

Secondary Mathematics Map

	August	September	October	November	December	January	February	March	April	May
Grade 7 Math	<p>Problem Solving</p> <p>Order of Operations</p> <p>Variables and Expressions</p> <p>Evaluation</p> <p>Expressions</p> <p>Properties</p> <p>Variables and Equations</p> <p>Solving Equations</p> <p>Solving Inequalities</p>	<p>Measuring in Metric Unit</p> <p>Using a Problem-Solving Plan</p> <p>Scientific Notation</p> <p>Divisibility test</p> <p>Prime</p> <p>Factorization</p> <p>Simplifying fractions</p> <p>Mixed numbers and Improper fractions</p> <p>Fractions and Decimals</p>	<p>Adding fractions</p> <p>Subtracting fractions</p> <p>Multiplying fractions</p> <p>Dividing fractions</p> <p>Customary system</p>	<p>Understanding Percents</p> <p>Percent, Fractions, and Decimals</p> <p>Percents greater than 100% and less than 1%</p> <p>Finding percent of a number</p> <p>Solving percents using proportions</p> <p>Applications of Percents</p> <p>Percent of change</p>	<p>Probability</p> <p>Experimental Probability</p> <p>Sample Space</p> <p>Compound Events</p> <p>Permutations</p> <p>Combinations</p>	<p>Solving integers</p> <p>Evaluating</p>	<p>Order of operation</p> <p>Evaluating</p> <p>One and two step inequalities</p> <p>Equations with fractions</p>	<p>Graphing points on four quadrants</p> <p>Graphing linear equations</p> <p>Finding the slope of a line</p> <p>Exploring nonlinear relationships</p>	<p>Circumference of a circle</p> <p>Square roots and irrational numbers</p> <p>The Pythagorean Theorem</p>	<p>Lines and planes</p> <p>Measuring and Classifying angles</p> <p>Triangles</p> <p>Quadrilaterals and other polygons</p> <p>Circles</p>
Grade 8 Pre-Algebra	<p>Problem Solving</p> <p>Order of Operations</p> <p>Variables and Expressions</p> <p>Evaluating Expressions</p> <p>Properties</p> <p>Variables and Equations</p> <p>Solving Equations</p> <p>Solving Inequalities</p>	<p>Integers and absolute value</p> <p>Comparing and ordering</p> <p>Adding integers</p> <p>Subtracting integers</p> <p>Problem Solving</p> <p>Multiplying integers</p> <p>Dividing integers</p>	<p>Problem solving</p> <p>Solving equations by adding and subtracting</p> <p>Solving equations by multiplication and division</p> <p>Formulas</p> <p>Area and perimeter</p> <p>Solving inequalities by adding and subtracting</p> <p>Solving inequalities by multiplication and division</p> <p>Applying equations and inequalities</p>	<p>Factors and monomials</p> <p>Powers and Exponents</p> <p>Evaluating expressions with exponents</p> <p>Problem solving</p> <p>Prime factorization</p> <p>Greatest common factor</p> <p>Simplifying fractions</p> <p>Least common multiple</p> <p>Multiplying and Dividing Monomials</p> <p>Negative exponents</p>	<p>Rational numbers</p> <p>Estimating sums and differences</p> <p>Adding and subtracting decimals</p> <p>Adding and subtracting fractions</p> <p>Solving equations</p> <p>Solving inequalities</p>	<p>Rational numbers</p> <p>Estimating products and quotients</p> <p>Multiplying and dividing fractions</p> <p>Multiplying and dividing decimals</p> <p>Measures of central tendency</p> <p>Solving multi-step equations</p> <p>Solving multi-step inequalities</p>	<p>Coordinate system</p> <p>Linear equations</p> <p>Linear inequalities</p> <p>Systems of equations</p>	<p>Ratios and rate</p> <p>Problem solving</p> <p>Simple probability</p> <p>Proportions</p> <p>Fractions</p> <p>Decimals</p> <p>Percents</p> <p>Percent equations</p> <p>Percent of change</p>	<p>Probability</p> <p>Review of integers</p> <p>Geometry Angle relationships</p> <p>Triangles</p> <p>Quadrilaterals</p> <p>Polygons</p>	<p>Polynomials</p> <p>Adding, subtracting, and multiplying polynomials</p>
Grade 9 Algebra	<p>Modeling relationships with graphs</p> <p>Modeling relationships with variables</p> <p>Order of operations</p> <p>Addition/Subtraction</p>	<p>Adding and subtracting matrices</p> <p>One-step equations</p> <p>Two-step equations</p> <p>Combining like</p>	<p>Solve inequalities with addition and subtraction</p> <p>Solving inequalities with multiplication and division</p> <p>Solving multi-step</p>	<p>Slopes and rates of change</p> <p>Direct variation</p> <p>Slope-intercept</p> <p>linear equations</p> <p>$Ax+By=C$ linear equations</p> <p>Parallel and</p>	<p>Linear systems and solutions</p> <p>Solving systems by graphing</p> <p>Solving systems by substitution</p> <p>Solving systems by elimination</p>	<p>Solving systems by elimination</p> <p>Writing systems</p> <p>Linear inequalities</p> <p>Systems of linear inequalities</p> <p>Non-linear equations</p>	<p>Adding and subtracting polynomials</p> <p>Multiplying and factoring monomials</p> <p>Multiplying polynomials</p> <p>Factoring trinomials</p> <p>Factoring special cases</p>	<p>Addition and subtraction of radicals</p> <p>Multiplication of radicals</p> <p>Division of radicals</p> <p>Solving radical</p>	<p>Solving radical equations</p> <p>Exploring exponential functions</p> <p>Zero and negative exponents</p> <p>Scientific notation</p>	<p>Functions</p> <p>Families of functions</p> <p>Pythagorean Theorem</p> <p>Distance formula</p> <p>Midpoint formula</p>

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	<p>/Multiplication /Division integers Real and rational numbers Experimental probability</p>	<p>terms Distributive property Equations with rational numbers Probability of independent and dependent events Percent equations Percent of Change Proportions Equations with variables on both sides Absolute value equations Transforming formulas</p>	<p>inequalities Compound inequalities Interpreting solutions</p>	<p>perpendicular lines</p>		<p>Systems of nonlinear equations</p>	<p>Solving equations by factoring Square roots Simplifying square roots Addition and subtraction of radicals</p>	<p>equations *(JH only) Volume and area</p>	<p>Multiplication properties of exponents Division properties of exponents</p>	
Grade 10 Geometry	<p>Patterns and inductive reasoning Basic terms of geometry Basic postulates and theorems of geometry Measurement of angles and segments Congruence Midpoint Perpendicular lines Segment bisector and perpendicular bisector Angle bisector Basic constructions Deductive reasoning Vertical angles, adjacent angles Complementary and supplementary angles Coordinate plane</p>	<p>Triangle Polygons Parallel and perpendicular lines Writing linear equation Classifying quadrilaterals Solve quadrilaterals Circles Congruent and similar figures Matrices Logical reasoning Isosceles triangles</p>	<p>Two-column proofs Midsegments of triangles Indirect reasoning (Honors only) Triangle inequalities Angle bisectors Perpendicular bisectors Concurrent lines (Honors only) Median, altitude, angle bisector, and perpendicular bisector of a triangle Perimeter and area Radicals (Algebra review)</p>	<p>Pythagorean Theorem Special right triangles Area of trapezoids</p>	<p>Area of regular polygons Circles</p>	<p>Prisms and cylinders Pyramids and cones Spheres Composite figures (Honors only) Hershey's pie project</p>	<p>Reasoning and parallel lines Proving triangles congruent</p>	<p>Quadrilaterals Similarity</p>	<p>Similarity Right triangle trigonometry</p>	<p>Chords, Secants, and Tangents of circles</p>
Grade 11 Algebra II	<p>Chapter 1 Expressions and Formulas</p>	<p>Chapter 2 Continued Graphing</p>	<p>Solving Systems of Equations by graphing</p>	<p>Introduction to Matrices Operations with</p>	<p>Monomials Polynomials Dividing</p>	<p>Graphing Quadratic Function</p>	<p>Polynomial Functions The Remainder and Factor Theorems</p>	<p>(Ch. 8) Midpoint and Distance</p>	<p>(Ch.9) Multiplying & Dividing Rational</p>	<p>(Ch.10) Exponential Functions</p>

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	<p>Properties of real numbers</p> <p>Solving Equations.</p> <p>Solving Absolute Value Equations</p> <p>Solving Inequalities</p> <p>Solving Compound and Absolute Value Inequalities</p> <p>Chapter 2</p> <p>Relations and Functions</p> <p>Linear Equations</p> <p>Slopes</p> <p>Writing Linear Equations</p>	<p>inequalities</p> <p>Graphing absolute value inequalities</p> <p>Graphing linear inequalities</p> <p>Special Functions</p> <p>Modeling real world Data-Using scatter Plots</p>	<p>Solving Systems of Equations by Substitution</p> <p>Solving Systems of Equations by Elimination</p> <p>Solving Systems of Inequalities by Graphing</p> <p>Linear Programming</p> <p>Solving Systems of Equations in Three Variables</p>	<p>Matrices</p> <p>Multiplying Matrices</p> <p>Transformations with Matrices</p> <p>Determinants</p> <p>Cramer's Rule</p> <p>Identity and Inverse Matrices</p> <p>Honors: Using Matrices to Solve Systems of Equations</p>	<p>Polynomials</p> <p>Factoring</p> <p>Polynomials</p> <p>Roots of Real Numbers</p> <p>Radical Expressions</p> <p>Rational Exponents</p> <p>Radical Equations & Inequalities</p> <p>Complex (Imaginary) Numbers</p>	<p>Solving Quadratic Equations by Factoring</p> <p>Completing the Square</p> <p>The Quadratic Formula and the Discriminant</p> <p>Analyzing Graph of Quadratic Functions</p>	<p>Operations of Functions</p> <p>Inverse Functions and Relations</p>	<p>Formulas</p> <p>Parabolas</p> <p>Circles</p> <p>Ellipses</p> <p>Hyperbolas</p> <p>Conic Sections</p>	<p>Expressions</p> <p>Adding & Subtracting Rational Expressions</p>	<p>Logarithms and Logarithmic Functions</p> <p>Properties of Logarithms (Ch.II)</p> <p>Arithmetic Sequences</p> <p>Arithmetic Series</p> <p>Geometric Sequences</p> <p>Geometric Series</p>
Grade 12 Trigonometry	Chapter 12: Sequences and Series	Chapter 11: Logarithms	Chapter 5 – Introduction to Trigonometry	Chapter 4 – Graphing of Trigonometric functions, Chapter 5 – Trigonometric Identities	Chapter 5 – Trigonometric Identities	Chapter 5/6 Trigonometric Identities and Inverse Trigonometric Functions	Chapter 6/10 – Inverse Trigonometric Functions and Parametric Equations, including expressions involving imaginary numbers.	Chapter 10 – Conic Sections Standardizing equations for circles, ellipses, hyperbolas, and parabolas.	Chapter 10 – Conic Sections Systems of Conic Sections, Tangent and Normal Lines Chapter 4 – Synthetic Division, Rational Zeroes, Irrational Zeroes, Possible Solutions	Chapter 1 – Introductory concepts for Calculus
Grade 12 Statistics	<p>The nature of statistics</p> <p>Uses and abuses of statistics</p> <p>Design of experiments</p> <p>Summarize data with frequency</p> <p>Tables</p> <p>Pictures of data</p> <p>Measures of center</p> <p>Measures of variation</p>	<p>Measures of variation</p> <p>Measures of position</p> <p>Data analysis</p> <p>Fundamentals of probability</p> <p>Addition rule</p>	<p>Multiplication rule</p> <p>Counting principle</p>	<p>Random Variables</p> <p>Binomial probability distributions</p> <p>Mean, median, standard deviation for a binomial distribution</p> <p>Standard normal distribution</p> <p>Uniform distribution</p>	<p>Finding probabilities using normal distributions</p> <p>Find values using normal distributions</p> <p>Central limit theorem</p> <p>Normal distributions as approximation to binomial distribution</p>	<p>Estimating a population mean: large samples</p> <p>Estimating population mean: small samples</p> <p>Determine sample size required to estimate population mean</p>	<p>Estimating a population proportion</p> <p>Estimating a population variance</p> <p>Hypothesis testing</p> <p>Testing a claim about a mean with large samples</p> <p>Testing a claim about a mean with small samples</p> <p>Testing a claim about a proportion</p>	<p>Testing a claim about a standard deviation or variance</p> <p>Inferences about two means: independent and large samples</p> <p>Inferences about two means: matched pairs</p> <p>Inferences about two proportions</p>	<p>Correlation</p> <p>Regression</p> <p>Variation</p>	<p>Multinomial experiments:</p> <p>Goodness-of-fit</p> <p>Contingency tables:</p> <p>Independence</p>
Grade 12 Integrated	Chapter 6: Algebra: Equations and	Chapter 7: Algebra: Graphs,	Chapter 10 – Geometry	Chapter 11 – Fundamental	Chapter 8 – Consumer	Chapter 8/1 – Consumer	Chapter 1-2 – Critical Thinking Skills and Set	Chapter 3-4 – Truth Tables and	Chapter 5 – Number Theory	Chapter 5 – Number Theory

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Mathematics	Inequalities	Functions, and Linear Systems. Chapter 9: Measurement	Chapter 11 – Probability (II.I)	Counting Principle, Permutations, Combinations, Probability Chapter 8 – Consumer Mathematics	Mathematics	Math/Problem Solving Skills and Critical Thinking Skills	Theory	Number Bases	and the Properties of Real Numbers	and the Properties of Real Numbers
Grade 12 AP Calculus	Prerequisites: Functions and Graphs, Exponential Functions, Parametric Equations, Logarithms, and Trigonometric Functions.	Limits, the derivative, rules for differentiation, continuity, differentiability.	Derivatives of Trig Functions, Derivatives of Inverse Trig Functions, Derivatives of Exponential Functions, The Chain Rule, Implicit Differentiation	Extreme Values of Functions, Mean Value Theorem, First and Second Derivative Tests	Modeling and Optimization	Related Rates and the Definite Integral	Modeling/Linearization, Newton's Method, Riemann Sums, Definite and Indefinite Integrals, Mean Value Theorem for Integrals, Fundamental Theorem of Calculus, Trapezoidal Rule, Simpson's Rule, Error Bounds, Antiderivatives	Applications of integration including area between curves, length of curves, volumes of solids of revolutions, differential equations	All topics of differentiation and integration, including continuity, differentiability, limits, and various techniques of integration.	All topics of differentiation and integration, including continuity, differentiability, limits, and various techniques of integration.