



Pre-Calculus

Precalculus is a fourth-year mathematics course option for students who have completed Advanced Algebra: Concepts and Connections. The course is intended to provide students with opportunities to develop a deeper understanding of Algebraic concepts that are critical to the study of Calculus. Students will also deepen their understanding of trigonometry and its applications. Throughout the Precalculus course, there is a focus on notational fluency and the use of multiple representations. The course includes the study and analysis of piecewise and rational functions; limits and continuity as related to piecewise and rational functions; sequences and series with the incorporation of convergence and divergence; conic sections as implicitly defined curves; the six trigonometric functions and their inverses; applications of trigonometry such as modeling periodic phenomena, modeling with vectors and parametric equations, solving oblique triangles in contextual situations, graphing in the Polar Plane; solutions of trigonometric equations in a variety of contexts; and the manipulation and application of trigonometric identities. Topics are analyzed in multiple ways, including verbal and written, numerical, algebraic, and graphical presentations. Instruction and assessment include the appropriate use of technology.