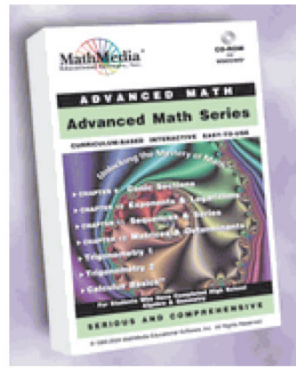




Advanced Mathematics Software

Intermediate Algebra 2 – Trigonometry – PreCalculus – Calculus Basics



Set of 7 software programs:

- Conic Sections (Analytic Geometry)
- Exponents & Logarithms
- Sequences & Series
- Matrices & Determinants
- Trigonometry 1 & Advanced Trigonometry 2
- Calculus Basics

The Advanced Mathematics Instructional Software Series is for continuing Advanced Algebra 2, Trigonometry, and PreCalculus students as well as those beginning their study of calculus basics. This advanced math education series is also appropriate for post high school algebra 2 trigonometry students working on their mathematics education or those needing advanced algebra help or an entire curriculum. This instructional software with precalculus help includes graphing calculator lessons scattered throughout the 7-program mathematics software series - keep up with today's math education usage of graphing calculators.

The first four programs in this mathematics education software series are a continuation of the Algebra by Chapter series for Intermediate Algebra and Pre Calculus students. The "Conic Sections" program provides in-depth practice to understanding, calculating, and graphing conic sections. The "Exponent and Logarithms" program teach beginning through advanced exponents with log functions calculated both by hand and by calculator. The "Sequences and Series" program provides interactive practice with formulas leading to the more advanced topics of binomial expansions. Understanding and using "Matrices and Determinants" concludes the advanced algebra 2 course. Each of these math education programs has a word problem section and concludes with a comprehensive test of the material learned in the program.

The two-program set of "Trigonometry" (Parts 1 and 2) provides a complete course in high school and college level trig.

The "Calculus Basics" program begins with an in-depth review of the pre-calculus topics necessary for success in calculus.

The program covers high school calculus A/B or the first semester of college calculus (Derivatives).

The screenshots show the following menu options:

- Analytic Geometry Conic Sections:** Completing the Square, Distance & Midpoint, Circle, Ellipse, Hyperbola, More Conics, Quadratic Systems, Quadratic Systems (Geometry), Systems in Three Variables, Problem Solving, TEST, Exit.
- Exponents & Logarithms:** Beginning Exponents, Roots & Radicals, Composite Functions, Inverses, Application of Logs, Negative & Fractional Exponents, Introduction to Logarithms, Problem Solving, Natural Logs, Irrational Exponents, Logarithm Laws, Growth/Decay, TEST, Exit.
- Sequences & Series:** VOCABULARY, What is a Sequence?, What is a Series?, Powers of Binomials, Arithmetic Sequence, Geometric Sequence, Sigma Notation, Binomial Theorem, Problem Solving, Pascal's Triangle, Infinite Geometric Series, TEST, Exit.
- Matrices and Determinants:** Definitions & Vocabulary, Problem Solving, Expanding by Minors, Addition, Determinants, Properties of Determinants, Multiplication, Inverse Matrix, Cramer's Rule, TEST, Exit.
- Trigonometry (Part 1):** Right Triangle Review, The Unit Circle, sin, cos, tan, csc, sec, cot, Radians & Degrees, Amplitude, Period, Phase Shift, Reference Angles, Inverses, TEST, Exit Program.
- Calculus Basics:** TIPS FOR SUCCESS, MENU, MATH NEWS, CLICK TO START HERE, PRE-CALC TOPICS, (1) Limits, (2) Continuity, (3) Differentiation, (4) Working with Derivatives, Please note: Much of your learning will take place when you click on the "hint" buttons which are available for each and every question in this program!, Graphs in this program were either hand-drawn or produced by a graphing calculator., EXIT.