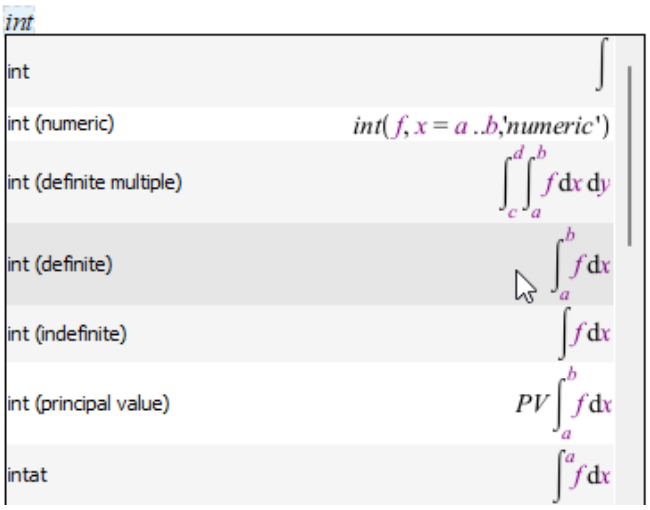
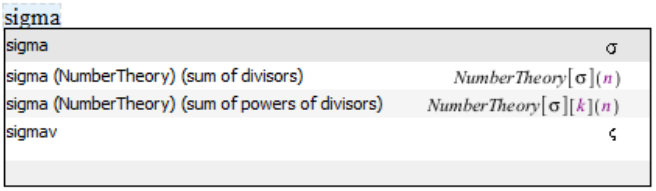
User Interface Enhancements for Maple 2024

Maple 2024 includes a number of enhancements suggested by customers. Many of the user interface changes on this page were initiated by customer requests.

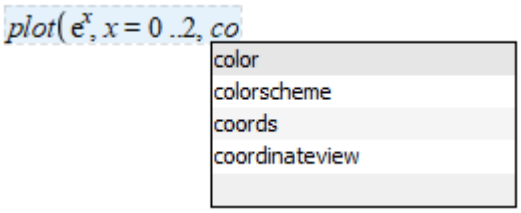
Automatic Argument Completion

Maple already offers symbol/command completion. To use symbol or command completion, press **Esc**. For example, you can use this to get a template for integration, or to enter a Greek letter:





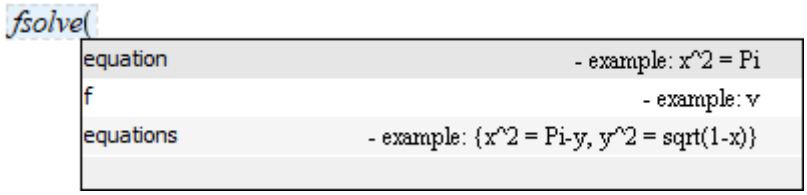
New in Maple 2024, when typing commands, Maple offers automatic completions for arguments in many useful cases. When such items are available, Maple displays a pop-up list of suggested completions automatically—no shortcut key needed.



To use argument completion:

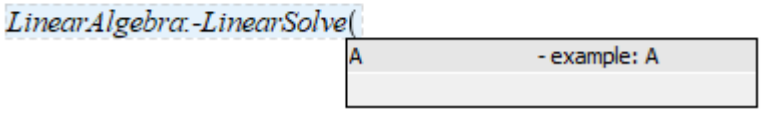
1. If only one item is suggested, press **Tab** to insert the suggested item into your expression.
2. If more than one item is listed, use the arrow keys to select an entry then press **Tab**. You can alternatively use your pointer to select an entry from the list.

The argument completion list can include examples for some suggested items. In such a case, if you select that entry, the example is inserted.



Here is a handy use of this feature. Suppose you have defined a Matrix in your worksheet. Here, we define a matrix A and vector b. Then, start to type **LinearAlgebra:-LinearSolve(**

$$A, \mathbf{b} := \begin{bmatrix} 1.0 & -0.1 & 2. & 0. \\ -0.1 & 1.1 & -0.1 & 3. \\ 0.2 & -0.1 & 1.0 & -0.1 \\ 0. & 0.3 & -0.1 & 0.8 \end{bmatrix}, \begin{bmatrix} 0.6 \\ 2.5 \\ -1.1 \\ 1.5 \end{bmatrix} :$$



Maple suggests using the matrix A as the first argument.

Notes:

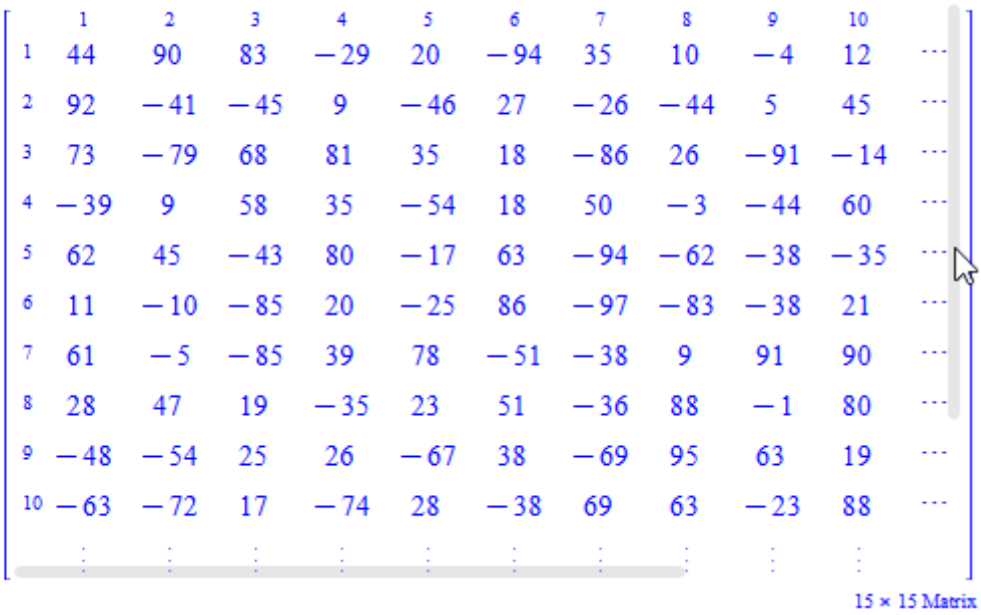
- Argument completion works in 2-D math, 1-D math, and in the Code Editor.
- Automatic Argument completion is on by default. You can change this in the Options Dialog.

For more information on this feature, see Automatic Argument Completion.

Scrollable Matrices

When you have a large matrix (or any rtable) output in your document, only a portion is visible. You can now browse through the entries directly in the document. When you hover over the output, scroll bars are visible. Use the scroll bars to change your view.

$$LinearAlgebra:-RandomMatrix(15, 15)$$



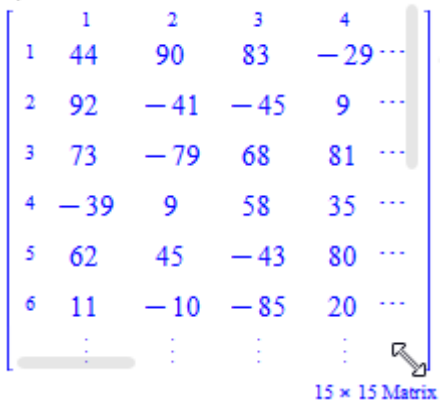
	1	2	3	4	5	6	7	8	9	10	
1	44	90	83	−29	20	−94	35	10	−4	12	⋯
2	92	−41	−45	9	−46	27	−26	−44	5	45	⋯
3	73	−79	68	81	35	18	−86	26	−91	−14	⋯
4	−39	9	58	35	−54	18	50	−3	−44	60	⋯
5	62	45	−43	80	−17	63	−94	−62	−38	−35	⋯
6	11	−10	−85	20	−25	86	−97	−83	−38	21	⋯
7	61	−5	−85	39	78	−51	−38	9	91	90	⋯
8	28	47	19	−35	23	51	−36	88	−1	80	⋯
9	−48	−54	25	26	−67	38	−69	95	63	19	⋯
10	−63	−72	17	−74	28	−38	69	63	−23	88	⋯
	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	

15 × 15 Matrix

The size of matrix displayed inline is determined by the **interface(rtablesize)** setting. By default, it is 10 x 10. This setting also determines how much is shown of the scrollable large matrix.

You can also interactively change the view by resizing the inline matrix viewer.

$$LinearAlgebra:-RandomMatrix(15, 15)$$



	1	2	3	4	
1	44	90	83	−29	⋯
2	92	−41	−45	9	⋯
3	73	−79	68	81	⋯
4	−39	9	58	35	⋯
5	62	45	−43	80	⋯
6	11	−10	−85	20	⋯
	⋮	⋮	⋮	⋮	

15 × 15 Matrix

Notes:

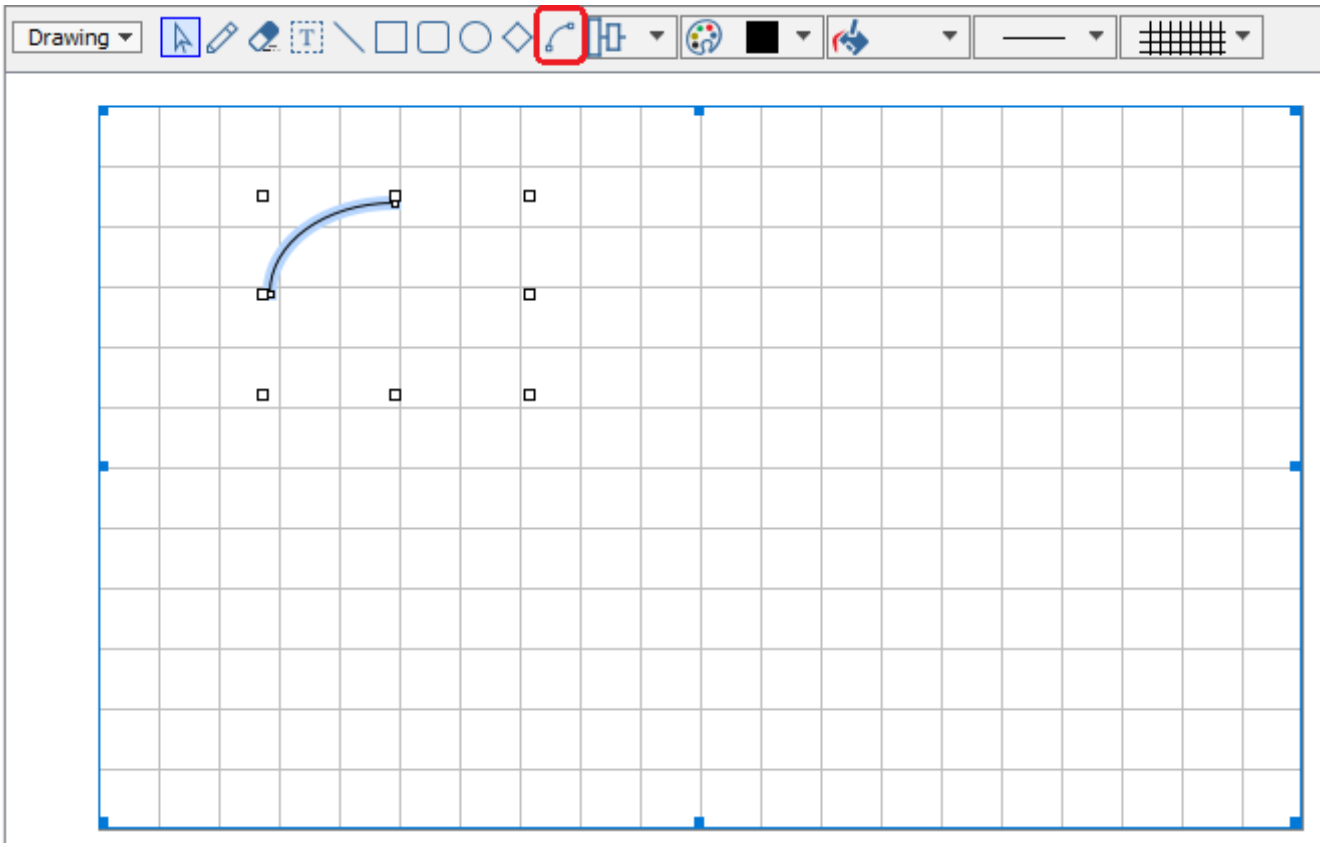
- To remove the row and column headers, right-click (**Control**-click, on Mac) on the matrix and clear the check boxes for **Row Header** and **Column Header**.
- As in previous releases, you can double-click on the matrix to open the Matrix browser.
- If a worksheet that contains a large matrix is saved and reopened, the data is saved and is scrollable as long as the matrix has 5000 or fewer entries. With larger matrices, you will need to re-execute or re-import the matrix before scrolling. (This limit can be changed in the **Options Dialog**.)
- Matrix outputs are not scrollable in the help system. (However, you can always open a help page as a worksheet and re-execute to interact with them.)

AI Formula Assistant

Maple 2024 includes a new assistant that's designed to help you get the formulas you need with the help of powerful AI technology! Find out more about AI in Maple.

Additional UI Improvements

- The **Format>Character** menu now includes strikethrough, making it easy to ~~strikethrough text~~.
- You can now change the font in the Code Edit Region by modifying the **Code** style under the **Format > Styles** menu. This can be useful, for example, if you want to use a larger font size or want to control the font for export to PDF.
- The Drawing toolbar has been updated to include an arc segment tool.
  - Use the smaller white boxes to change the amount of arc that is drawn.
  - Use the larger white boxes to change the shape of the arc.
  - To change the arc orientation, select and drag one of the larger white boxes past the white boxes on the opposite side of the box.



- The following property of a Plot Component can now be obtained programmatically:

  `extents`: returns the extents of the plot view as a list of floating-point numbers, [xmin,ymin,xmax,ymax], where [xmin,ymin] are the coordinates of the lower left corner, and [xmax,ymax] are the coordinates of the upper right corner.

- It is now easy to switch between help browser tabs using a shortcut key:
  - Ctrl + Tab
  - Control + Tab, on Mac
- On Mac, using the pinch gesture with two fingers on a trackpad now zooms in/out in a document.