

Honors/Regular Precalculus

Course	Dates	Schedule	Instructor
Precalculus	10/24/25 – 5/29/26	Friday 7:30 PM – 9:00 PM	Mr. Kouts

Course Description

The small group class is designed to re-enforce students' understanding of the school curriculum. The classes will include homework, quizzes/tests to prep for the school quizzes/tests. The topics covered are listed below. We'll be happy to open additional small group classes focusing on your school specific topics upon request.

Unit 1 – Functions and Their Properties

Domain and range

Polynomial, absolute value, logarithmic, exponential, rational, and radical functions and families of their equations

Linear equations, lines

Unit 2 – Function Analysis (Continuity and Infinity)

Discuss the continuity and end behavior of a function.

Extrema of a function and determine whether a function is increasing or decreasing

Piecewise functions

Limits from the graph

Unit 3 – Polynomial & Rational Functions

Determine the roots, both positive and negative, of a polynomial equation through algebraic techniques and using the discriminant of quadratic equations

Find factors of polynomials using various theorems

Unit 4 – Exponential and Logarithmic Functions

Exponential Functions and graphs

Inverse of a functions and graphs

Logarithmic Functions and graphs
Exponential and Logarithmic Equations

Unit 5 – Trigonometric Functions

The six trigonometric functions using trigonometric ratios and the unit circle

Graphs of Trigonometric Functions

Equations of sine and cosine functions - amplitude, period, phase shift, and vertical translation

Applications

Unit 6 – Trigonometric Equations and Identities

Solve trigonometric equations using various identities

Use the basic trigonometric identities to verify other identities

Inverse Trigonometric Functions

Unit 7 – Additional Trigonometry Topics/Applications

Complex numbers arithmetic

Polar representation of complex numbers (De'Moivre's Formula)

Vectors

Law of Sines and Cosines

Unit 8 – Analytic Geometry

Conics

Polar Coordinates

Parametric Equations

Unit 8 – Various Topics from Precalculus (if time permits)

Program Pricing

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Course Instructor

Mr. Koutsothodoros (Kouts)

Mathematics, Physics, and Computer Science Teacher



Mr. Koutsothodoros is a professional teacher of Mathematics with a Master's degree and a Bachelor's degree in Mathematics. He has over 15 years of teaching experience on Math, Physics, and Computer Science, including SAT/ACT Math, AP Calculus AB, AP Calculus BC, AP Statistics, Precalculus, Algebra I, Algebra II, Geometry, Honor Physics, and AP Physics C (Mechanics and E&M), AP Physics I & II, and AP Computer Science A. He emphasizes on teaching the fundamentals so that students can build a solid foundation on both the subject and problem-solving skills required to excel on exams and applications of concepts in the real world. Being extremely familiar with the structure and style of questions, Mr. Koutsothodoros has helped hundreds of students achieve high and perfect scores.

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