Mathematics

Mission Statement

Our mission is to give everyone an opportunity to succeed in math. We believe that anyone who is committed to learning has the ability to achieve, regardless of his/her prior experience with math. Anyone who puts in the effort and follows the course instructions will succeed.

Arizona State Board of Education High School Graduation Requirements for Cohort 2013 and beyond

- Four credits of mathematics to minimally include the following:
  - i. Two credits containing course content covering the following areas in preparation for proficiency at the high school level on the AIMS test: Number Sense and Operations; Data Analysis, Probability and Discrete Mathematics; Patterns, Algebra and Functions; Geometry and Measurement; and Structure and Logic. These credits shall be taken consecutively beginning with the ninth grade unless a student meets these requirements prior to the ninth grade pursuant to subsection 1(c)(iv).
  - ii. One credit covering Algebra II or course content equivalent to Algebra II. Courses meeting this requirement may include, but are not limited to, career and technical education and vocational education, economics, science, and arts courses as determined by the local school district governing board or charter school.
  - iii. One credit that includes significant mathematics content as determined by the local school district governing board or charter school.
  - iv. Courses successfully completed prior to the ninth grade that meet the high school mathematics credit requirements may be applied toward satisfying those requirements.
  - v. The mathematics requirements may be modified for students using a personal curriculum pursuant to R7-2-302.03.

Students in the AOI Program must take Algebra 1, Geometry, Algebra 2 and an additional credit with significant mathematics content.

Courses that may be used for the additional credit of mathematics are:

- Precalculus
- Calculus
- Financial Literacy

Curriculum Planning Document – Algebra 1
Content Area/ Grade Level: Math/High School

Course Description: Algebra 1 is an introduction to and development of beginning algebra skills. Upon completion of this course, students will deepen their knowledge of how to set up and solve algebraic equations and inequalities including word problems, graph linear and nonlinear equations, interpret and describe functions and graphs, and analyze patterns.

Algebra 1A	Educational Delivery Methodologies	Evidence of Mastery	Comments
Domain: The Real Number System			
Cluster: Use properties of rational and irrational numbers.	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Domain: Quantities			
Cluster: Reason quantitatively and use units to solve problems.	Interactive Study Guide Practice with Feedback Explanation Videos	Project Chapter exam Mastery Checkpoint	
Domain: Vector and Matrix Quantities			
Cluster: Perform operations on matrices and use matrices in applications.	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Domain: Seeing Structure in Expressions			
Cluster: Interpret the structure of expressions	Interactive Study Guide Practice with Feedback Explanation Videos	Presentation Instructor observation	Continuous throughout course
Cluster: Write expressions in equivalent forms to solve problems	Interactive Study Guide Practice with Feedback Explanation Videos	Presentation Instructor observation	Continuous throughout course
Domain: Creating Equations			
Cluster: Create equations that describe numbers or relationships	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Domain: Reasoning with Equations and Inequalities			
Cluster: Understand solving equations as a process of reasoning and explain the reasoning	Explanation Videos Interactive Study Guide Explanation Videos	Chapter exam Mastery Checkpoint	* discussion forum planned
Cluster: Solve equations and inequalities in one variable	Explanation Videos Interactive Study Guide Explanation Videos	Chapter exam Mastery Checkpoint	
Domain: Interpreting Functions			

Algebra 1A	Educational Delivery Methodologies	Evidence of Mastery	Comments
Cluster: Understand the concept of a function and use function notation	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Cluster: Interpret functions that arise in applications in terms of the context	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Cluster: Analyze functions using different representations	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Domain: Building Functions			
Cluster: Build a function that models a relationship between two quantities	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	* discussion forum planned
Domain: Linear, Quadratic, and Exponential Models			
Cluster: Construct and compare linear, quadratic, and exponential models and solve problems	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Domain: Similarity, Right Triangles, and Trigonometry			
Cluster: Define trigonometric ratios and solve problems involving right triangles	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Domain: Expressing Geometric Properties with Equations			
Cluster: Use coordinates to prove simple geometric theorems algebraically	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Domain: Interpreting Categorical and Quantitative Data			
Cluster: Summarize, represent, and interpret data on a single count or measurement variable	Interactive Study Guide Practice with Feedback Explanation Videos	Project Chapter exam Mastery Checkpoint	
Cluster: Summarize, represent, and interpret data on two categorical and quantitative variables	Interactive Study Guide Practice with Feedback Explanation Videos	Project Chapter exam Mastery Checkpoint	
Cluster: Interpret linear models	Interactive Study Guide Practice with Feedback Explanation Videos	Project Chapter exam Mastery Checkpoint	
Domain: Making Inferences and Justifying Conclusions			
Cluster: Understand and evaluate random processes	Interactive Study Guide Practice with Feedback	Project Chapter exam	

Algebra 1A	Educational Delivery Methodologies	Evidence of Mastery	Comments
underlying statistical experiments	Explanation Videos	Mastery Checkpoint	
Domain: Conditional Probability and the Rules of Probability			
Cluster: Understand independence and conditional probability and use them to interpret data	Interactive Study Guide Practice with Feedback Explanation Videos	Presentation Chapter exam Mastery Checkpoint	
Cluster: Use the rules of probability to compute probabilities of compound events in a uniform probability model	Interactive Study Guide Practice with Feedback Explanation Videos	Presentation Chapter exam Mastery Checkpoint	

Algebra 1B	Educational Delivery Methodologies	Evidence of Mastery	Comments
Domain: The Real Number System			
Cluster: Extend the properties of exponents to rational exponents.	Interactive Study Guide Practice with Feedback Explanation Videos	Project Chapter exam Mastery Checkpoint	
Cluster: Use properties of rational and irrational numbers.	Interactive Study Guide Practice with Feedback Explanation Videos	Project Chapter exam Mastery Checkpoint	
Domain: Seeing Structure in Expressions			
Cluster: Interpret the structure of expressions	Interactive Study Guide Practice with Feedback Explanation Videos	Project Instructor observation	Continuous throughout course
Cluster: Write expressions in equivalent forms to solve problems	Interactive Study Guide Practice with Feedback Explanation Videos	Project Instructor observation	Continuous throughout course
Domain: Arithmetic with Polynomials and Rational Expressions			
Cluster: Perform arithmetic operations on polynomials.	Interactive Study Guide Practice with Feedback Explanation Videos	Presentation Chapter exam Mastery Checkpoint	
Cluster: Rewrite rational expressions	Interactive Study Guide Practice with Feedback Explanation Videos	Presentation Chapter exam Mastery Checkpoint	
Domain: Creating Equations			
Cluster: Create equations that describe numbers or relationships	Interactive Study Guide Practice with Feedback Explanation Videos	Presentation Chapter exam Mastery Checkpoint	
Domain: Reasoning with Equations and Inequalities			

Algebra 1B	Educational Delivery Methodologies	Evidence of Mastery	Comments
Cluster: Understand solving equations as a process of reasoning and explain the reasoning	Interactive Study Guide Practice with Feedback Explanation Videos	Presentation Chapter exam Mastery Checkpoint	
Cluster: Solve equations and inequalities in one variable	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Cluster: Solve systems of equations	Interactive Study Guide Practice with Feedback Explanation Videos	Presentation Chapter exam Mastery Checkpoint	
Cluster: Represent and solve equations and inequalities graphically	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Domain: Interpreting Functions			
Cluster: Understand the concept of a function and use function notation	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Cluster: Analyze functions using different representations	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Domain: Building Functions			
Cluster: Build a function that models a relationship between two quantities	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	* discussion forum planned
Domain: Linear, Quadratic, and Exponential Models			
Cluster: Construct and compare linear, quadratic, and exponential models and solve problems	Interactive Study Guide Practice with Feedback Explanation Videos	Project Chapter exam Mastery Checkpoint	
Domain: Similarity, Right Triangles, and Trigonometry			
Cluster: Define trigonometric ratios and solve problems involving right triangles	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Domain: Interpreting Categorical and Quantitative Data			
Cluster: Summarize, represent, and interpret data on a single count or measurement variable	Interactive Study Guide Practice with Feedback Explanation Videos	Project Chapter exam Mastery Checkpoint	
Domain: Conditional Probability and the Rules of Probability			
Cluster: Use the rules of probability to compute	Interactive Study Guide Practice with Feedback	Chapter exam Mastery Checkpoint	* discussion forum

Algebra 1B	Educational Delivery Methodologies	Evidence of Mastery	Comments
probabilities of compound events in a uniform probability model	Explanation Videos		planned

Curriculum Planning Document – Geometry
Content Area/ Grade Level: Math/High School

Course Description: Geometry is an introduction to and development of beginning algebra skills. Upon completion of this course, students will deepen their knowledge of inductive and deductive reasoning, proofs, applying theorems and postulates, measurement, construction, geometric similarities, triangle relationships, congruency, analyzing patterns, properties of polygons, and the connection between geometry and algebra.

Geometry A	Educational Delivery Methodologies	Evidence of Mastery	Comments
Domain: Quantities			
Cluster: Reason quantitatively and use units to solve problems.	Interactive Study Guide Practice with Feedback Explanation Videos	Project Chapter exam Mastery Checkpoint	
Domain: Creating Equations			
Cluster: Create equations that describe numbers or relationships.	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Domain: Reasoning with Equations and Inequalities			
Cluster: Understand solving equations as a process of reasoning and explain the reasoning	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Cluster: Solve equations and inequalities in one variable	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Cluster: Solve systems of equations	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Cluster: Represent and solve equations and inequalities graphically	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Domain: Interpreting Functions			
Cluster: Analyze functions using different representations	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Domain: Building Functions			
Cluster: Build a function that models a relationship between two quantities	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Domain: Congruence			

Geometry A	Educational Delivery Methodologies	Evidence of Mastery	Comments
Cluster: Experiment with transformations in the plane	Interactive Study Guide Practice with Feedback Explanation Videos	Presentation Chapter exam Mastery Checkpoint	* discussion forum planned
Cluster: Understand congruence in terms of rigid motions	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Cluster: Prove geometric theorems	Interactive Study Guide Practice with Feedback Explanation Videos	Presentation Chapter exam Mastery Checkpoint	* discussion forum planned
Cluster: Make geometric constructions	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Domain: Similarity, Right Triangles, and Trigonometry			
Cluster: Prove theorems involving similarity	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Cluster: Define trigonometric ratios and solve problems involving right triangles	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Domain: Expressing Geometric Properties with Equations			
Cluster: Use coordinates to prove simple geometric theorems algebraically	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Domain: Geometric Measurement and Dimension			
Cluster: Visualize relationships between two-dimensional and three dimensional objects	Interactive Study Guide Practice with Feedback Explanation Videos	Presentation Chapter exam Mastery Checkpoint	
Domain: Modeling with Geometry			
Cluster: Apply geometric concepts in modeling situations	Interactive Study Guide Practice with Feedback Explanation Videos	Project Chapter exam Mastery Checkpoint	* discussion forum planned

Geometry B	Educational Delivery Methodologies	Evidence of Mastery	Comments
Domain: The Real Number System			
Cluster: Extend the properties of exponents to rational exponents.	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Domain: Quantities			

Geometry B	Educational Delivery Methodologies	Evidence of Mastery	Comments
Cluster: Reason quantitatively and use units to solve problems.	Interactive Study Guide Practice with Feedback Explanation Videos	Project Chapter exam Mastery Checkpoint	
Domain: Vector and Matrix Quantities			
Cluster: Perform operations on vectors.	Interactive Study Guide Practice with Feedback Explanation Videos	Presentation Chapter exam Mastery Checkpoint	* discussion forum planned
Domain: Seeing Structure in Expressions			
Cluster: Write expressions in equivalent forms to solve problems	Interactive Study Guide Practice with Feedback	Instructor observation	Continuous throughout course
Domain: Creating Equations			
Cluster: Create equations that describe numbers or relationships	Interactive Study Guide Practice with Feedback Explanation Videos	Instructor observation Chapter exam Mastery Checkpoint	Continuous throughout course
Domain: Reasoning with Equations and Inequalities			
Cluster: Solve equations and inequalities in one variable	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Domain: Trigonometric Functions			
Cluster: Extend the domain of trigonometric functions using the unit circle	Interactive Study Guide Practice with Feedback Explanation Videos	Presentation Chapter exam Mastery Checkpoint	
Domain: Congruence			
Cluster: Experiment with transformations in the plane	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Cluster: Understand congruence in terms of rigid motions	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Cluster: Prove geometric theorems	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Domain: Similarity, Right Triangles, and Trigonometry			
Cluster: Understand similarity in terms of similarity transformations	Interactive Study Guide Practice with Feedback Explanation Videos	Presentation Chapter exam Mastery Checkpoint	
Cluster: Prove theorems involving similarity	Interactive Study Guide Practice with Feedback Explanation Videos	Presentation Chapter exam Mastery Checkpoint	
Cluster: Define trigonometric	Interactive Study Guide	Presentation	

Geometry B	Educational Delivery Methodologies	Evidence of Mastery	Comments
ratios and solve problems involving right triangles	Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Cluster: Apply trigonometry to general triangles	Interactive Study Guide Practice with Feedback Explanation Videos	Presentation Chapter exam Mastery Checkpoint	
Domain: Circles			
Cluster: Understand and apply theorems about circles	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Cluster: Find arc lengths and areas of sectors of circles	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Domain: Expressing Geometric Properties with Equations			
Cluster: Translate between the geometric description and the equation for a conic section	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Domain: Geometric Measurement and Dimension			
Cluster: Explain volume formulas and use them to solve problems	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	* discussion forum planned
Cluster: Visualize relationships between two-dimensional and three dimensional objects	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Domain: Modeling with Geometry			
Cluster: Apply geometric concepts in modeling situations	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	* discussion forum planned

Curriculum Planning Document – Algebra 2
Content Area/ Grade Level: Math/High School

Course Description: Algebra 2 provides a review and extension of the concepts taught in Algebra 1. Upon completion of this course, students will deepen their knowledge of solving equations and inequalities, solving systems, matrices, and graphing and identifying key features. Students study quadratic equations, polynomial functions, radical functions, exponential functions, logarithmic functions, rational functions, quadratic relations and conic sections, trigonometric functions, sequences and series, standard deviation, the Binomial Theorem, the Fundamental Theorem of Algebra, the Law of Sines, and the Law of Cosines. Students also will learn how to use a graphing calculator. Throughout this course, students will develop learning strategies, critical thinking skills, and problem solving techniques to prepare for future math courses.

Algebra 2A	Educational Delivery Methodologies	Evidence of Mastery	Comments
Domain: The Real Number System			
Cluster: Use properties of rational and irrational numbers.	Interactive Study Guide Practice with Feedback	Chapter exam Mastery Checkpoint	
Domain: The Complex Number System			
Cluster: Perform arithmetic operations with complex numbers.	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Cluster: Represent complex numbers and their operations on the complex plane.	Interactive Study Guide Practice with Feedback	Chapter exam Mastery Checkpoint	
Cluster: Use complex numbers in polynomial identities and equations.	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Domain: Vector and Matrix Quantities			
Cluster: Perform operations on vectors.	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Cluster: Perform operations on matrices and use matrices in applications.	Interactive Study Guide Practice with Feedback Explanation Videos Use Graphing Calculator	Chapter exam Mastery Checkpoint Graphing Calc Activity	
Domain: Seeing Structure in Expressions			
Cluster: Interpret the structure of expressions	Interactive Study Guide Practice with Feedback	Instructor observation	Continuous throughout

Algebra 2A	Educational Delivery Methodologies	Evidence of Mastery	Comments
			course
Cluster: Write expressions in equivalent forms to solve problems	Interactive Study Guide Practice with Feedback	Instructor observation	Continuous throughout course
Domain: Arithmetic with Polynomials and Rational Expressions			
Cluster: Perform arithmetic operations on polynomials	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Cluster: Understand the relationship between zeros and factors of polynomials	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	* discussion forum planned
Cluster: Use polynomial identities to solve problems	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	* discussion forum planned
Cluster: Rewrite rational expressions	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Domain: Creating Equations			
Cluster: Create equations that describe numbers or relationships	Interactive Study Guide Practice with Feedback	Chapter exam Mastery Checkpoint	
Domain: Reasoning with Equations and Inequalities			
Cluster: Solve equations and inequalities in one variable	Interactive Study Guide Practice with Feedback Explanation Videos	Graphing Calc Activity Portfolio Project Mastery Checkpoint	
Cluster: Solve systems of equations	Interactive Study Guide Practice with Feedback Explanation Videos	Graphing Calc Activity Chapter exam Mastery Checkpoint	
Cluster: Represent and solve equations and inequalities graphically	Interactive Study Guide Practice with Feedback Explanation Videos	Presentation Virtual Lab Graphing Calc Activity Chapter exam Portfolio Project	
Domain: Interpreting Function			
Cluster: Understand the concept of a function and use function notation	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Cluster: Interpret functions that arise in applications in terms of the context	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Cluster: Analyze functions	Interactive Study Guide	Presentation	

Algebra 2A	Educational Delivery Methodologies	Evidence of Mastery	Comments
using different representations	Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Domain: Building Functions			
Cluster: Build a function that models a relationship between two quantities	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Cluster: Build new functions from existing functions	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Domain: Linear, Quadratic, and Exponential Models			
Cluster: Construct and compare linear, quadratic, and exponential models and solve problems	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Cluster: Interpret expressions for functions in terms of the situation they model	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Domain: Congruence			
Cluster: Experiment with transformations in the plane	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Domain: Expressing Geometric Properties with Equations			
Cluster: Use coordinates to prove simple geometric theorems algebraically	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Domain: Modeling with Geometry			
Cluster: Apply geometric concepts in modeling situations	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Domain: Interpreting Categorical and Quantitative Data			
Cluster: Summarize, represent, and interpret data on two categorical and quantitative variables	Interactive Study Guide Practice with Feedback Explanation Videos	Presentation Chapter exam Mastery Checkpoint	
Cluster: Interpret linear models	Interactive Study Guide Practice with Feedback Explanation Videos	Presentation Chapter exam Mastery Checkpoint	
Domain: Making Inferences and Justifying Conclusions			
Cluster: Understand and evaluate random processes	Interactive Study Guide Practice with Feedback	Chapter exam Mastery Checkpoint	* discussion forum

Algebra 2A	Educational Delivery Methodologies	Evidence of Mastery	Comments
underlying statistical experiments	Explanation Videos		planned
Domain: Conditional Probability and the Rules of Probability			
Cluster: Understand independence and conditional probability and use them to interpret data	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Cluster: Use the rules of probability to compute probabilities of compound events in a uniform probability model	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	

Algebra 2B	Educational Delivery Methodologies	Evidence of Mastery	Comments
Domain: The Real Number System			
Cluster: Extend the properties of exponents to rational exponents.	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Domain: Quantities			
Cluster: Reason quantitatively and use units to solve problems.	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Domain: Seeing Structure in Expressions			
Cluster: Interpret the structure of expressions	Interactive Study Guide Practice with Feedback Explanation Videos	Project Instructor observation Chapter exam Mastery Checkpoint	Continuous throughout course
Cluster: Write expressions in equivalent forms to solve problems	Interactive Study Guide Practice with Feedback Explanation Videos	Project Instructor observation Chapter exam Mastery Checkpoint	Continuous throughout course
Domain: Creating Equations			
Cluster: Create equations that describe numbers or relationships	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Domain: Reasoning with Equations and Inequalities			
Cluster: Understand solving equations as a process of reasoning and explain the reasoning	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	

Algebra 2B	Educational Delivery Methodologies	Evidence of Mastery	Comments
Domain: Interpreting Function			
Cluster: Understand the concept of a function and use function notation	Interactive Study Guide Practice with Feedback Explanation Videos	Presentation Chapter exam Mastery Checkpoint	
Cluster: Interpret functions that arise in applications in terms of the context	Interactive Study Guide Practice with Feedback Explanation Videos	Presentation Chapter exam Mastery Checkpoint	
Cluster: Analyze functions using different representations	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Domain: Building Functions			
Cluster: Build a function that models a relationship between two quantities	Interactive Study Guide Practice with Feedback Explanation Videos	Presentation Chapter exam Mastery Checkpoint	
Cluster: Build new functions from existing functions	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Domain: Linear, Quadratic, and Exponential Models			
Cluster: Construct and compare linear, quadratic, and exponential models and solve problems	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	* discussion forum planned
Cluster: Interpret expressions for functions in terms of the situation they model	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Domain: Trigonometric Functions			
Cluster: Extend the domain of trigonometric functions using the unit circle	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Domain: Congruence			
Cluster: Experiment with transformations in the plane	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Domain: Similarity, Right Triangles, and Trigonometry			
Cluster: Apply trigonometry to general triangles	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Domain: Circles			
Cluster: Find arc lengths and areas of sectors of circles	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	

Algebra 2B	Educational Delivery Methodologies	Evidence of Mastery	Comments
Domain: Expressing Geometric Properties with Equations			
Cluster: Translate between the geometric description and the equation for a conic section	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Cluster: Use coordinates to prove simple geometric theorems algebraically	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Domain: Modeling with Geometry			
Cluster: Explain volume formulas and use them to solve problems	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Domain: Interpreting Categorical and Quantitative Data			
Cluster: Summarize, represent, and interpret data on a single count or measurement variable	Interactive Study Guide Practice with Feedback Explanation Videos	Project Chapter exam Mastery Checkpoint	* discussion forum planned
Cluster: Summarize, represent, and interpret data on two categorical and quantitative variables	Interactive Study Guide Practice with Feedback Explanation Videos	Project Chapter exam Mastery Checkpoint	* discussion forum planned
Domain: Making Inferences and Justifying Conclusions			
Cluster: Make inferences and justify conclusions from sample surveys, experiments, and observational studies	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Domain: Conditional Probability and the Rules of Probability			
Cluster: Understand independence and conditional probability and use them to interpret data	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Cluster: Use the rules of probability to compute probabilities of compound events in a uniform probability model	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Domain: Using Probability to Make Decisions			
Cluster: Calculate expected values and use them to solve problems	Interactive Study Guide Practice with Feedback Explanation Videos	Project Chapter exam Mastery Checkpoint	* discussion forum planned
Cluster: Use probability to	Interactive Study Guide	Project	* discussion

Algebra 2B	Educational Delivery Methodologies	Evidence of Mastery	Comments
evaluate outcomes of decisions	Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	forum planned

Curriculum Planning Document – Precalculus
Content Area/ Grade Level: Math/High School

Course Description: This course covers the concepts and skills necessary for students to succeed in calculus. This course contains an in-depth coverage of trigonometry, logarithms, analytic geometry, and upper-level algebraic concepts. Students develop an understanding of matrices, proofs, statistics, functions, and the graphing calculator. Upon completion of this course, students will be fully prepared for calculus, advanced chemistry, and calculus-based physics.

Precalculus	Educational Delivery Methodologies	Evidence of Mastery	Comments
Domain: The Complex Number System			
Cluster: Perform arithmetic operations with complex numbers.	Interactive Study Guide Practice with Feedback	Chapter exam Mastery Checkpoint	* discussion forum planned
Cluster: Represent complex numbers and their operations on the complex plane.	Interactive Study Guide Practice with Feedback	Chapter exam Mastery Checkpoint	
Cluster: Use complex numbers in polynomial identities and equations.	Interactive Study Guide Practice with Feedback	Chapter exam Mastery Checkpoint	
Domain: Vector and Matrix Quantities			
Cluster: Represent and model with vector quantities.	Interactive Study Guide Practice with Feedback	Presentation Chapter exam Mastery Checkpoint	* discussion forum planned
Cluster: Perform operations on vectors.	Interactive Study Guide Practice with Feedback	Chapter exam Mastery Checkpoint	
Cluster: Perform operations on matrices and use matrices in applications.	Interactive Study Guide Practice with Feedback	Project Chapter exam Mastery Checkpoint	
Domain: Arithmetic with Polynomials and Rational Expressions			
Cluster: Use polynomial identities to solve problems.	Interactive Study Guide Practice with Feedback	Chapter exam Mastery Checkpoint	
Cluster: Rewrite rational expressions.	Interactive Study Guide Practice with Feedback	Chapter exam Mastery Checkpoint	
Domain: Reasoning with Equations and Inequalities			
Cluster: Solve systems of equations.	Interactive Study Guide Practice with Feedback	Chapter exam Mastery Checkpoint	
Domain: Interpreting Functions			
Cluster: Analyze functions using different representation.	Interactive Study Guide Practice with Feedback	Chapter exam Mastery Checkpoint	

Domain: Building Functions			
Cluster: Build a function that models a relationship between two quantities.	Interactive Study Guide Practice with Feedback	Chapter exam Mastery Checkpoint	
Cluster: Build new functions from existing functions.	Interactive Study Guide Practice with Feedback	Chapter exam Mastery Checkpoint	
Domain: Trigonometric Functions			
Cluster: Extend the domain of trigonometric functions using the unit circle.	Interactive Study Guide Practice with Feedback	Project Chapter exam Mastery Checkpoint	
Cluster: Model periodic phenomena with trigonometric functions.	Interactive Study Guide Practice with Feedback	Project Chapter exam Mastery Checkpoint	
Cluster: Prove and apply trigonometric identities.	Interactive Study Guide Practice with Feedback	Chapter exam Mastery Checkpoint	* discussion forum planned
Domain: Circles			
Cluster: Apply trigonometry to general triangles.	Interactive Study Guide Practice with Feedback	Chapter exam Mastery Checkpoint	
Cluster: Understand and apply theorems about circles.	Interactive Study Guide Practice with Feedback	Chapter exam Mastery Checkpoint	
Domain: Expressing Geometric Properties with Equations			
Cluster: Translate between the geometric description and the equation for a conic section.	Interactive Study Guide Practice with Feedback	Chapter exam Mastery Checkpoint	
Domain: : Geometric Measurement and Dimension			
Cluster: Explain volume formulas and use them to solve problems.	Interactive Study Guide Practice with Feedback	Chapter exam Mastery Checkpoint	
Domain: Conditional Probability and the Rules of Probability			
Cluster: Use the rules of probability to compute probabilities of compound events in a uniform probability model.	Interactive Study Guide Practice with Feedback	Chapter exam Mastery Checkpoint	
Domain: Using Probability to Make Decisions			
Cluster: Calculate expected values and use them to solve problems.	Interactive Study Guide Practice with Feedback	Chapter exam Mastery Checkpoint	
Cluster: Use probability to evaluate outcomes of decisions.	Interactive Study Guide Practice with Feedback	Chapter exam Mastery Checkpoint	* discussion forum planned

Domain: Contemporary Mathematics: Discrete Mathematics			
Cluster: Understand and apply vertex-edge graph topics.	Interactive Study Guide Practice with Feedback	Project Chapter exam Mastery Checkpoint	

Curriculum Planning Document – Financial Literacy
Content Area/ Grade Level: Math/High School

Course Description: The goal of financial literacy is to provide students with the tools to make wise financial decisions. Students learn how current financial decisions affect future financial options. Understanding credit scores, the danger of pay-check to pay-check living, and the principles behind banking is an important foundation taught in Financial Literacy. Students learn purchasing and spending skills as they look into price comparison and explore the many facets sales and budgeting. Students are also introduced to investments and retirements to start thinking about their future, as well as credit card offers, payday loans, car title loans, personal loans, and student loans. Students evaluate offers and recognize misleading data, offers, and scams including pyramid schemes, phishing scams, modeling scams, work-at-home and business opportunity scans, reloading phone call scams, travel telemarketing scams, lottery scams, fake check scams, charity and fundraising fraud, and credit and loan phone scams. The course finishes with taxes: federal income, state income, sales tax, property tax, personal property tax, and other taxes and assessments. Financial Literacy reinforces basic math applications as they exist in everyday life.

Financial Literacy	Educational Delivery Methodologies	Evidence of Mastery	Comments
Domain: The Real Number System			
Cluster: Extend the properties of exponents to rational exponents.	Interactive Study Guide Practice with Feedback Explanation Videos	Mastery Checkpoint	
Cluster: Use properties of rational and irrational numbers.	Interactive Study Guide Practice with Feedback Explanation Videos	Mastery Checkpoint	
Domain: Quantities			
Cluster: Reason quantitatively and use units to solve problems.	Interactive Study Guide Practice with Feedback Explanation Videos	Project Presentation	Continuous throughout course
Domain: Seeing Structure in Expressions			
Cluster: Interpret the structure of expressions	Interactive Study Guide Practice with Feedback Explanation Videos	Project Instructor observation Chapter exam Mastery Checkpoint	Continuous throughout course
Cluster: Write expressions in equivalent forms to solve problems	Interactive Study Guide Practice with Feedback Explanation Videos	Project Instructor observation Chapter exam Mastery Checkpoint	Continuous throughout course
Domain: Creating Equations			
Cluster: Create equations that	Interactive Study Guide	Project	

describe numbers or relationships	Practice with Feedback Explanation Videos	Mastery Checkpoint	
Domain: Reasoning with Equations and Inequalities			
Cluster: Understand solving equations as a process of reasoning and explain the reasoning	Interactive Study Guide Practice with Feedback Explanation Videos	Project Mastery Checkpoint	
Domain: Interpreting Functions			
Cluster: Interpret functions that arise in applications in terms of the context	Interactive Study Guide Practice with Feedback Explanation Videos	Project Mastery Checkpoint	
Cluster: Analyze functions using different representations	Interactive Study Guide Practice with Feedback Explanation Videos	Presentation Project Mastery Checkpoint	
Domain: Linear, Quadratic, and Exponential Models			
Cluster: Construct and compare linear, quadratic, and exponential models and solve problems	Interactive Study Guide Practice with Feedback Explanation Videos	Project Mastery Checkpoint Chapter exam	
Cluster: Interpret expressions for functions in terms of the situation they model	Interactive Study Guide Practice with Feedback Explanation Videos	Project Mastery Checkpoint Chapter exam	
Domain: Interpreting Categorical and Quantitative Data			
Cluster: Summarize, represent, and interpret data on a single count or measurement variable	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	
Domain: Making Inferences and Justifying Conclusions			
Cluster: Understand and evaluate random processes underlying statistical experiments	Interactive Study Guide Practice with Feedback Explanation Videos	Chapter exam Mastery Checkpoint	

Calculus with Trigonometry and Analytic Geometry
Content Area/ Grade Level: Math/High School

Course Description: This course is an intensive review from algebra, trigonometry, and analytic geometry, and covers all topics normally taught in the first two semesters of a calculus course in college. Upon completion of this course, students will have developed a thorough understanding of derivatives, integrals, limits, continuity, differentiability, and other calculus related concepts.

Educational Delivery Methodologies: Interactive Study Guide, Practice with Feedback, Explanation Videos

Evidence of Mastery: Projects, Presentations, Chapter exam, Mastery Checkpoints

Mathematical Practices are continuously used throughout the course. Calculus is beyond the score of the Arizona's Common Cores Standards. This course is aligned to the following Advanced Placement Calculus AB standards set forth by the College Board:

APC.1 The student will define and apply the properties of elementary functions, including algebraic, trigonometric, exponential, and composite functions and their inverses, and graph these functions, using a graphing calculator. Properties of functions will include domains, ranges, combinations, odd, even, periodicity, symmetry, asymptotes, zeros, upper and lower bounds, and intervals where the function is increasing or decreasing.

APC.2 The student will define and apply the properties of limits of functions. Limits will be evaluated graphically and algebraically. This will include
a) limits of a constant;
b) limits of a sum, product, and quotient;
c) one-sided limits; and
d) limits at infinity, infinite limits, and non-existent limits.

APC.3 The student will use limits to define continuity and determine where a function is continuous or discontinuous. This will include
a) continuity in terms of limits;
b) continuity at a point and over a closed interval;
c) application of the Intermediate Value Theorem and the Extreme Value Theorem; and
d) geometric understanding and interpretation of continuity and discontinuity.

APC.4 The student will investigate asymptotic and unbounded behavior in functions. This will include

a) describing and understanding asymptotes in terms of graphical behavior and limits involving infinity; and
b) comparing relative magnitudes of functions and their rates of change.

APC.5 The student will investigate derivatives presented in graphic, numerical, and analytic contexts and the relationship between continuity and differentiability. The derivative will be defined as the limit of the difference quotient and interpreted as an instantaneous rate of change.

APC.6 The student will investigate the derivative at a point on a curve. This will include

a) finding the slope of a curve at a point, including points at which the tangent is vertical and points at which there are no tangents;
b) using local linear approximation to find the slope of a tangent line to a curve at the point;
c) defining instantaneous rate of change as the limit of average rate of change; and
d) approximating rate of change from graphs and tables of values.

APC.7 The student will analyze the derivative of a function as a function in itself. This will include

a) comparing corresponding characteristics of the graphs of f, f', and f'';
b) defining the relationship between the increasing and decreasing behavior of f and the sign of f';
c) translating verbal descriptions into equations involving derivatives and vice versa;
d) analyzing the geometric consequences of the Mean Value Theorem;
e) defining the relationship between the concavity of f and the sign of f''; and
f) identifying points of inflection as places where concavity changes and finding points of inflection.

APC.8 The student will apply the derivative to solve problems. This will include

a) analysis of curves and the ideas of concavity and monotonicity;
b) optimization involving global and local extrema;
c) modeling of rates of change and related rates;
d) use of implicit differentiation to find the derivative of an inverse function;
e) interpretation of the derivative as a rate of change in applied contexts, including velocity, speed, and acceleration; and
f) differentiation of nonlogarithmic functions, using the technique of logarithmic differentiation.

APC.9 The student will apply formulas to find derivatives. This will include

a) derivatives of algebraic, trigonometric, exponential, logarithmic, and inverse trigonometric functions;

b) derivations of sums, products, quotients, inverses, and composites (chain rule) of elementary functions;
c) derivatives of implicitly defined functions; and
d) higher order derivatives of algebraic, trigonometric, exponential, and logarithmic, functions.

APC.10 The student will use Riemann sums and the Trapezoidal Rule to approximate definite integrals of functions represented algebraically, graphically, and by a table of values and will interpret the definite integral as the accumulated rate of change of a quantity over an interval interpreted as the change of the quantity over the interval

$$\int_a^b f'(x)\,dx = f(b) - f(a).$$

Riemann sums will use left, right, and midpoint evaluation points over equal subdivisions.

APC.11 The student will find antiderivatives directly from derivatives of basic functions and by substitution of variables (including change of limits for definite integrals). *
* AP Calculus BC will also include finding antiderivatives by parts and simple partial fractions (nonrepeating linear factors only), and finding improper integrals as limits of definite integrals.
* AP Calculus BC will also solve logistic differential equations and use them in modeling.

APC.12 The student will identify the properties of the definite integral. This will include additivity and linearity, the definite integral as an area, and the definite integral as a limit of a sum as well as the fundamental theorem:

$$d/dx \int_a^x f(t)\,d(t) = f(x).$$

APC.13 The student will use the Fundamental Theorem of Calculus to evaluate definite integrals, represent a particular antiderivative, and facilitate the analytical and graphical analysis of functions so defined.

APC.14 The student will find specific antiderivatives, using initial conditions (including applications to motion along a line). Separable differential equations will be solved and used in modeling (in particular, the equation $y' = ky$ and exponential growth).

APC.15 The student will use integration techniques and appropriate integrals to model physical, biological, and economic situations. The emphasis will be on using the integral of a rate of change to give accumulated change or on using the method of

setting up an approximating Riemann sum and representing its limit as a definite integral. Specific applications will include

a) the area of a region;
b) the volume of a solid with known cross-section;
c) the average value of a function; and
d) the distance traveled by a particle along a line.

APC.16 The student will define a series and test for convergence of a series in terms of the limit of the sequence of partial sums. This will include

a) geometric series with applications;
b) harmonic series;
c) alternating series with error bound;
d) terms of series as areas of rectangles and their relationship to improper integrals, including the integral test and its use in testing the convergence of p-series; and
e) ratio test for convergence and divergence.

APC.17 The student will define, restate, and apply Taylor series. This will include

a) Taylor polynomial approximations with graphical demonstration of convergence;
b) Maclaurin series and the general Taylor series centered at $x = a$;
c) Maclaurin series for the functions e^x, $\sin x$, $\cos x$, and $1/(1 - x)$;
d) formal manipulation of Taylor series and shortcuts to computing Taylor series, including substitution, differentiation, antidifferentiation, and the formation of new series from known series;
e) functions defined by power series;
f) radius and interval of convergence of power series; and
g) Lagrange error bound of a Taylor polynomial.

Arizona's Common Core Standards

Mathematics	Standards Addressed in Course
Domain: The Real Number System	
Cluster: Extend the properties of exponents to rational exponents.	Algebra 1 Geometry Algebra 2 Financial Literacy
Cluster: Use properties of rational and irrational numbers.	Algebra 1 Algebra 2 Financial Literacy
Domain: Quantities	
Cluster: Reason quantitatively and use units to solve problems.	Algebra 1 Geometry Algebra 2 Financial Literacy
Domain: The Complex Number System	
Cluster: Perform arithmetic operations with complex numbers.	Algebra 2 Precalculus
Cluster: Represent complex numbers and their operations on the complex plane.	Algebra 2 Precalculus
Cluster: Use complex numbers in polynomial identities and equations.	Algebra 2 Precalculus
Domain: Vector and Matrix Quantities	
Cluster: Represent and model with vector quantities.	Precalculus
Cluster: Perform operations on vectors.	Algebra 1 Geometry Algebra 2 Precalculus
Cluster: Perform operations on matrices and use matrices in applications.	Algebra 2 Precalculus
Domain: Seeing Structure in Expressions	
Cluster: Interpret the structure of expressions	Algebra 1 Algebra 2 Financial Literacy
Cluster: Write expressions in equivalent forms to solve problems	Algebra 1 Geometry Algebra 2 Financial Literacy
Domain: Arithmetic with Polynomials and Rational	

Mathematics	Standards Addressed in Course
Expressions	
Cluster: Perform arithmetic operations on polynomials	Algebra 1 Algebra 2
Cluster: Understand the relationship between zeros and factors of polynomials	Algebra 2
Cluster: Use polynomial identities to solve problems	Algebra 2 Precalculus
Cluster: Rewrite rational expressions	Algebra 1 Algebra 2 Precalculus
Domain: Creating Equations	
Cluster: Create equations that describe numbers or relationships	Algebra 1 Geometry Algebra 2 Financial Literacy
Domain: Reasoning with Equations and Inequalities	
Cluster: Understand solving equations as a process of reasoning and explain the reasoning	Algebra 1 Geometry Algebra 2 Financial Literacy
Cluster: Solve equations and inequalities in one variable	Algebra 1 Geometry Algebra 2
Cluster: Solve systems of equations	Algebra 1 Geometry Algebra 2 Precalculus
Cluster: Represent and solve equations and inequalities graphically	Algebra 1 Geometry Algebra 2
Domain: Interpreting Function	
Cluster: Understand the concept of a function and use function notation	Algebra 1 Algebra 2
Cluster: Interpret functions that arise in applications in terms of the context	Algebra 1 Algebra 2 Financial Literacy
Cluster: Analyze functions using different representations	Algebra 1 Geometry Algebra 2 Precalculus Financial Literacy

Mathematics	Standards Addressed in Course
Domain: Building Functions	
Cluster: Build a function that models a relationship between two quantities	Algebra 1 Geometry Algebra 2 Precalculus
Cluster: Build new functions from existing functions	Algebra 2 Precalculus
Domain: Linear, Quadratic, and Exponential Models	
Cluster: Construct and compare linear, quadratic, and exponential models and solve problems	Algebra 1 Algebra 2 Financial Literacy
Cluster: Interpret expressions for functions in terms of the situation they model	Algebra 2 Financial Literacy
Domain: Trigonometric Functions	
Cluster: Extend the domain of trigonometric functions using the unit circle	Geometry Algebra 2 Precalculus
Cluster: Model periodic phenomena with trigonometric functions	Precalculus
Cluster: Prove and apply trigonometric identities	Precalculus
Domain: Congruence	
Cluster: Experiment with transformations in the plane	Geometry Algebra 2
Cluster: Understand congruence in terms of rigid motions	Geometry
Cluster: Prove geometric theorems	Geometry
Cluster: Make geometric constructions	Geometry
Domain: Similarity, Right Triangles, and Trigonometry	
Cluster: Understand similarity in terms of similarity transformations	Geometry
Cluster: Prove theorems involving similarity	Geometry
Cluster: Define trigonometric ratios and solve problems	Algebra 1 Geometry

Mathematics	Standards Addressed in Course
involving right triangles	
Cluster: Apply trigonometry to general triangles	Geometry Algebra 2
Domain: Circles	
Cluster: Understand and apply theorems about circles	Geometry Precalculus
Cluster: Find arc lengths and areas of sectors of circles	Geometry Algebra 2 Precalculus
Domain: Expressing Geometric Properties with Equations	
Cluster: Translate between the geometric description and the equation for a conic section	Geometry Algebra 2 Precalculus
Cluster: Use coordinates to prove simple geometric theorems algebraically	Algebra 1 Geometry Algebra 2
Domain: Geometric Measurement and Dimension	
Cluster: Explain volume formulas and use them to solve problems	Geometry Algebra 2 Precalculus
Cluster: Visualize relationships between two-dimensional and three dimensional objects	Geometry
Domain: Modeling with Geometry	
Cluster: Apply geometric concepts in modeling situations	Geometry Algebra 2
Domain: Interpreting Categorical and Quantitative Data	
Cluster: Summarize, represent, and interpret data on a single count or measurement variable	Algebra 1 Algebra 2 Financial Literacy
Cluster: Summarize, represent, and interpret data on two categorical and quantitative variables	Algebra 1 Algebra 2
Cluster: Interpret linear models	Algebra 1 Algebra 2
Domain: Making Inferences and Justifying Conclusions	
Cluster: Understand and	Algebra 1

Mathematics	Standards Addressed in Course
evaluate random processes underlying statistical experiments	Algebra 2 Financial Literacy
Cluster: Make inferences and justify conclusions from sample surveys, experiments, and observational studies	Algebra 2
Domain: Conditional Probability and the Rules of Probability	
Cluster: Understand independence and conditional probability and use them to interpret data	Algebra 1 Algebra 2
Cluster: Use the rules of probability to compute probabilities of compound events in a uniform probability model	Algebra 1 Algebra 2 Precalculus
Domain: Using Probability to Make Decisions	
Cluster: Calculate expected values and use them to solve problems	Algebra 2 Precalculus
Cluster: Use probability to evaluate outcomes of decisions	Algebra 2 Precalculus
Domain: Discrete Mathematics	
Cluster: Understand and apply vertex-edge graph topics	Precalculus

<u>The following Mathematical Practices are continuous throughout all mathematics courses:</u>

HS.MP.1. Make sense of problems and persevere in solving them.
HS.MP.2. Reason abstractly and quantitatively.
HS.MP.3. Construct viable arguments and critique the reasoning of others.
HS.MP.4. Model with mathematics.
HS.MP.5. Use appropriate tools strategically.
HS.MP.6. Attend to precision.
HS.MP.7. Look for and make use of structure.
HS.MP.8. Look for and express regularity in repeated reasoning.