

$$w(t) = \sum_{n=1}^N A_n \cdot \cos(\omega_n \cdot t)$$

$$L = 610 \text{ mm}$$

$$L := \frac{1}{2} \cdot \lambda$$

$$c = \sqrt{\frac{T}{\lambda}}$$

$$by(x) = \left(\begin{array}{l} f(x) + 1 \cdot c_0(x) \\ + c_1(x) - c_2(x) \\ \cdot \sin(x) \end{array} \right)$$

ptc® mathcad prime 11®

$$w(t) = \sum_{n=1}^N A_n \cdot \cos(\omega_n \cdot t)$$

$$f_1 = \frac{\sqrt{\frac{T}{\lambda}}}{2 \cdot \pi \cdot L}$$

n	f_n
$\left(\frac{m}{s} \right)$	(cm)
400	200.5
300	92
120	96

$$y = \sum_{n=1}^{\infty} \sin(k_n \cdot x) \left(A_n \cdot \cos(\omega_n \cdot t) + B_n \cdot \sin(\omega_n \cdot t) \right)$$

$$f_n = n \cdot f_1$$



Compare our free and full versions

PTC Mathcad Prime is the industry standard for engineering mathematics software, and buying a license gets you access to all the latest product developments and full product functionality. With **PTC Mathcad Express** however, you can **trial full functionality for 30 days** after which you can get basic functionality.

Use the table to understand what features you'll miss out on if you don't upgrade to the full version.



Mathcad.com

	Mathcad Express	Prime 11
PTC Mathcad Capabilities	PTC Mathcad Express	PTC Mathcad Prime (Full License)
Usability		
Write equations using natural math notation	✓	✓
Spell Check	•	✓
Internal and External Hyperlinks in Text	•	✓
Custom Margin, Header, Footer Sizes	•	✓
Redefinition Warnings	•	✓
Calculate Now in Manual Calculation Mode	•	✓
Required PTC Watermark and Marketing Start Page	✓	•
Basic Math		
Automatic update of calculations	✓	✓
Algebra and trigonometry operators and functions	✓	✓
Unit Support	✓	✓
Advanced Math		
Programming	•	✓
Solve systems of linear, non-linear and differential equations	•	✓
Evaluate expressions symbolically	•	✓
Advanced Engineering Mathematics: e.g. Design of Experiments, Differential Equations, Solving Regression	•	✓
Advanced Numeric Functions: e.g. Fourier Transforms, Signal Processing, Statistics & Data Analysis	•	✓
Choice of solving algorithms for applicable functions	•	✓
Custom Unit Systems	•	✓

Documentation

Comprehensive documentation	✓	✓
Text Styles	•	✓
Standardize engineering processes using templates	•	✓
Copying Worksheet Regions to a Word/PowerPoint Document	One at a time	✓
Content Protection	•	✓
Equation Wrapping	•	✓
Custom Color Picker	•	✓

Plotting

X-Y plots	✓	✓
Advanced plot types: Polar, Contour, 3D	•	✓

Input/Output

API Guide	✓	✓
Include worksheet region	•	✓
Excel Component	•	✓
Basic Combo-box Input Control	•	✓
Advanced scripted controls (Python, VBScript, JScript)	•	✓
Insert Object	•	✓

© 2025, PTC Inc. (PTC). All rights reserved. Information described herein is furnished for informational use only, is subject to change without notice, and should not be taken as a guarantee, commitment, or offer by PTC. PTC, the PTC logo, and all PTC product names and logos are trademarks or registered trademarks of PTC and/or its subsidiaries in the United States and other countries. All other product or company names are property of their respective owners. The timing of any product release, including any features or functionality, is subject to change at PTC's discretion.

642339_Mathcad_Express_vs_Mathcad_Prime_Express_0325