Broward County Public Schools Curriculum Guide

11th Grade

GEOMETRY

This course is designed for students that successfully has completed Algebra 1 Honors by eighth grade. 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 towards formal mathematical arguments.

GEOMETRY HONORS

This course is designed for students that successfully has completed Algebra 1 Honors by eighth grade. Geometry is the study of logical reasoning. The fundamental purpose of the course is to study that points, lines, and planes are used as the building blocks of geometric figures, and as the basic models from which to reason. Emphasis is placed on formal proofs and problem-solving involving algebra skills.

FINANCIAL ALGEBRA

Financial Algebra is designed for students who have completed Algebra 1 or Geometry by ninth grade. The course would be a bridge to upper-level mathematics such as Algebra 2 and Mathematics for College Readiness. It is targeted for students who need additional instruction in content to prepare them for success in upper-level mathematics. The focus of this course, is to provide a real-life financial literacy framework that can be applied to upper-level mathematics standards. In our consumer-based society, this course addresses the results of financial decisions that will result in more fiscally responsible citizens.

ALGEBRA 2

This course is designed for students who have successfully completed Geometry by ninth grade. The fundamental purpose of this course is to prepare students to take Pre-Calculus and Statistics. This course is designed to build on algebraic and geometric concepts. It develops advanced algebra skills such as systems of equations, advanced polynomials, imaginary and complex numbers, quadratics, and concepts and includes the study of trigonometric functions.

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11th Grade

ALGEBRA 2 HONORS

This course is designed for students who have successfully completed Geometry or Geometry Honors by ninth grade. This course is designed for students who have demonstrated exceptional ability and motivation in mathematics and will meet the needs of students who anticipate entering college majors requiring an extensive mathematical background. This provide students with an in-depth level of instruction, an accelerated pace and a cooperative learning environment. Building on their work with linear, quadratic, and exponential functions, students extend their repertoire of functions to include polynomial, rational, and radical 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.

ANLYSIS OF FUNCTIONS /TRIG

This course is designed for students who successfully have completed Algebra 2 Honors by ninth grade. It is designed to prepare students for further study of mathematics at the college level. It prepares students for Pre-calculus. Students learn more in-depth topics such as the family of functions (e.g. polynomial, rational, exponential, logarithmic, and trigonometric), limits, derivatives, vectors, matrices, sequences, and series will be undertaken.

ADVANCED TOPICS

This course is designed for students who have successfully completed Algebra 2 by tenth grade, and are interested in learning about some advanced mathematical topics and improving their math proficiency. The course includes Algebra 2 topics, analytic trigonometry, matrices, analytic geometry, and probability. At the end of this course, the students will have a better understanding of algebra, as an approach to higher level courses such as Pre-Calculus or Honors Probability and Stats

HONORS PROBALILITY AND STATS

This course is designed for students who successfully have completed Algebra 2 or Algebra 2 honors by tenth grade. The fundamental purpose of this course is to explore the fundamental concepts of probability and statistics through exercises that require students to interpret results, provide written explanations, find patterns, and make decisions. The main objective is to provide students with the foundations of statistical inference mostly used in a wide variety of disciplines such as business and economics.

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PRE-CALCULUS

This course is designed for students who successfully have completed Algebra 2 Honors by ninth grade. This course covers topics in Algebra ranging from polynomial, rational, and exponential functions to conic sections. Trigonometry concepts such as Law of Sines and Cosines will be introduced and get students ready for Calculus.

AP CALCULUS AB

This course is designed for students who have successfully completed Pre-calculus by tenth grade. AP Calculus AB is roughly equivalent to a first semester college calculus course devoted to topics in differential and integral calculus. The AP course covers topics in these areas, including concepts and skills of limits, derivatives, definite integrals, and the Fundamental Theorem of Calculus. The course teaches students to approach calculus concepts and problems when they are represented graphically, numerically, analytically, and verbally, and to make connections amongst these representations. Students learn how to use technology to help solve problems, experiment, interpret results, and support conclusions.

CALCULUS HONORS

This course is designed for students who have successfully completed Pre-calculus by tenth grade. This course is intended to develop practical skills in differential and integral calculus. As well, it is intended to illustrate various applications of calculus to technical problems. The use of tables of integrals for finding solutions for difficult integrals will be introduced.

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