Chose the Mathcad® product that's right for you

Mathcad is the industry standard software for engineering calculations. Its easy-to-use, live mathematical notation, powerful capabilities, and open architecture enable engineers and organizations to streamline critical design processes.

Both Mathcad 15.0 and the latest Mathcad release, Mathcad Prime® 1.0, present calculations, text and images in an understandable format, enabling knowledge capture, reuse and design verification, which results in improved product quality with faster time-to-market. Please review the following table to help you decide which product is right for you.

Capability	Mathcad 15.0	Mathcad Prime 1.0
User interface		
WYSIWIG document editing, including headers and footers		•
Alignment grid (fine and standard size) for easy alignment of equations and regions		•
Compare worksheets	•	
Customizable toolbars and interface	•	
Multi-region property settings	•	•
Multi-region Undo	•	•
Customizable Quick Access Toolbar		•
Ribbon user interface based on Microsoft® Fluent UI		•
Drop down menu user interface	•	
Floating toolbars	•	

	Mathcad 15.0	Mathcad Prime 1.0
Documentation		
Customizable spell-checker with technical terms	•	
Document templates and stylesheets	•	
Hyperlinking	•	
Advanced Find and Replace in text and math	•	•
Region layering, bordering and alignment controls	•	
Region separation commands	•	•
Document ruler with indenting support	•	
Text and equation highlighting, bordering and color selection	•	
Header and footer formatting	•	•
Hidden, collapsed and locked areas	•	
Live math within text regions	•	
E-books with hyperlinks and indexing	•	
Document protection	•	
Region nudging and alignment guides	•	•
Metadata, automatic provenance, annotations	•	
Autofilled delete lines	•	•
Custom characters	•	
Collapsed and locked areas	•	
Full Unicode support	•	•
Comprehensive math font	•	•
Save as XML	•	
Compressed images and files	•	•
OpenXML-based file format		•
Batch worksheet converter for MCD and XMCD files		•

	Mathcad 15.0	Mathcad Prime 1.0
Documentation (continued)		
Calculated results saved in XML	•	•
Save as HTML	•	
HTTP File Open support	•	
Save files in older file formats	•	
Save to RTF, retaining region positioning for Microsoft Word®	•	
Save to XPS		•
Autosave	•	
Literal subscripts can be in middle of a variable name		•
Math styles	•	
Numerics & Symbolic Math		
Real, imaginary and complex number support	•	•
Decimal, binary, octal and hexadecimal display and import	•	
Explicit substitution of values before calculation	•	
In-line statement definition and evaluation	•	•
Operator display options for symbolic evaluations	•	
Math operator display options for assignment, partial derivatives and multiplication	•	
Engineering and Scientific Notation Display	•	•
Define and evaluate variables and functions numerically	•	•
Live symbolic (algebraic) evaluation, including expansion, factorization, and transforms. Define and evaluate variables and functions symbolically	•	
New and enhanced symbolics capabilities, including vectorization, solve fully, piecewise integral solutions, new and enhanced keywords, etc.	•	
Automatic recalculation	•	•

	Mathcad 15.0	Mathcad Prime 1.0
Numerics & Symbolic Math (continued)		
Easy-to-use equation editor	•	•
Improved equation editor		•
Error tracing	•	•
Redefinition warnings	•	
Mixed numbers (fraction)	•	
Results formatting: zero threshold and complex threshold, exponential threshold, E-notation	•	
Units		
SI, MKS, U.S. and CGS unit-balancing with user-defined units	•	•
Temperature and non-multiplicative scaling units (dB, FIF, DMS, etc.)	•	•
User-defined default units dialog showing base and derived units	•	
Choice of simplified or base units display		•
Dynamic checking of units		•
Mixed units in matrices, tables and plots		•
Visual distinction between units, constants, functions and variables		•
Automatic unit tracking and conversion	•	•
Unit-specific error messages	•	•
Most functions now accept units		•
Operators and functions		
80+ core mathematical functions and 10 discrete transform functions	•	•
Advanced linear algebra functions based on BLAS/LAPACK libraries	•	•
110+ statistics, probability and data analysis functions	•	•
18 differential equation and partial differential equation solvers	•	•
Root-finding functions	•	•
47 matrix creation, lookup and characteristics functions	•	•

	Mathcad 15.0	Mathcad Prime 1.0
Operators and functions (continued)		
28 file access functions	•	•
Additional file access functions		•
14 expression-type and string functions	•	•
18 finance functions	•	•
Complex arguments for Bessel/Hankel and truncation functions	•	•
Enhanced data fitting functions	•	•
New data fitting algorithm and automatic derivatives	•	•
1D and 2D Correlation	•	•
Logarithmically-spaced point generators	•	•
Until function for iteration	•	
Jacob function	•	
30 Design of Experiments (DoE) functions	•	•
Full unit support for DoE functions		•
Improved discrete Fourier functions		•
Improved unit support		•
35+ arithmetic, vector and matrix operators	•	•
Indefinite integration and limits	•	
1st, n-th derivative, and definite integrals	•	•
Evaluation operator	•	•
9 evaluation operators	•	
10 boolean operators	•	•
User-defined operators	•	
Programming operators (loops, assignments, etc.)	•	•
If-then-else programming operator		•

	Mathcad 15.0	Mathcad Prime 1.0
Operators and functions (continued)		
Namespace operator	•	
Del operator (gradients)	•	
Function dialog box with functions arranged in categories	•	•
Algorithm AutoSelect for integration, optimization and ODE solve blocks	•	•
Data Analysis Extension Pack	•	•
Signals, Image Processing, and Wavelets Extension Packs	•	•
Integrated and simplified extension packs		•
Improved performance for computational signal and image functions		•
Custom currency symbols	•	
Operator/Operand highlighting during math editing		•
Plotting and graphing		
Bar charts, x-y, polar, vector, contour, scatter and surface plots	•	•
Animation capabilities	•	
Trace & Zoom	•	
2D and 3D QuickPlot™ and plot annotation	•	•
Contour plots	•	•
Open GL™ 3D graphs	•	
Image Viewer with support for BMP, GIF, JPG, PCX, TARGA, PGM, TIFF	•	
2nd Y-axis for 2D plots	•	
Positionable legends for 2D plots	•	
Grid and marker color selectors	•	•
Full color palette for traces, new symbols, symbol frequency	•	•

	Mathcad 15.0	Mathcad Prime 1.0
Plotting and graphing (continued)		
Axis number formatting	•	•
Negative radii on polar plots	•	
Box plots	•	•
Effects plots	•	•
Pareto plots	•	•
Discrete (category) plots	•	•
Programming and solvers		
Program debugging	•	
Local functions in programs	•	•
Choice of different solving algorithms	•	
Movable solve block region		•
Solve block inputs and outputs labeled for easier use		•
Local variables within solve blocks		•
Fast ODE solver for stiff systems and differential algebraic systems (Radau)	•	•
Systems of ODEs in solve blocks	•	•
New and improved ODE algorithms (Adams, BDF)	•	•
Statespace function	•	•
1D PDE solvers in solve blocks	•	
Multiple root-finding algorithms	•	•
Symbolic root-finding methods	•	

	Mathcad 15.0	Mathcad Prime 1.0
Customization, integration and interoperability		
User-defined functions created in C, C++ or FORTRAN	•	
Embed or link any OLE-compliant application or ActiveX control	•	
Use OLE Automation and Visual Basic® to call Mathcad	•	
Software Development Kit (SDK) for building custom components	•	
Mathcad Custom Controls	•	
Scriptable object component for reuse and deployment of components	•	
Automation interface for scripting Mathcad worksheets	•	
Automation access to XML Metadata and region content	•	
Web controls (scriptless, save state)	•	
Previous version compatibility switches	•	
Support for Microsoft SharePoint® Server	•	
Creo™ Elements/Pro™ integration (formerly Pro/ENGINEER®)	•	•
MathWorks® MATLAB® 4 - 6.5	•	
Microsoft Excel®	•	•
Intergraph® SmartSketch 4	•	
Support for Windchill® 9.1	•	•
Support for Windchill ProductPoint®	•	•
Knovel Math support	•	
Kornucopia support	•	
Truenumbers support	•	
Data filters for .mat files, Excel files, Lotus 1-2-3®, ASCII and others	•	
Autodesk® AutoCAD® 2000/2001i/2002	N/A	N/A

	Mathcad 15.0	Mathcad Prime 1.0
Customization, integration and interoperability (continued)		
Mixed format import, cut and paste (strings, complex, engineering notation, real numbers, Excel) to matrices	•	
Real-time data acquisition from National Instruments® and Measurement Computing analog boards	•	
Microsoft Access, FoxPro and SQL-supported databases	•	
WAV file read, write and information functions	•	•
File I/O component for multiple file formats, importing data as strings, and selecting specified columns or rows	•	•
Support for UserEFI strings	•	
Improved APPENDPRN function	•	•
Binary file read and write	•	•
Enhanced Excel data exchange and integration	•	
Data Wizard component with preview, text, binary and Excel import settings	•	•
Function to read Excel and fixed-width files	•	•
READEXCEL and WRITEEXCEL supporting Excel 2007 file format	•	•
READCSV and WRITECSV using csv format	•	•
Included (referenced) worksheets can be cached for portability		•
Multilevel include supported	•	•
Resources, help and support		
Mathcad User's Guide on Start menu	•	
References tables, key formulas and constants	•	•
PlanetPTC™ Community – Mathcad web-based forum	•	•
Technical support	•	•
Online tutorials and discipline-specific examples	•	•
Easy-to-use online Help with Search and Index	•	•

	Mathcad 15.0	Mathcad Prime 1.0
Resources, help and support (continued)		
Adaptable QuickSheets demonstrating standard analyses and tasks	•	
New Solving and Optimization E-book	•	
Localized Help and Documentation	•	•
Online Developer's Reference	•	
FLEXlm license management	•	•
Programming tutorial	•	•
Rewritten, reorganized and reformatted Help	•	•
Civil, Electrical and Mechanical Engineering Libraries	•	
Knovel Math – comprehensive Roark's and Hicks' reference content	•	
Mathcad on-site training courses	•	•
Web-based training courses	•	•
Supported Systems and Requirements		
Available in English, French, German, Japanese	•	•
Available in Italian, Spanish, Korean, Chinese (Simplified, Traditional), Russian	•	•
Microsoft® Windows® XP support	•	•
Microsoft Office® 2003 compatibility	•	•
Microsoft® Windows XP/Office XP support	•	•
Microsoft Windows Vista® support	•	•
Microsoft Windows 7 support	•	•
Microsoft Office 2007 support	•	•
ActiveX support	•	
Licensing with maintenance	•	•
PTC Gold Maintenance Support	•	•

Learn More

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