

User's manual - LOZA:

This application has a different navigation method to the most common applications, it has a dropdown menu that shows every method that's executable and available. This allows the user to choose the method he wants to run more freely, since it can run methods and then simply select another one at the top without any problem, also, this app does not save any part of your input, so if you do want to save, you must copy and past it or simply screenshot it.

Data input:

Methods that use any type of matrix (or an array-like structure):

For any method that has a matrix, the structure **must** be the following;

- For rows, or simple vectors: 1 , 2, 3, 4
- For columns, or a simple matrix take the row structure and a ; to the end of the row, all except for the last row: 1, 2 , 3 ,4;
5, 6, 7, 8

Here's an example of how it should look like:

Select the method which you want to use

Methods ▾ Grapher

Doolittle

A 1, 2, 3, 4;
5, 6, 7, 8

b 1, 1, 1, 1

Calculate

A 1, 2, 3, 4;
5, 6, 7, 8

b 1, 1, 1, 1

Example:

A = [1 2 3 4
5 6 7 8
] 9 0 0 0

dentro de LOZA A :{ 1, 2, 3 ,4;
5, 6, 7, 8;
9, 0, 0, 0 }

Then, simply press the calculate button or its equivalent within the method's page and it's done.

Numerical solution of equations in a variable:

Within navigation menu, you will find yourself selecting methods like Bisection or Regula Falsi (False Rule), and the page you're in not really changing, this is because it is shared, and you will find a little dot selector, which allows you to run whichever method you want without having to delete what you wrote, or, changing pages, yet again.

Example:

Select the method which you want to use

Methods ▾

Grapher

Fx

☐ Bisec

☐ FalseRule

☐ Secant

A B Error N

Calculate

Se encontró una aproximación de la raíz en

Methods ▾

Grapher

☐ Bisec

☐ FalseRule

☐ Secant

This is the case for:

- Bisection
- FalseRule
- Secant
- Fixed point
- Newton

Also, for these interpolation methods:

- Linear Tracers
- Quadratic plotters
- Cubic tracers

Interpolation methods:

The methods follow the same rules stated in the **Methods that use any type of matrix (or an array-like structure):** section,

In this case, every vector is just like any **row of a matrix**, so the input for this, should be exactly as stated up there.

Functions::

The input type for functions is mostly normal, just make sure to remember these details:

To the **left** you will see how it's normally written, to the **right** how you should write it.

$\sin(x)$ -> $\sin(x)$: applies for any geometric function

$\sin^2(x)$ -> $(\sin(x))^2$: applies for any geometric function

$\ln(x)$ -> $\ln(x)$

e^x -> $\exp(x)$