

Mathcad®

IN HIGHER EDUCATION

Designed with technical educators in mind

PRODUCT OVERVIEW

More than 2,000 colleges and universities around the world use Mathcad in their math, science, engineering, and other technical courses. Graduates bring their well-developed Mathcad skills to some of the most diverse and prestigious engineering organizations in the world: Mathcad is a standard at 90% of the Fortune 1000, including Qualcomm, Boeing, General Electric, IBM, Compaq, Kellogg-Brown & Root, and Parsons Brinkerhoff. Mathcad is an ideal tool for all engineering and scientific coursework - wherever numerical and symbolic calculations are required. Ensure your students are prepared for their entry into the work force by making sure they know Mathcad.

With Mathcad, educators and students are able to design and document technical work simultaneously with complete math functionality and unique, unit-aware calculations for excellent results and significant productivity gains. Mathcad's open application architecture, combined with its support of the .NET architecture and its native XML file format, enable Mathcad to easily integrate with other applications.

Mathcad Benefits for Educators

- Mathcad conserves valuable time, reducing development and checking time for both solutions and courseware.
- You can create math-intensive courseware for the Web, as well as interactive lecture notes.
- Mathcad makes it simple to change parameters and explore "what-if" scenarios, so you can demonstrate math-oriented concepts and help students visualize routines and relationships.
- Standard math notation ensures consistency and clarity in your teaching materials.
- You can hide selected worksheet regions behind password-protected areas - ideal for preparing homework assignments and solution sets.

A TIME SAVING, CROSS-DISCIPLINARY TOOL

Mathcad's real math notation makes applied math easy for non-mathematicians across a wide spectrum of engineering and scientific disciplines. Mathcad automates mundane, repetitive, and arcane math steps - freeing students to enhance their calculation skills and visualize mathematical, engineering, and other technical concepts.

BENEFITS

- **Intuitive visual format** - Mathcad brings together equations, text, graphs, and diagrams in a scratchpad, so you work visually, just as you would on paper.
- **Lowest learning curve** - Students learn to use Mathcad easier than any mathematical package.
- **Outstanding ease of use** - Change a variable, and Mathcad instantly recalculates your equations and draws graphs - a major advantage when preparing coursework, assignments, lab work, and demonstrations.
- **Easy access to symbols** - Mathcad's comprehensive toolbars let students easily access math symbols, operators, expressions and Greek letters.
- **Easy to check, easy to find errors** - Mathcad calculations and formulae are always visible, making it easy to check and validate results; error-tracing tool easily pinpoints errors.
- **Units-aware** - Mathcad checks inconsistent units and allows conversion of results with units instantly.

Mathcad Benefits for Students

- Mathcad is self-documenting in its math representations AND has the ability to annotate the math, helping students use words to demonstrate their understanding.
- Mathcad allows students to refine their work continuously, to create professional-looking homework assignments, lab write-ups, expository papers, and math-intensive Web pages.
- No programming is required to get going; all levels of students can use Mathcad for their coursework.
- Mathcad encourages exploration by providing opportunities to modify variables and observe the results instantaneously.

FEATURES & CAPABILITIES

- **Output formats** include print, Web (PDF, HTML) and RTF.
- **Areas** can contain any worksheet regions and allow the author to lock or hide math, text, images, etc.; protect critical worksheet elements; and hide homework solutions.
- **Web controls and scriptable controls** simplify input, particularly for novice users, providing flexible input handling and enabling you to create interactive worksheets for the Mathcad Application Server.
- **Mathcad and Web templates** allow you to streamline homework submission and standardize formats, facilitate course creation, and export worksheets to the Web for publishing consistency.
- **Interoperability** with Excel, LabView, Visio, VisSim, SPLUS/AXUM, SmartSketch, MATLAB, and AutoCAD enables easy interaction with other common educational tools.
- **Automation of Mathcad** allows access to worksheets and their variables for use within other program environments.

ADDITIONAL TOOLS

As a Mathcad Academic Package user, you also get access to the following tools in the special education bonus pack in the download center:

- Programming and Solving Modules
- Applied Math Problem Solving
- 3 Schaum's Electronic Tutors
 - Thermodynamics
 - Mechanical Vibrations
 - College Physics
- Plus other free downloadables

LICENSING

Mathsoft offers educational users extremely flexible on- and off-campus licensing options.

MATHCAD APPLICATION SERVER

The Mathcad Application Server is ideal for faculty interested in harnessing the raw power of a mathematical engine without having to bring students and colleagues up to speed on specifics. Document transparency - with real-math notation and seamless integration of calculations, graphs, data, text, and objects - provides power within elegantly presented Web documents. Interactive Web pages that calculate enable widespread use with a Web browser. Visit the Application Server in action: <http://mas.mathsoft.com/mas/>.

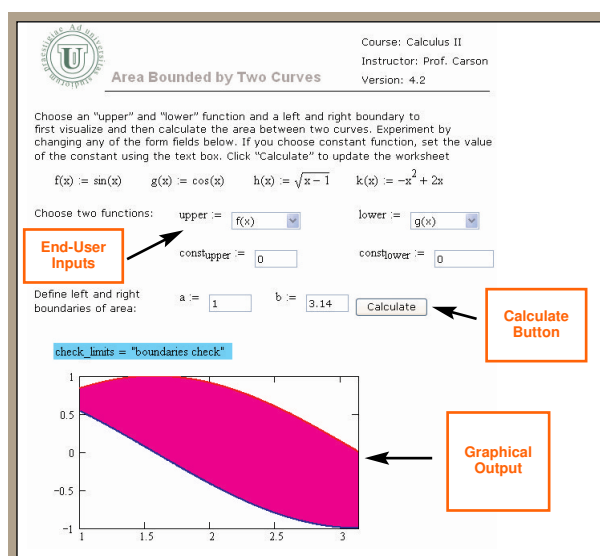


Figure 1. Mathcad Application Server lets students learn through instant recalculation.

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With 20 years of experience, Mathsoft Engineering & Education, Inc. provides comprehensive solutions that streamline the engineering process in a way that can be documented, verified and reused, enabling engineering and product innovation.

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