

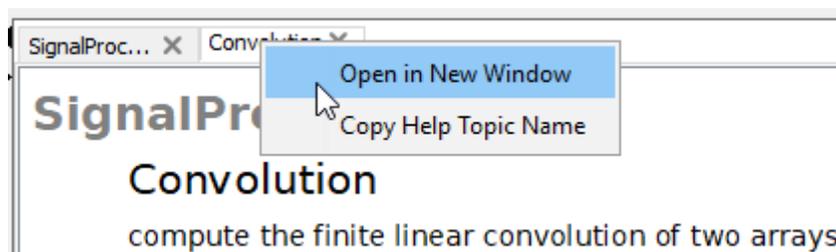
Interface

Maple 2023 includes a number of enhancements suggested by customers. Many of the user interface changes on this pages were initiated by customer requests.

Help System

The help system now opens help pages in tabs, making it easy to reference content from different help pages.

- To open a help page tab in a new window, right-click on the tab, and select **Open in New Window**.



In addition, you can easily copy to the clipboard the full topic name for a help page, for instance if you want to create a hyperlink to a help page in a document.

To copy and paste the name of a help page:

1. Right-click on the tab, and select **Copy Help Topic Name**.
2. Next, paste into the desired location.

New Menu Options for Matrices and Piecewise Functions

Maple 2023 offers more options in the Context Panel for changing the size of a matrix or piecewise function.

For a matrix, you can place the cursor in an element of the matrix and select from the following options in the Context Panel:

- Insert Row Above (or Below)
- Delete Row
- Insert Column to the Left (or Right)

For a piecewise function, if you enter a piecewise function using the **Expression** palette or command completion, it initially has two branches. You can add another by placing your cursor in the piecewise expression and selecting Insert Row Above or Below.

Loading Packages through the Tools Menu

Based on user feedback, we now provide full clarity on what happens when you load a package through the **Tools** menu.

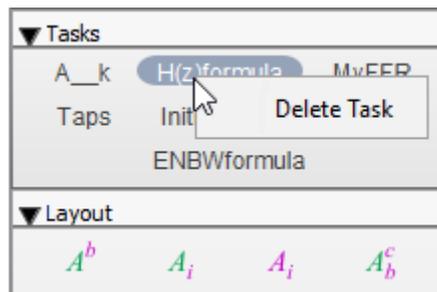
When you load packages using **Tools > Load Package**, the command that performs that step is now always visible in your document. This makes it easier to see what you have done, as well as making it clear what to delete if you decide you don't want the package loaded.

Palettes

Maple offers many built-in palettes. Maple also makes it easy to add content to a custom palette. Simply select the content in your worksheet, right-click and select **Create Task**. Provide a name for the entry. The entry appears in the Palettes pane in a palette called Tasks.

It is now straightforward to remove an item from that custom palette.

- To remove an item, right-click on the palette entry in the Tasks palette, and select **Delete Task**.



Open MPL Files in Maple

Maple language [files](#), which are typically saved with the file extension **.mpl**, can now be opened directly in Maple's standard interface. You then can view and edit the file using all the features of Maple's code editor including syntax highlighting, command completion, and automatic indenting.

As a consequence, when an MPL file is attached to a Maple [workbook](#), double-clicking on the file in the workbook navigator now opens the file directly in Maple. For more about these changes, see [Coding Tools](#).

Primed Variables

When you open Maple, prime notation represents differentiation. So, when you input A' it means the derivative of $A(x)$ with respect to x . It is a handy shortcut to typing $\text{diff}(A(x), x)$. This meaning of prime notation as differentiation is the [useprime setting of the Typesetting package](#).

[There is also another frequent meaning, not differentiation, for prime notation: [primed variables](#), typically used when relating variables in different coordinate systems, e.g. x and x' in two reference systems K and K' , or variables that are related in some way (e.g. when working with Green functions), set complement, the dual of a vector space, etc.. New in Maple 2023, by entering `Typesetting:-Settings(useprime=false)`, instead of receiving an error message when you input - say - x' , you can now work with x' as a primed variable. Also new, when you load the [Physics](#) package, where transformation of coordinates are the most frequent use of the prime notation, the Typesetting `useprime` keyword is automatically set to `false`.

For example, this is the default behavior

A'

$$\frac{d}{dx} A(x)$$

New: you can work with primed variables

`Typesetting:-Settings(useprime=false)`

`true`

A'

A'

Turn again ON prime notation to represent differentiation

`Typesetting:-Settings(useprime=true)` :

A'

$$\frac{d}{dx} A(x)$$

Load the Physics package or its Physics:-Vectors subpackage

`with(Physics)` :

A'

A'

Query about the status of the `useprime` setting

`Typesetting:-Settings(useprime)`

`false`

You can also change this status directly from the `Physics:-Setup` command using a keyword complementary to the one of `Typesetting`; query, then change it

`Setup(prime)`

* Partial match of 'prime' against keyword 'primedvariables'

`[primedvariables=true]`

Setup(primedvariables=false)

[primedvariables=false]

A'

$$\frac{d}{dx} A(x)$$

New Display of Arbitrary Constants and Functions (dsolve and pdsolve)

In previous Maple versions, according to an old convention, arbitrary constants returned by [dsolve](#) were of the form $_Cn$, and arbitrary functions returned by [pdsolve](#) were of the form $_Fn(\dots)$, with n an integer and without any particular typesetting. In Maple 2023, arbitrary constants returned by [dsolve](#) and arbitrary functions by [pdsolve](#) are respectively of the form c_n (that is the symbol c_n) and $f_n(\dots)$ (that is $f_n(\dots)$). This change is implemented in a way that does not interfere with previous programs or worksheets: in Maple 2023 the constants returned by [dsolve](#) satisfy $c_n \equiv _Cn$ and you can use, indistinctly, both representing the same object. You can also call [dsolve](#) with the option *arbitraryconstants=traditional* and from there on the constants returned are of the form $_Cn$ as in previous versions, or [pdsolve](#) with the option *arbitraryfunctions=traditional* resulting in [pdsolve](#) returning these functions with name $_Fn$.

Similarly, new functionality in [dsolve](#) allows for handling *vectorial ODEs* represented using the symbolic vector conventions of the [Physics:-Vectors](#) package, and in these cases the arbitrary constants are also vectorial of the form \vec{c}_n (that is $c_{n_}$) displayed with an arrow on top. For examples of vectorial arbitrary constants see for instance [the corresponding section in Physics, Courseware-Support, Mechanics](#).