

M@th Desktop and MD Tools

Mathematics and Mathematica made easy for students

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M@th Desktop Tools (MDTools) is a palette-based add-on for Mathematica developed for teaching and research at universities, colleges and high schools. Its aim is to provide easily accessible and user-friendly templates for the most important functions in various fields. MDTools includes several palettes for frequently used calculation types in the fields of Analysis, Algebra, Linear Algebra and Statistics.

M@th Desktop (MD), in contrast, is a modern, interactive teaching and learning software package for mathematics classes, meant to be used in conjunction with traditional educational methods. It is not supposed to be a replacement for a lecturer or teacher but rather a supplemental tool, which can also be used by the students on their own to do some exercises. Currently, the M@th Desktop package contains modules for Differentiation, Integration, and Statistics. A module consists of several notebooks, each tackling one specific concept (e.g., the indefinite integral). Every notebook is augmented by an attractively styled palette, which provides templates for the calculations. M@th Desktop is also bilingual: all materials have been written in both English and German. For more information, see <http://www.deltasoft.at>.

Usually when computers are used for teaching mathematics, a large amount of time is wasted finding errors in the input, rather than learning the mathematical concepts. M@th Desktop and its palettes, with their ease of use, allow the students to concentrate on the actual concepts instead these technical issues.

M@th Desktop and MDTools are heavily used within the EU-Project "Computer Algebra and Web: Modern Tools for Understanding Mathematics", and are used for teaching at several high schools and Universities of Applied Sciences in Austria and Germany. M@th Desktop has been developed in cooperation with Univ. Prof. Dr. Bernd Thaller, Institute of Mathematics, University Graz. Some diplomas have been written or are currently being written about the palettes and the didactical background of M@th Desktop. For more information, see <http://www.uni-graz.at/imawww/diplomarbeiten/index.html>.

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