

River Ridge High School Math Course Offerings



Intensified Algebra

Intensified Algebra I is a comprehensive, extended-period course that is designed to help students who are one to two years behind in mathematics re-engage as motivated learners and succeed in Algebra I within a single academic year. It transforms the teaching of algebra for students who need additional time to understand the mathematics.

Algebra 1

This course is designed to develop the concepts and skills in first year algebra. Topics include operations with rational numbers, variables, ratio and proportion, graphs, sets, number theory, equations, polynomials, algebraic expressions and factoring. This course has a state-developed and mandated End of Course Exam. Demonstrating proficiency on this standardized exam is a graduation requirement.

Liberal Arts Math 1

This course is designed to strengthen the mathematical skills required for college entrance exams or for further study of advanced mathematics. Topics include ratio and proportion, sets, polynomials, expressions, equations and inequalities, graphs, quadratic equations, and the geometry of angles, lines, polygons, similarity and congruence.

Geometry

The purpose of the course 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 towards formal mathematical arguments. This course has a state-developed and mandated End of Course Exam. Depending on an individual student's progression, Geometry is typically offered to 9th or 10th grade students.

Liberal Arts Math 2

This course is designed to strengthen the mathematical skills required for college entrance exams and for further study of advanced mathematics. Topics include operations with real numbers, ratio and proportion, percents, integers, polynomials, factoring, algebraic expressions, quadratic equations, and the geometry of angles, lines, polygons, similarity and congruence. Liberal Arts Math 2 is recommended for students that are in need of reinforcing both Algebra 1 and Geometry concepts.

Algebra 2

This course is designed to continue the study of the structure of algebra and to provide the foundation for applying these skills to other mathematical and scientific fields. Topics include graphs, polynomials and rational expressions, quadratic equations and inequalities, exponents, irrational numbers, logarithms and complex numbers.

Advanced Topics of Math

The purpose of the course is to formalize and extend students' mathematical experiences from Algebra 2. Students have the opportunity to improve upon and progress skills that will prepare them for college PreCalculus. Advanced Topics of Math is typically a 12th grade course, though some 11th graders may opt to take this course if they do not have adequate Algebra 2 skills to be successful in Honors PreCalculus.

Math for College Readiness

This course is targeted for students who are not yet "college ready" in mathematics or need some additional instruction in content to prepare them for success in college level mathematics. The standards align with the Mathematics Postsecondary Readiness Competencies and PERT deemed necessary for entry-level college courses.

PreCalculus

This course is designed to emphasize the concepts and skills necessary for the study of calculus. Topics include functions, vectors, polar coordinates, symbolic logic and matrix algebra.

Probability & Statistics

This course is designed to provide a basic understanding of descriptive and inferential statistics. Topics include standard deviation, sampling, and various distributions. Emphasis on application of statistical concepts.

AP Calculus AB

AP Calculus AB is structured around three big ideas: limits, derivatives, and integrals and the Fundamental Theorem of Calculus. The concept of limits is foundational; the understanding of this fundamental tool leads to the development of more advanced tools and concepts that prepare students to grasp the Fundamental Theorem of Calculus, a central idea of AP Calculus.

AP Probability and Statistics

This AP course is designed to introduce students to the major concepts and tools for collecting, analyzing and drawing conclusions from data. Students will learn about exploring patterns in data, planning and performing a study, exploring random phenomena, testing hypotheses and estimating population parameters.

- Four math credits are required for graduation to include Algebra 1 or equivalent and Geometry.
- Students must PASS the Algebra 1 State EOC and must Take the Geometry State EOC for graduation.
- Math for College Readiness is a course that will prepare students to be successful on the PERT. A math score of 97 on the PERT, 19 on the ACT, or 440 on the SAT, will satisfy the Algebra 1 EOC graduation requirement. The purpose of this class is to prepare students to pass the PERT/CPT.
- As mathematics is sequential, students must meet the prerequisite prior to taking the next course in the sequence. H denotes the Honors class.
- A student may cross program lines as his/her goals and needs change. Some students with high grades in regular classes and teachers recommendation may proceed into honors level classes.
- Liberal Arts Mathematics (prerequisite Algebra 1 or equivalent) may be used after Algebra 1 for reinforcement of content prior to next course in the sequence. It will also review some content needed for the Algebra 1 and Geometry EOC State Assessments.