



ptc<sup>®</sup> mathcad prime<sup>®</sup>

**What's New**  
4.0



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## What's New in PTC Mathcad Prime 4.0

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## Content Protection – Area Protection and Locking

You can protect an area from edit and optionally lock its display state.

User Interface Location: Right-click the area collapse or area expand button, and select **Protect Area**.

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### Benefits and Description

Using the area protection and locking functionality, you can protect the content of an area so it cannot be edited. This protection can be set with or without a password. This gives another user the ability to read the content but not to change the content.

For example, you may want to make the contents of an area visible for someone to see how a calculation works without giving them permission to make changes, by protecting the area. If your company has specific parameters that need to be included in a shared Mathcad template, you can place them in a protected area to prevent users from editing those calculations when using the template.

You can also lock the display state of the protected Area. This means you can both protect an area and lock its display state. For example, if you protect and lock an area in its collapsed state, a third-party accessing the worksheet cannot see the contents of the area but the contents remain part of the calculation. In this example, your calculation can still be used but is hidden from view.

## Support for Windows 10

PTC Mathcad Prime 4.0 supports the Windows 10 operating system.

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### Benefits and Description

PTC Mathcad Prime 4.0 is certified to run on the Windows 10 operating system. This makes use of the technology advances introduced in that operating system and of the new Microsoft .NET 4.6.2 framework

## Equation Breaking

You can break an equation on the addition, subtraction, multiplication, or inline division operators. When typing, you can insert versions of those operators that are already wrapped, so the equation fits the space you require.

User Interface Location:



- 
- Click **Math** ► **Operators** and then click an **Equation Break**.
  - Click **Math** and then in the **Style** group, click **Equation Break**.
  - Use a keyboard shortcut.

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### **Benefits and Description**

Mathematical definitions in PTC Mathcad Prime 4.0 can become complex and extend across a page width or more. When this occurs, you cannot read information in the worksheet unless you switch from **Page View** to **Draft View** and scroll to the right. If you print the worksheet, the information to the right of the **Page View** page does not print.

If you structure the length of an equation to fit within the bounds typically viewed, you can deliver all the design content to the reader. You may also have a definition that fits within the width of a page but the structure of which makes splitting it onto separate lines easier to read.

With PTC Mathcad Prime 4.0, you can split an equation over multiple lines, on any of the four main operators. You can insert a wrapped addition, subtraction, multiplication, or inline division operator while typing an equation. This gives you the ability to write long definitions without leaving the math. You can also go back to existing math and toggle the wrapping on any addition, subtraction, multiplication, or inline division operator, so that you can structure the equation as you like.

## **Mathcad as an OLE Container**

You can embed third-party application OLE objects directly within PTC Mathcad Prime 4.0.

User Interface Location: Click **Input/Output** ► **Insert Object**.

Release: PTC Mathcad Prime 4.0

### **Benefits and Description**

Many applications can be embedded within other applications as an object:

- The embedded application is represented in the parent application by an object.
- The object reflects the content that is embedded.
- That content can be accessed for editing in the original authoring application from the object itself.

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As an OLE container, you can embed objects within PTC Mathcad Prime 4.0. For example, if you want to put a sketch in your Mathcad worksheet, you can embed any sketching application that has an OLE object available, such as Microsoft Paint. Then, use the functionality of Microsoft Paint to draw a simple diagram.

You can embed new objects or objects created from existing files. If you embed objects created from existing files and maintain links to those existing files, you can perform the following actions:

1. Outside of PTC Mathcad Prime 4.0, edit the content in the original authoring application.
2. Within PTC Mathcad Prime 4.0, update the embedded object to reflect that new content within the worksheet.

## Copy and Paste Multiple Regions to Third Party Applications

You can copy multiple regions within a worksheet and then paste them in applicable third-party applications in either of the ways listed below:

- Keeping the layout formatting
- As a collection of regions that can then be moved according to your requirements

User Interface Location:

- Click **Mathcad ► Copy**
- Press CTRL+C
- In a selected region, right-click and select **Copy**

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### Benefits and Description

Company engineering processes may require using a specific application in which to record all design decisions. Moving user-defined content from Mathcad to other applications is essential.

You can copy multiple regions from a worksheet in RTF (rich text format) and paste that content into an applicable third party application while maintaining the layout of the content from Mathcad. The content can also be merged with the third party application, so you can move that content in the application to suit your needs.

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## Save as Rich Text Format (RTF)

You can save a PTC Mathcad Prime 4.0 worksheet as an RTF file. It can then be opened in compatible applications, such as Microsoft Word.

User Interface Location: Click the Mathcad icon in the top left window and then click **Save As ► Rich Text Format**.

Release: PTC Mathcad Prime 4.0

### Benefits and Description

You can save a Mathcad worksheet as an RTF file and then open the file in applications that read a .rtf file, such as Microsoft Word.

## Increased Number of Points on an XY Plot

You can plot up to 2,000,000 points per trace on an XY plot.

Release: PTC Mathcad Prime 4.0

### Benefits and Description

The number of plot points for an XY plot is increased to 2,000,000 per trace. With this increase, you can analyze a larger volume of data.

## Roark's Worksheet Library

The 6th Edition of the Roark's Worksheet Library is now available for purchase for PTC Mathcad Prime 4.0.

Provides a library of PTC Mathcad Prime 4.0 templates of stress and strain calculations on a comprehensive collection of structural components.

Release: PTC Mathcad Prime 4.0

### Benefits and Description

The library of PTC Mathcad Prime 4.0 worksheets is based on the industry standard, Warren C. Young's *Roark's Formulas for Stress and Strain, 6th Edition*. The library provides immediate stress and strain templates for use in production as well as the option of customizing the templates to match company standards or user preferences.

## Performance Enhancements

The performance of document-level functionality in larger worksheets is faster.

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## **Benefits and Description**

There are improvements to performance when working with large worksheets, as compared to previous releases. When working in large worksheets, it is faster to perform actions such as adding and removing space, changing page format or margin size, collapsing or expanding areas, and so on. This performance improvement applies to large worksheets that you are creating or when you are working on an existing large worksheet.