**Willingboro Public Schools**

**Curriculum and Instruction**

**Mathematics**

**Eureka Mathematics Module Sequence by Grade Level:**

**A Story of Units**

Grade 1

Grade 2

Grade 3

Grade 4

Grade 5

**A Story of Ratios**

Grade 6

Grade 7

Grade 8

Pre-Algebra (non-Eureka)

**A Story of Functions**

Algebra I

Geometry

Algebra II

Pre-Calculus (non-Eureka)

Calculus (non-Eureka)

**Eureka Mathematics: Parent Tip Sheets** – The Parent Tip Sheets were designed to help parents address questions children may have about Eureka Math at home. Tip sheets provide an overview of each topic and include suggested strategies and models, key vocabulary, connections to previous learning, and tips for how parents can support their child’s learning at home. Tip Sheets are arranged in the same sequence as the student homework, making it easy for parents to follow along with their child’s progress.

**To access the Parent Tip Sheets**,

1. Log into greatminds.org (all you need is an email address and an internet-capable device).
2. Sign-In
3. Then click on the following tabs:

Resources

Parent Tip Sheets (Math)

Grade Level desired

Add to Dashboard

Parent Tip Sheets (grade level specified)

Specific module desired

Specific topic desired

Parent Support

**How to support your children with Mathematics**

 Helping students master basic facts

**Mathematics Overview: Grade 1**

[**Curriculum Link: Click Here**](https://edconnectnj.schoolnet.com/5805/Align/CurriculumDetail.aspx?content_id=d9d1b178-6bd6-447c-b668-e4ca90e4ac7b&referrer=~%2FAlign%2Fsearch.aspx%3Ftab%3DCurriculum)

**Sequence of Grade 1 Modules**

Module 1: Sums and Differences to 10

Module 2: Introduction to Place Value Through Addition and Subtraction Within 20

Module 3: Ordering and Comparing Length Measurements as Numbers

Module 4: Place Value, Comparison, Addition and Subtraction to 40

Module 5: Identifying, Composing, and Partitioning Shapes

Module 6: Place Value, Comparison, Addition and Subtraction to 100

**Summary of Year:** Grade 1 mathematics is about

1. developing understanding of addition, subtraction, and strategies for addition and subtraction within 20;
2. developing understanding of whole number relationships and place value, including grouping in tens and ones;
3. developing understanding of linear measurement and measuring lengths as iterating length units; and
4. reasoning about attributes of, and composing and decomposing geometric shapes.

**Key Areas of Focus:** Addition and subtraction—concepts, skills, and problem solving

**Required Fluency:** 1.OA.6 Add and subtract within 10.

**Major Emphasis Clusters: Operations and Algebraic Thinking**

• Represent and solve problems involving addition and subtraction.

• Understand and apply properties of operations and the relationship between addition and subtraction.

• Add and subtract within 20.

• Work with addition and subtraction equations. Number and Operations in Base Ten

• Extend the counting sequence.

• Understand place value.

• Use place value understanding and properties of operations to add and subtract. Measurement and Data

• Measure lengths indirectly and by iterating length units.

**Mathematics Overview: Grade 2**

[**Curriculum Link: Click Here**](https://edconnectnj.schoolnet.com/5805/Align/CurriculumDetail.aspx?content_id=dee44011-3271-4cfa-987a-273169f99d63&referrer=~%2FAlign%2Fsearch.aspx%3Ftab%3DCurriculum)

**Sequence of Grade 2 Modules**

Module 1: Sums and Differences to 100

Module 2: Addition and Subtraction of Length Units

Module 3: Place Value, Counting, and Comparison of Numbers to 1,000

Module 4: Addition and Subtraction Within 200 with Word Problems to 100

Module 5: Addition and Subtraction Within 1,000 with Word Problems to 100

Module 6: Foundations of Multiplication and Division

Module 7: Problem Solving with Length, Money, and Data

Module 8: Time, Shapes, and Fractions as Equal Parts of Shapes

**Summary of Year** Grade 2 mathematics is about

1. extending understanding of base-ten notation;
2. building fluency with addition and subtraction;
3. using standard units of measure; and
4. describing and analyzing shapes.

**Key Areas of Focus**:

Addition and subtraction

Concepts, skills, and problem solving

**Required Fluency:**

2.OA.2 Add and subtract within 20.

2.NBT.5 Add and subtract within 100.

**Major Emphasis Clusters: Operations and Algebraic Thinking**

* Represent and solve problems involving addition and subtraction.
* Add and subtract within 20. Number and Operations in Base Ten
* Understand place value.
* Use place value understanding and properties of operations to add and subtract. Measurement and Data
* Measure and estimate lengths in standard units.
* Relate addition and subtraction to length.

**Problem Solving:**

* Read-Draw-Write
* Tape diagrams
* Part-whole relationships

**Mathematics Overview: Grade 3**

[**Curriculum Link: Click Here**](https://edconnectnj.schoolnet.com/5805/Align/CurriculumDetail.aspx?content_id=a45a7a48-9785-4bbd-a4ad-dba9d151288b&referrer=~%2FAlign%2Fsearch.aspx%3Ftab%3DCurriculum)

**Sequence of Grade 3 Modules**

Module 1: Properties of Multiplication and Division and

Solving Problems with Units of 2–5 and 10

Module 2: Place Value and Problem Solving with Units of Measure

Module 3: Multiplication and Division with Units of 0, 1, 6–9, and Multiples of 10

Module 4: Multiplication and Area

Module 5: Fractions as Numbers on the Number Line

Module 6: Collecting and Displaying Data

Module 7: Geometry and Measurement Word Problems

**Summary of Year**: Grade 3 mathematics is about

(1) developing understanding of multiplication and division and strategies for multiplication and division within 100;

(2) developing understanding of fractions, especially unit fractions (fractions with a numerator of 1);

(3) developing understanding of the structure of rectangular arrays and of area; and

(4) describing and analyzing two-dimensional shapes.

**Key Areas of Focus::**

Multiplication and division of whole numbers and fractions

Concepts, skills, and problem solving

**Required Fluency:**

3.OA.7 Multiply and divide within 100.

3.NBT.2 Add and subtract within 1000.

**Major Emphasis Clusters Operations and Algebraic Thinking**

* Represent and solve problems involving multiplication and division.
* Understand the properties of multiplication and the relationship between multiplication and division.
* Multiply and divide within 100.
* Solve problems involving the four operations and identify and explain patterns in arithmetic. Number and Operations—Fractions
* Develop understanding of fractions as numbers. Measurement and Data
* Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.
* Geometric measurement: understand concepts of area and relate area to multiplication and to addition.

**Mathematics Overview: Grade 4**

[**Curriculum Link: Click Here**](https://edconnectnj.schoolnet.com/5805/Align/CurriculumDetail.aspx?content_id=afdbcd5c-e1cd-4f44-9e46-9c3200663596&referrer=~%2FAlign%2Fsearch.aspx%3Ftab%3DCurriculum)

**Sequence of Grade 4 Modules**

Module 1: Place Value, Rounding, and Algorithms for Addition and Subtraction

Module 2: Unit Conversions and Problem Solving with Metric Measurement

Module 3: Multi-Digit Multiplication and Division

Module 4: Angle Measure and Plane Figures

Module 5: Fraction Equivalence, Ordering, and Operations

Module 6: Decimal Fractions

Module 7: Exploring Measurement with Multiplication

**Summary of Year Grade 4 mathematics is about**

(1) developing understanding and fluency with multi-digit multiplication, and developing understanding of dividing to find quotients involving multi-digit dividends;

(2) developing an understanding of fraction equivalence, addition and subtraction of fractions with like denominators, and multiplication of fractions by whole numbers; and

(3) understanding that geometric figures can be analyzed and classified based on their properties, such as having parallel sides, perpendicular sides, particular angle measures, and symmetry.

**Key Areas of Focus for 3–5:**

Multiplication and division of whole numbers and fractions—concepts, skills, and problem solving

**Required Fluency:**

4.NBT.4 Add and subtract within 1,000,000.

**Major Emphasis Clusters:** Operations and Algebraic Thinking

• Use the four operations with whole numbers to solve problems. Number and Operations in Base Ten

• Generalize place value understanding for multi-digit whole numbers.

• Use place value understanding and properties of operations to perform multi-digit arithmetic. Number and Operations—Fractions

• Extend understanding of fraction equivalence and ordering.

• Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.

• Understand decimal notation for fractions, and compare decimal fractions.

**Mathematics Overview: Grade 5**

[**Curriculum Link: Click Here**](https://edconnectnj.schoolnet.com/5805/Align/CurriculumDetail.aspx?content_id=dd9be8bd-a724-447e-a171-26bac5699332&referrer=~%2FAlign%2Fsearch.aspx%3Ftab%3DCurriculum)

**Sequence of Grade 5 Modules**

Module 1: Place Value and Decimal Fractions

Module 2: Multi-Digit Whole Number and Decimal Fraction Operations

Module 3: Addition and Subtraction of Fractions

Module 4: Multiplication and Division of Fractions and Decimal Fractions

Module 5: Addition and Multiplication with Volume and Area

Module 6: Problem Solving with the Coordinate Plane

**Summary of Year Grade 5 mathematics is about**

(1) developing fluency with addition and subtraction of fractions, and developing understanding of the multiplication of fractions and of division of fractions in limited cases (unit fractions divided by whole numbers and whole numbers divided by unit fractions);

(2) extending division to two-digit divisors, integrating decimal fractions into the place value system and developing understanding of operations with decimals to hundredths, and developing fluency with whole number and decimal operations; and

(3) developing understanding of volume.

**Key Areas of Focus**:

Multiplication and division of whole numbers and fractions—concepts, skills, and problem solving

**Required Fluency:**

5.NBT.5 Multi-digit multiplication.

**Major Emphasis Clusters:** Number and Operations in Base Ten

• Understand the place value system.

• Perform operations with multi-digit whole numbers and with decimals to hundredths. Number and Operations—Fractions

• Use equivalent fractions as a strategy to add and subtract fractions.

• Apply and extend previous understandings of multiplication and division to multiply and divide fractions. Measurement and Data

• Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.

**Mathematics Overview: Grade 6**

[**Curriculum Link: Click Here**](https://edconnectnj.schoolnet.com/5805/Align/CurriculumDetail.aspx?content_id=532e528d-d7e4-45db-8023-06355c7d7312&referrer=~%2FAlign%2Fsearch.aspx%3Ftab%3DCurriculum)

**Sequence of Grade 6 Modules**

Module 1: Ratios and Unit Rates

Module 2: Arithmetic Operations Including Division of Fractions

Module 3: Rational Numbers

Module 4: Expressions and Equations

Module 5: Area, Surface Area, and Volume Problems

Module 6: Statistics

**Summary of Year: Grade 6 mathematics is about**

1. connecting ratio and rate to whole number multiplication and division and using concepts of ratio and rate to solve problems;
2. completing understanding of division of fractions and extending the notion of number to the system of rational numbers, which includes negative numbers;
3. writing, interpreting, and using expressions and equations; and
4. developing understanding of statistical thinking.

**Key Areas of Focus for Grade 6:**

* Ratios and proportional reasoning;
* early expressions and equations

**Required Fluency:**

* 6.NS.B.2 Multi-digit division
* 6.NS.B.3 Multi-digit decimal operations

**Major Emphasis Clusters:**

**Ratios and Proportional Relationships**

* + Understand ratio concepts and use ratio reasoning to solve problems.

**The Number System**

* + Apply and extend previous understandings of multiplication and division to divide fractions by fractions.
	+ Apply and extend previous understandings of numbers to the system of rational numbers. Expressions and Equations
	+ Apply and extend previous understandings of arithmetic to algebraic expressions.
	+ Reason about and solve one-variable equations and inequalities.
	+ Represent and analyze quantitative relationships between dependent and independent variables.

**Mathematics Overview: Grade 7**

[**Curriculum Link: Click Here**](https://edconnectnj.schoolnet.com/5805/Align/CurriculumDetail.aspx?content_id=18473c2f-ac75-4758-8134-4959b19901b7&referrer=~%2FAlign%2Fsearch.aspx%3Ftab%3DCurriculum)

**Sequence of Grade 7 Modules**

Module 1: Ratios and Proportional Relationships

Module 2: Rational Numbers

Module 3: Expressions and Equations

Module 4: Percent and Proportional Relationships

Module 5: Statistics and Probability

Module 6: Geometry

**Summary of Year Grade 7 mathematics is about**

1. developing understanding of and applying proportional relationships;
2. developing understanding of operations with rational numbers and working with expressions and linear equations;
3. solving problems involving scale drawings and informal geometric constructions, and working with two- and three-dimensional shapes to solve problems involving area, surface area, and volume; and
4. drawing inferences about populations based on samples.

**Key Areas of Focus for Grade 7:**

* Ratios and proportional reasoning;
* arithmetic of rational numbers

**Major Emphasis Clusters:**

**Ratios and Proportional Relationships**

* Analyze proportional relationships and use them to solve real-world and mathematical problems.

**The Number System**

* Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.

**Expressions and Equations**

* + Use properties of operations to generate equivalent expressions.
	+ Solve real-life and mathematical problems using numerical and algebraic expressions and equations.

**Mathematics Overview: Grade 8**

[**Curriculum Link: Click Here**](https://edconnectnj.schoolnet.com/5805/Align/CurriculumDetail.aspx?content_id=62ba23bd-27be-4d17-9983-c7a6c3abd273&referrer=~%2FAlign%2Fsearch.aspx%3Ftab%3DCurriculum)

**Sequence of Grade 8 Modules**

Module 1: Integer Exponents and Scientific Notation

Module 2: The Concept of Congruence

Module 3: Similarity

Module 4: Linear Equations

Module 5: Examples of Functions from Geometry

Module 6: Linear Functions

Module 7: Introduction to Irrational Numbers Using Geometry

**Summary of Year Grade 8 mathematics is about**

1. formulating and reasoning about expressions and equations, including modeling an association in bivariate data with a linear equation, and solving linear equations and systems of linear equations;
2. grasping the concept of a function and using functions to describe quantitative relationships;
3. analyzing two- and three-dimensional space and figures using distance, angle, similarity, and congruence, and understanding and applying the Pythagorean theorem.

**Key Area of Focus for Grade 8**: Linear algebra

**Major Emphasis Clusters**

**Expressions and Equations**

* + Work with radicals and integer exponents.
	+ Understand the connections between proportional relationships, lines, and linear equations.
	+ Analyze and solve linear equations and pairs of simultaneous linear equations.

**Functions**

* + Define, evaluate, and compare functions.

**Geometry**

* + Understand congruence and similarity using physical models, transparencies, or geometry software.
	+ Understand and apply the Pythagorean theorem.

**Mathematics Overview: Pre-Algebra**

[**Curriculum Link: Click Here**](https://edconnectnj.schoolnet.com/5805/Align/CurricularUnitDetail.aspx?content_id=0e2b8bd4-2e01-4a56-86d2-48e7d7a2a098&referrer=~%2FAlign%2Fsearch.aspx)

**Sequence of Pre-Algebra Units**

Unit 1: Equations and Expressions, Integer Operations, Rational Number Operations, Multiple-step equations and Inequalities

Unit 2: Proportion, Percent, and Similarity

Unit 3: Linear Functions, Graphing, Exponents and other Non-linear Functions, Polynomials

Unit 4: Real Numbers and Right Triangles, Distance and Angles, Surface Area and Volume, Statistics and probability

**Summary of Year Pre-Algebra mathematics is about**

1. Consolidating the understanding of our number system and the relationships between quantities, algorithms, properties, and formulas.
2. Formulating and reasoning about expressions and equations, including modeling an association in bivariate data with a linear equation, and solving linear equations and systems of linear equations;
3. Describing relationships that are both linear and non-linear.
4. Grasping the concept of a function and using functions to describe quantitative relationships; expressing known relationships using the language and notations of functions.
5. analyzing two- and three-dimensional space and figures using distance, angle, similarity, and congruence, understanding and applying the Pythagorean theorem, calculating surface area and volume.

**Key Area of Focus for Pre-Algebra**: Linear algebra; manipulation of expressions and equations; using Algebra to generalize previously learned skills.

**Major Emphasis Clusters**

**Expressions and Equations**

* + Work with radicals and integer exponents.
	+ Understand the connections between proportional relationships, lines, and linear equations.
	+ Analyze and solve linear and non-linear equations
	+ Analyze and solve pairs of simultaneous linear equations.
	+ Develop facility at manipulating and solving algebraic equations.

**Functions**

* + Define, evaluate, and compare functions.

**Geometry**

* + Understand congruence and similarity using physical models, transparencies, or geometry software.
	+ Understand and apply the Pythagorean theorem.

**Mathematics Overview: Algebra I**

[**Curriculum Link: Click Here**](https://edconnectnj.schoolnet.com/5805/Align/CurriculumDetail.aspx?content_id=d8315111-8637-4ed8-85ad-e21fbb2f121b&referrer=~%2FAlign%2Fsearch.aspx%3Ftab%3DCurriculum)

**Sequence of Algebra I Modules**

Module 1: Relationships Between Quantities and Reasoning with Equations and Their Graphs

Module 2: Descriptive Statistics

Module 3: Linear and Exponential Functions

Module 4: Polynomial and Quadratic Expressions, Equations, and Functions

Module 5: A Synthesis of Modeling with Equations and Functions

**Summary of Year:** The fundamental purpose of this course is to formalize and extend the mathematics that students learned in the middle grades. The Modules deepen and extend understanding of linear and exponential relationships by contrasting them with each other and by applying linear models to data that exhibit a linear trend, and students engage in methods for analyzing, solving, and using quadratic functions. The Mathematical Practice Standards apply throughout each course and, together with the content standards, prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations.

**Recommended Fluencies for Algebra I**

* Solving characteristic problems involving the analytic geometry of lines, including writing the equation of a line given a point and a slope
* Adding, subtracting, and multiplying polynomials
* Transforming expressions and chunking (seeing the parts of an expression as a single object) as used in factoring, completing the square, and other algebraic calculations

**Major Emphasis Clusters:**

**Seeing Structure in Expressions**

* + Interpret the structure of expressions Arithmetic with Polynomials and Rational Expressions
	+ Perform arithmetic operations on polynomials

**Creating Equations**

* + Create equations that describe numbers or relationships

**Reasoning with Equations and Inequalities**

* + Understand solving equations as a process of reasoning and explain the reasoning
	+ Solve equations and inequalities in one variable
	+ Represent and solve equations and inequalities graphically

**Interpreting Functions**

* + Understand the concept of a function and use function notation
	+ Interpret functions that arise in applications in terms of the context

**Interpreting Categorical and Quantitative Data**

* + Interpret linear model

**Mathematics Overview: Geometry**

[**Curriculum Link: Click Here**](https://edconnectnj.schoolnet.com/5805/Align/CurriculumDetail.aspx?content_id=5c5681c0-970a-48ee-a58a-76c852f20493&referrer=~%2FAlign%2Fsearch.aspx%3Ftab%3DCurriculum)

**Sequence of Geometry Modules**

Module 1: Congruence, Proof, and Constructions

Module 2: Similarity, Proof, and Trigonometry

Module 3: Extending to Three Dimensions

Module 4: Connecting Algebra and Geometry Through Coordinates

Module 5: Circles With and Without Coordinates

**Summary of Year:** The fundamental purpose of the course in Geometry is to formalize and extend students’ geometric experiences from the middle grades. Students explore more complex geometric situations and deepen their explanations of geometric relationships, moving toward formal mathematical arguments. Important differences exist between this Geometry course and the historical approach taken in Geometry classes. For example, transformations are emphasized early in this course. Close attention should be paid to the introductory content for the Geometry conceptual category found in the high school standards. The Mathematical Practice Standards apply throughout each course and, together with the content standards, prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations.

**Recommended Fluencies for Geometry**

* Triangle congruence and similarity criteria
* Using coordinates to establish geometric results
* Calculating length and angle measures
* Using geometric representations as a modeling tool
* Using construction tools, physical and computational, to draft models of geometric phenomenon

**Major Emphasis Clusters**

**Congruence**

* Understand congruence in terms of rigid motions
* Prove geometric theorems Similarity, Right Triangles, and Trigonometry
* Understand similarity in terms of similarity transformations
* Prove theorems using similarity
* Define trigonometric ratios and solve problems involving right triangles

**Expressing Geometric Properties with Equations**

* Use coordinates to prove simple geometric theorems algebraically Modeling with Geometry
* Apply geometric concepts in modeling situations

**Mathematics Overview: Algebra II**

[**Curriculum Link: Click Here**](https://edconnectnj.schoolnet.com/5805/Align/CurriculumDetail.aspx?content_id=923afb4f-a573-4d43-a11d-f28138dd20b7&referrer=~%2FAlign%2Fsearch.aspx%3Ftab%3DCurriculum)

**Sequence of Algebra II** Modules

Module 1: Polynomial, Rational, and Radical Relationships

Module 2: Trigonometric Functions

Module 3: Exponential and Logarithmic Functions

Module 4: Inferences and Conclusions from Data

**Summary of Year:** Building on their work with linear, quadratic, and exponential functions, students extend their repertoire of functions to include polynomial, rational, trigonometric, and logarithmic functions. Students work closely with the expressions that define the functions and continue to expand and hone their abilities to model situations and to solve equations, including solving quadratic equations over the set of complex numbers and solving exponential equations using the properties of logarithms. The Mathematical Practice Standards apply throughout each course and, together with the content standards, prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations.

**Recommended Fluencies for Algebra II**

* Divide polynomials with remainder by inspection in simple cases.
* See structure in expressions and use this structure to rewrite expressions (e.g., factoring, grouping).
* Translate between recursive definitions and closed forms for problems involving sequences and series.

**Major Emphasis Clusters**

**The Real Number System**

* Extend the properties of exponents to rational exponents

**Seeing Structure in Expressions**

* Interpret the structure of expressions
* Write expressions in equivalent forms to solve problems

**Arithmetic with Polynomials and Rational Expressions**

* Understand the relationship between zeros and factors of polynomials

**Reasoning with Equations and Inequalities**

* Understand solving equations as a process of reasoning and explain the reasoning
* Represent and solve equations and inequalities graphically

**Interpreting Functions**

* Interpret functions that arise in applications in terms of the context

**Building Functions**

* Build a function that models a relationship between two quantities

**Making Inferences and Justifying Conclusions**

* Make inferences and justify conclusions from sample surveys, experiments and observational studies.

**Mathematics Overview: Pre-Calculus**

[**Curriculum Link: Click Here**](https://edconnectnj.schoolnet.com/5805/Align/MaterialDetail.aspx?content_id=524ef32e-f6c1-42b4-bf48-59b46aafc657&referrer=~%2FAlign%2FCurricularUnitDetail.aspx%3Fcontent_id%3Dca0cb927-dbf4-4352-81ed-18a45295e045%26referrer%3D~%252FAlign%252Fsearch.aspx&section_id=00000000-0000-0000-0000-000000000000)

**Unit 1:** Real Numbers, Complex Numbers, Vectors, Geometric Transformations, Matrices, matrix Transformations

**Unit 2:** Vectors, Matrices, Networks; Transformations of Planes and Space; Systems of Linear Equations; Projection Matrices.

**Unit 3:** Polynomial Functions, Fundamental Theorem of Algebra, Rational Functions, Composition of Functions, Inverse Functions

**Unit 4:** Special Triangles, Unit Circle, Trigonometric Functions, Inverse Trigonometric Functions; Probability, counting and combinations; Random Variables and distributions; Probability and Decision Making.

**Summary of Year:** Building on their work in Algebra II, students focus on the mastery of critical skills and exposure to new skills necessary for success in subsequent math courses, including linear, quadratic, exponential, logarithmic, radical, polynomial, and rational functions; systems of equations; and conic sections. You will also investigate trigonometric ratios and functions; inverse trigonometric functions; applications of trigonometry, including vectors and laws of cosine and sine; polar functions and notation; and arithmetic of complex numbers.

**Major Emphasis Clusters**

* In the **Algebra** conceptual category, Precalculus students work with higher-degree polynomials and rational functions that are more complicated, solving equations in contexts connected to real-world situations through modeling.
* **Functions**: expressions are often viewed as defining outputs for functions, and algebraic manipulations are then performed meaningfully with an eye toward what can be revealed about the function.
* **Modeling**: students asking a question about the world around them, and the mathematics is then constructed in the process of attempting to answer the question.
* The **Number and Quantity** standards in Precalculus represent a culmination of students’ understanding of number systems. Students investigate the geometry of complex numbers more fully and connect it to operations with complex numbers. Additionally, students develop the notion of a vector and connect operations with vectors and matrices to transformations of the plane.

**Mathematics Overview: Calculus**

**Unit 1:**

**Unit 2:**

**Unit 3:**

**Unit 4:**

**Summary of Year:**

**Major Emphasis Clusters**