



v	L
$\left(\frac{m}{s}\right)$	(cm)
400	80.5
405	92
420	95

$$\lambda := 2 \cdot L = \begin{bmatrix} 1.61 \\ 1.84 \\ 1.9 \end{bmatrix} m$$

$$w(t) = \sum_{n=1}^N A_n \cdot \cos(\omega_n \cdot t)$$
$$\omega_n = 2 \cdot \pi \cdot n \cdot f$$

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

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



PTC Mathcad Prime is a powerful calculation application for engineers, scientists and technical professionals looking to solve, analyze, document, and share calculations. With every release of Mathcad Prime, PTC adds new capabilities and improves ease-of-use. PTC Mathcad Prime 12 empowers engineers and technical professionals through every step of their workflow: improved worksheet performance, enhanced native 2D plotting, productivity boosts like find and replace identifiers with subscripts, and a foundational upgrade provides the support for future innovation. Learn about the latest release at ptc.com/products/mathcad/whats-new.



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PTC Mathcad Prime Version comparison	9	10	11	12
Capability				
Text Styles	•	•	•	•
Gradient Operator	•	•	•	•
Internal Links	•	•	•	•
Partial Differential Equation Solver	•	•	•	•
Symbolic Solving with Solve Block	•	•	•	•
Symbolic Solving of Ordinary Differential Equations	•	•	•	•
Custom color picker	•	•	•	•
Go-to Page	•	•	•	•
Advanced scripted controls		•	•	•
Subscript and superscript in text		•	•	•
Choice of solving algorithms for applicable functions		•	•	•
Manual Calculation Mode			•	•
Custom Unit Systems			•	•
Python for Advanced Controls			•	•
Show Region Borders			•	•
Binary, Octal and Hexadecimal Support			•	•
2D native plot updates (plot & axis titles, gridlines, legend)				•
Hide symbolic keywords				•
Functions to analyze functions				•
Find and Replace Identifier with Subscript				•
Worksheet Background Color Options				•
Modern Microsoft .NET architecture (from .NET Framework)				•

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