

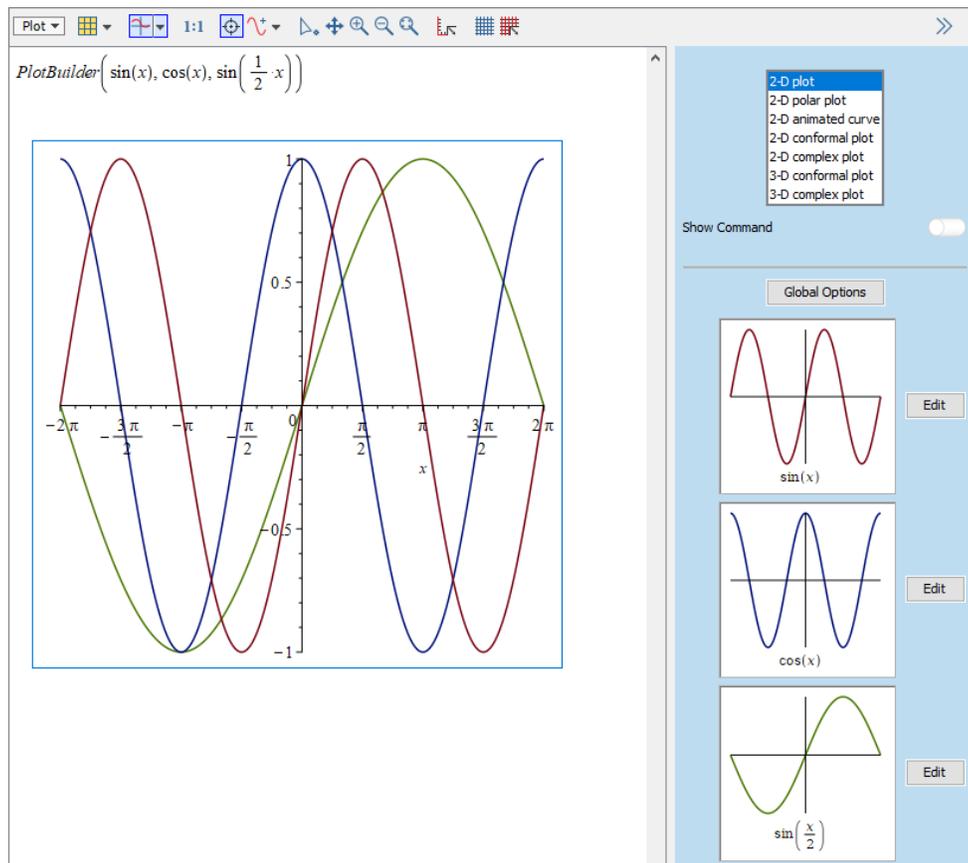
Improved Plot Builder in Maple 2022

Enhancements to the Plot Builder

- The Plot Builder has been enhanced to:
 - Support building a graph or animation from multiple expressions
 - Automatically select an initial choice of plot type, thereby showing a plot immediately
- You can access the Plot Builder using the [PlotBuilder](#) command or via the Context Panel for an expression. See [Using the Interactive Plot Builder](#).

Multiple Expressions and Automatic Plot Choice

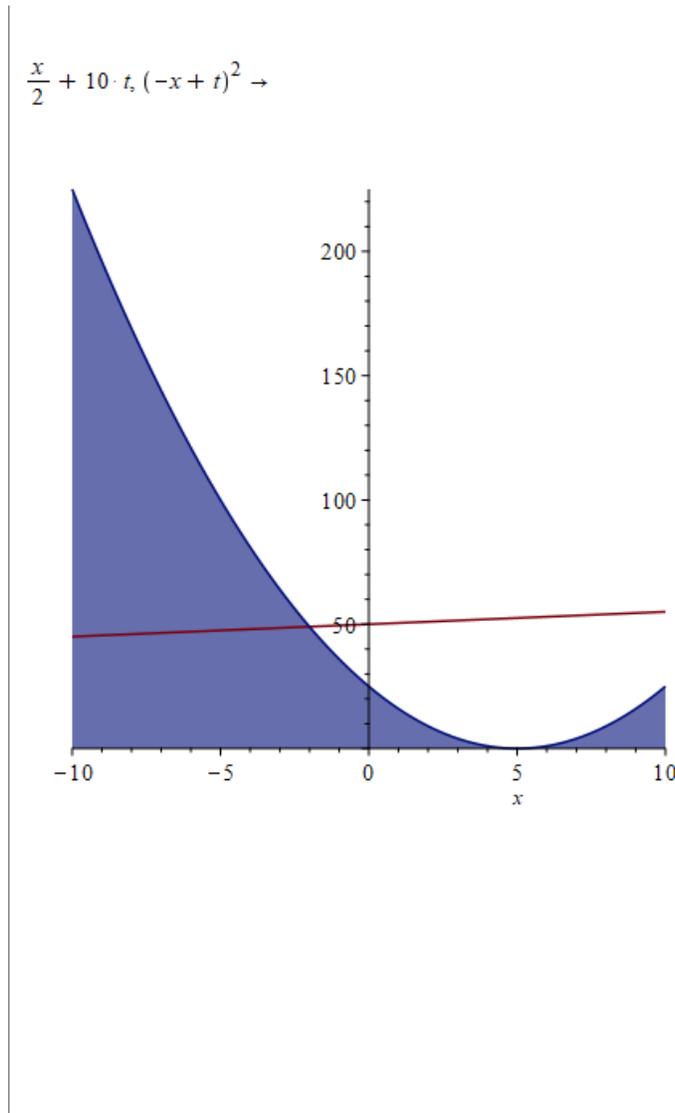
- When the PlotBuilder is passed a list, set, or sequence containing multiple expressions, the context panel gets automatically populated with a thumbnail view. The common plot type for expressions in a single unknown is a 2-D curve, and for expressions in two unknowns it is a 3-D surface plot.
- The following example deals with three expressions in a single unknown, and the current view is of the central window and the context panel showing the thumbnail view.
- In this thumbnail view you can change the common plot type for all expressions using the menu. You can select any individual thumbnail plot to change its associated properties.



Animation

- If more than one independent variable is present then the plot can be produced as an animation. New in Maple 2022, you can build an animation from multiple expressions.
- In the following example containing two expressions in two unknowns the automatic choice is a 3-D plot of two surfaces. To make it an animation of curves in 2-D instead, select the **Animation** radio button in the Plot Builder panel. Now one of the independent names is taken as the animating parameter.
- The choice of which names are the independent variable(s) and which is the animating parameter can be changed using the combo-box menu for each variable or the animating parameter.

- The image below shows in the Plot Builder panel the controls for one of the individual curves. A single preview frame is shown in the main window. After all additional plotting options have been chosen, click the **Build Animation** button, which constructs the full animation and displays it in the main window.



Back to Main Menu

2-D plot

- Basic Options
- 2-D Options
- Axes and Text
- Color Options
- Global Options

Assign to Name

Build Animation

Show Command

x to

Color

Style

Thickness 0 10

- Now you can use the animation toolbar to play the animation.

