and scale drawings using a variety of methods (paper folding, compass, straight edge, protractor, or technology).*

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Level IX (Continued) <u>Statistics and Probability:</u> MA 9.15 (A6.3.5, A6.4.5) <i>Calculates probability of independent and compound events.</i> MA 9.16 (A6.4.4) <i>Analyzes validity of statistical conclusions.</i> MA 9.17 (A6.4.1) <i>Interprets and analyzes information found in point and graphical displays.</i> <u>Problem Solving:</u> MA 9.18 (B1.4.2) <i>Applies multi-step integrated mathematical problem solving strategies to solve problems.</i> MA 9.19 (B1.4.3) <i>Verifies accuracy of solutions by using alternative strategies to solve.</i> <u>Communication and Reasoning:</u> MA 9.20 <i>Uses appropriate technology, math vocabulary, symbols and notation to defend mathematical ideas, solutions and methods to various audiences.</i> MA 9.21 (D1.3.1) <i>Recognizes and applies inductive and deductive reasoning.</i> MA 9.22 (D1.4.2) <i>Makes tests and proves mathematical conjectures.</i> <u>Connections:</u> MA 9.23 (E1.3.2, E1.4.1) <i>Applies practical skills in problem solving using typical business, consumer and real world problems.</i>		
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Level X: <u>Measurement:</u> MA 10.1 <i>Uses area and volume to calculate construction costs.</i> <u>Estimation and Computation:</u> MA 10.2 (A3.3.3) <i>Performs all operations using fractions, decimals and percents.</i> MA 10.3 <i>Calculates cost of goods sold, sales and excise tax.</i> MA 10.4 <i>Calculates net pay vs. gross pay.</i> MA 10.5 <i>Calculates the cost and returns of stocks and bonds.</i> MA 10.6 <i>Computes property tax, assessment and depreciation.</i> MA 10.7 <i>Performs and manages basic financial operations (e.g., using checking and saving account and repayment schedules for installment loans).</i> MA 10.8 (A3.4.1) <i>Estimates solutions to check reasonableness.</i> MA 10.9 <i>Calculates insurance rates, promissory notes, interest, discounts, commission sales, and markups.</i> MA 10.10 <i>Evaluates multi-step word problems involving equal and proportional groups, averages, and rates in business applications.</i> MA 10.11 <i>Calculates end of year federal income tax using long form.</i> <u>Functions and Relationships:</u> MA 10.12 <i>Uses formulas to compute investments using compound interest.</i> <u>Statistics and Probability:</u> MA 10.13 <i>Reads and constructs circle graphs.</i> <u>Problem Solving:</u> MA 10.14 <i>Applies various problem-solving strategies to solve problems aligned to this level.</i> <u>Communication and Reasoning:</u> MA 10.15 <i>Defends conclusions with examples and applies to new situations.</i> <u>Connections:</u> MA 10.16 (E1.4.2) <i>Describes how math is used in various careers.</i>		
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Level XI:		
<u>Functions and Relationships:</u>		
MA 11.1 Solves real-world problems involving constant rates, roots and exponents, vectors and nonlinear mathematical models.		
MA 11.2 (A5.4.1) Uses right triangle trigonometry (sine, cosine, and tangent) to determine length and angle measure.		
MA 11.3 Determines maximum and minimum points.		
MA 11.4 Solves quadratic equations by applying various methods, including factoring, taking square roots, and completing the square and the quadratic formula.		
MA 11.5 Understands concept of inequalities and the basic characteristics of vectors.		
MA 11.6 Solves systems of linear equations by various methods, including graphing, substitution, linear combination and determinants.		
MA 11.7 Solves fractional equations and equations containing radicals.		
<u>Statistics and Probability:</u>		
MA 11.8 Identifies and analyzes linear and nonlinear patterns in data using line graphs.		
MA 11.9 Fits lines and curves to a set of points.		
<u>Problem Solving:</u>		
MA 11.10 Classifies problem solving strategies or problem types by underlying general characteristics.		
<u>Communication and Reasoning:</u>		
MA 11.11 Defends conclusions with examples and applies to new situations.		
<u>Connection:</u>		
MA 11.12 Applies math skills and processes to other disciplines and everyday life.		
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Level XII:		
<u>Measurement:</u>		
MA 12.1 Understands the concepts of velocity and acceleration and how they are measured.		
<u>Functions and Relationships:</u>		
MA 12.2 Implements the basic trigonometric functions.		
MA 12.3 Makes up and writes simple algorithms for solving problems that take several steps and involve data matrices.		
MA 12.4 Calculates complex areas.		
<u>Geometry:</u>		
MA 12.5 Uses mathematical induction and constructs proofs.		
MA 12.6 Understands the basic features of statistics (including standard normal distribution, standard deviation, and variance) and their use.		
MA 12.7 Understands and uses matrices and determinants.		
MA 12.8 Evaluates arithmetic series and geometric.		
MA 12.9 Solves problems involving conic sections.		
MA 12.10 Determines roots and higher-order polynomial equations.		
MA 12.11 Applies concepts to surveying problems.		
<u>Communication and Reasoning:</u>		
MA 12.12 Defends conclusions with examples and applies to new situations.		
<u>Connections:</u>		
MA 12.13 Applies math skills and processes to other disciplines and everyday life.		
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