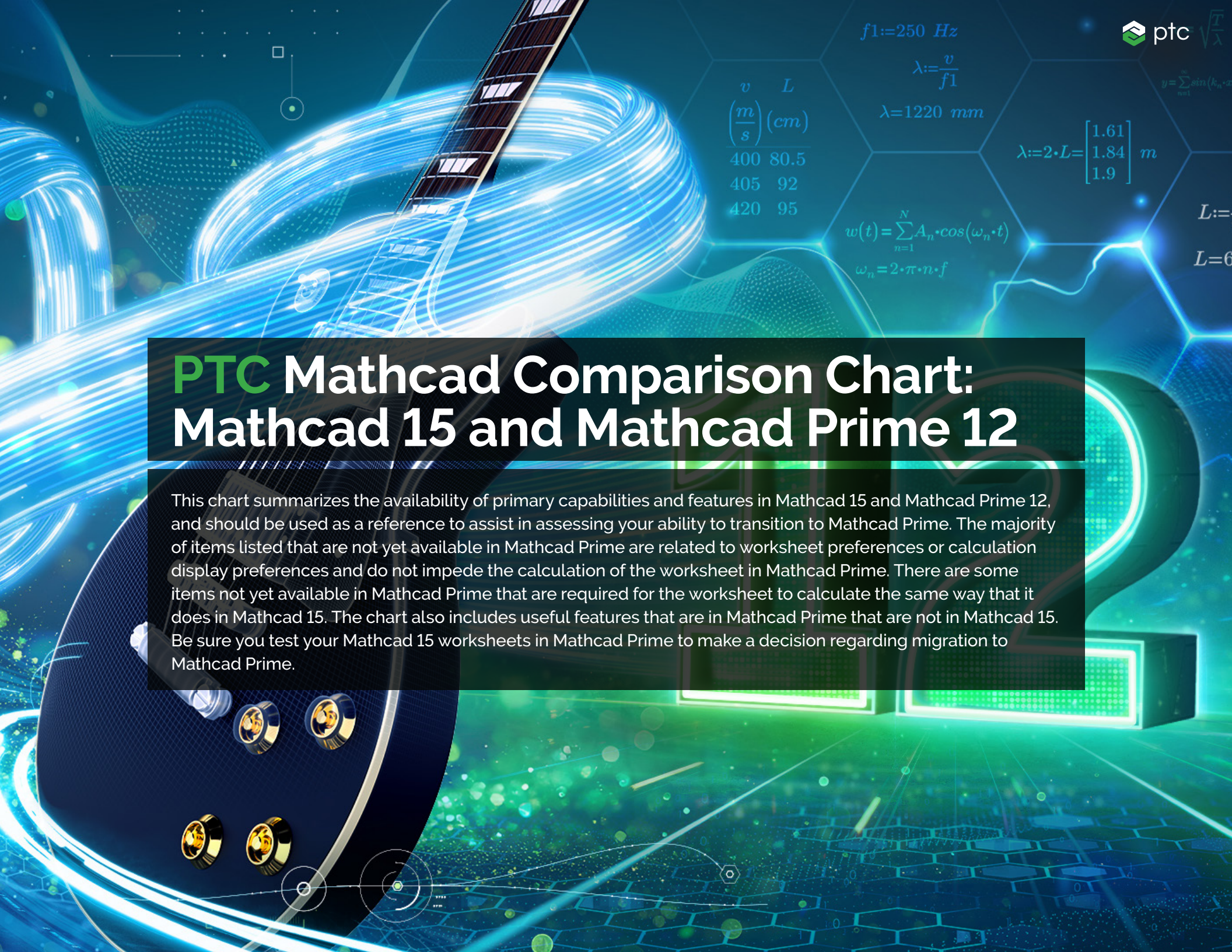

PTC Mathcad Comparison Chart: Mathcad 15 and Mathcad Prime 12

This chart summarizes the availability of primary capabilities and features in Mathcad 15 and Mathcad Prime 12, and should be used as a reference to assist in assessing your ability to transition to Mathcad Prime. The majority of items listed that are not yet available in Mathcad Prime are related to worksheet preferences or calculation display preferences and do not impede the calculation of the worksheet in Mathcad Prime. There are some items not yet available in Mathcad Prime that are required for the worksheet to calculate the same way that it does in Mathcad 15. The chart also includes useful features that are in Mathcad Prime that are not in Mathcad 15. Be sure you test your Mathcad 15 worksheets in Mathcad Prime to make a decision regarding migration to Mathcad Prime.

PTC Mathcad Comparison Chart: Mathcad 15 and Mathcad Prime 12

CHART

Feature	Mathcad 15	Prime 12
Math and Equation Editor		
Equation break on all 4 main arithmetic operators	•	✓
Equation break on addition operator	✓	✓
Variable, unit, constant, function label styles	•	✓
Redefinition Warnings	✓	✓
Solve blocks	✓	✓
Solve blocks contain local variables	•	✓
Hide left hand side of evaluation	✓	•
Hide symbolic keyword	✓	✓
Referenced/included worksheets	✓	✓
Referenced/included worksheets can be cached for portability	•	✓
Error tracing	✓	✓
PDEsolve	✓	✓
Setting tolerance for Zero/complex threshold on numerical results	✓	✓
Hexadecimal, octal, and binary number format	✓	✓
Units		
SI, US, CGS unit systems	✓	✓
MKS, None unit systems	✓	•
Custom Unit Systems	✓	✓
Dynamic unit checking	•	✓
Mixed units in matrices	•	✓
Native units in plots	•	✓
Mixed units in plots	•	✓
Functions		
Comprehensive built-in functions	✓	✓
Data Analysis, Signal Processing, Image Processing functions	✓	✓
Wavelet functions*	✓	•
Localized functions and keyword names	✓	•
Choice of solving algorithms for applicable functions	✓	✓
Functions to analyze functions	•	✓
MultiStart and Optimize for applicable solver functions	•	✓

Matrices and Vectors		
Insert matrix with desired rows and columns	✓	✓
Ability to view large matrix results	✓	✓
Tools to easily add and delete rows and columns in matrices	•	✓

Operators		
Algebra operators	✓	✓
Vector and matrix operators	✓	✓
Definition and evaluation operators	✓	✓
Calculus operators	✓	✓
Boolean operators	✓	✓
Polar representation operator	•	✓
Matrix row operator	•	✓
Custom display of operators	✓	•
Custom operators, prefix and postfix operators	✓	•
Gradient operator	✓	✓
Picture operator	✓	•

Document features		
Collapsible areas	✓	✓
Locked areas	✓	✓
Copy/ paste content into third party applications	✓	✓
Embedded math in text	✓	✓
Interactive Headers and Footers	•	✓
Insertion of OLE objects	✓	✓
Save to RTF	✓	✓
Spell check	✓	✓
Templates	✓	✓
Separate regions vertically	✓	✓
Separate regions horizontally	•	✓
Align regions vertically and horizontally	✓	•
Math formatting	•	✓
Text formatting	✓	✓
Text styles	✓	✓
External hyperlinks	✓	✓
Region tags/internal links	✓	✓

Subscript and superscript in text	✓	✓
Math Styles	✓	•
Worksheet Border, Header & Footer Borders	✓	✓
Display worksheet grid	•	✓
Region border	✓	✓
Ruler and guidelines	✓	•
Auto save	✓	•
Worksheet protection	✓	•
Find and Replace	✓	✓
User Interface		
Ribbon user interface	•	✓
WYSIWYG document editing	•	✓
Tile worksheets	✓	•
Calculation		
Auto and manual calculation modes	✓	✓
Multithreading for optimized performance	•	✓
Math Kernel Library*	✓	✓
Platform		
64-bit application	•	✓
Windows 11 support	•	✓
.NET Framework architecture	✓	•
Modern .NET architecture	•	✓
Plots		
2D plots; traces: line, column, bar, stem, waterfall, error, box, effects, polar plots	✓	✓
2D plots: trace and zoom	✓	•
3D plots: surfaces, curves, scaterred plots, contour plots	✓	✓
3D plots: rotate, pan, zoom	✓	✓
3D plots: vector field, 3D bar, 3D patch	✓	•
3D Plot legends, titles as embedded regions	✓	•
3D Plots: Color gradient on surface	✓	•
Programming		
In-Line programming	✓	✓
Debugger	✓	•
Programming operators: else if, also if	•	✓
Programming operators can be typed in directly	•	✓

Tables		
Insert data input table	✓	•
Tables with multiple variable definitions	•	✓
Integration with other applications		
Read/write Excel data	✓	✓
Windchill Workgroup Manager integration	✓	✓
Excel Component	✓	✓
Automation API	✓	✓
User-defined DLLs	✓	✓
Scriptable Objects	✓	•
Symbolics		
Symbolic math*	✓	✓
Symbolic Solve blocks	✓	✓
Controls*		
Web Controls: Textbox (display control; not needed for calculations to run)	✓	•
Web Controls: Check box (use Combo box in Prime)	✓	•
Web Controls: List box/Combo box	✓	✓
Web Controls: Radio button group (use Combo box in Prime)	✓	•
Web Controls: Submit	N/A	N/A
Scripted Controls: Check Box	✓	✓
Scripted Controls: Radio Button	✓	✓
Scripted Controls: Push Button	✓	✓
Scripted Controls: Text Box	✓	✓
Scripted Controls: List Box	✓	✓
Scripted Controls: Slider	✓	✓
VBScript and JScript support for controls	✓	✓
Python support for controls	•	✓
Miscellaneous		
Animation	✓	•
E-books	✓	•

Additional Notes

*__Wavelet functions:__ Some Wavelet functions are included in Mathcad Prime

*__Math Kernel Library:__ In Mathcad Prime, MKL is upgraded for improved numeric performance

*__Symbolic math:__ A New symbolic Engine was implemented in Mathcad Prime 6. Compared to the Legacy symbolic Engine, it offers more flexibility and significantly improved performance.

*__Web Controls:__ Analogous functionality for Checkbox and Radio button group Web Controls in legacy Mathcad is available through the Combo box Control in Prime.

If there are features that are required for your worksheets to calculate the same way that it does in Mathcad 15 that you need available in future versions of Mathcad Prime, please submit and vote on them on the PTC Community's PTC Mathcad Ideas board. You will need to be on a support or maintenance agreement to participate.

SUBMIT YOUR REQUESTS! >>