

## **This document shows how to use math formulas using LibreOffice.**

First of all, download LibreOffice from the following link:

<https://www.libreoffice.org/download/download-libreoffice/>

### **Using Math formulas in LibreOffice:**

LibreOffice includes a powerful tool called LibreOffice Math, which allows you to create and insert mathematical formulas into your documents. This guide walks you through the basics of using it.

#### **1. Opening LibreOffice Math**

You can use Math as a standalone application or from within other LibreOffice programs like Writer.

From LibreOffice Start Centre:

- Open LibreOffice.
- Click on Formula.

From LibreOffice Writer:

- Go to Insert → Object → Formula.

#### **2. Understanding the Formula Editor**

The formula editor uses a markup language to write formulas. For example:

$a^2 + b^2 = c^2$

renders as:  $a^2 + b^2 = c^2$

#### **3. Common Math Formula Syntax**

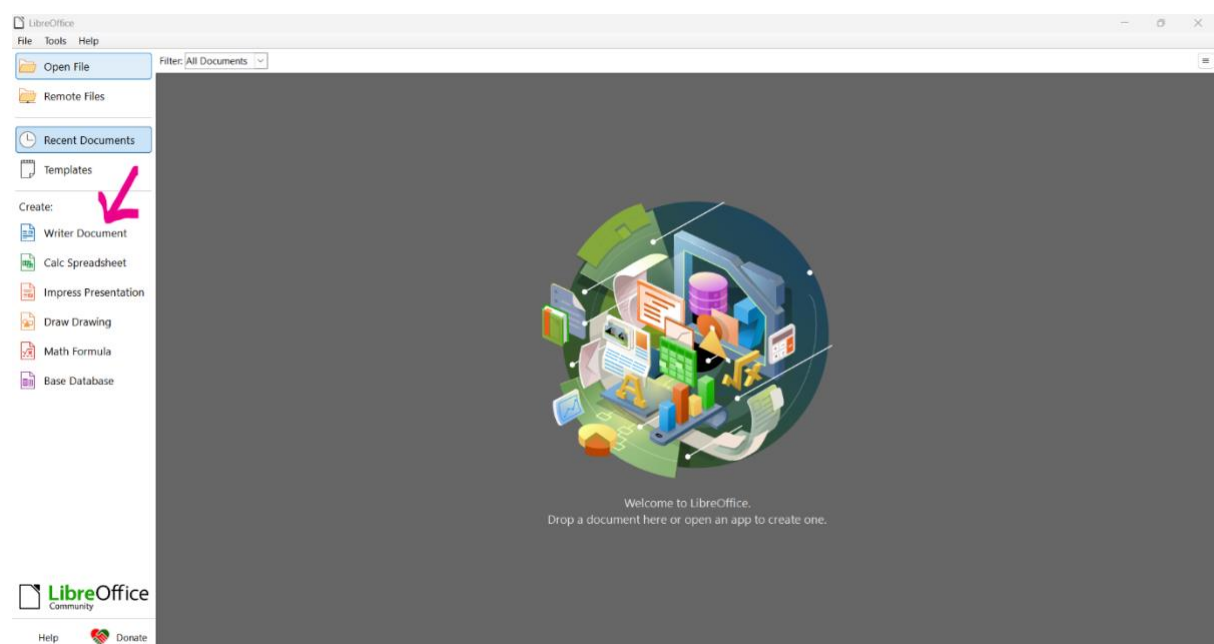
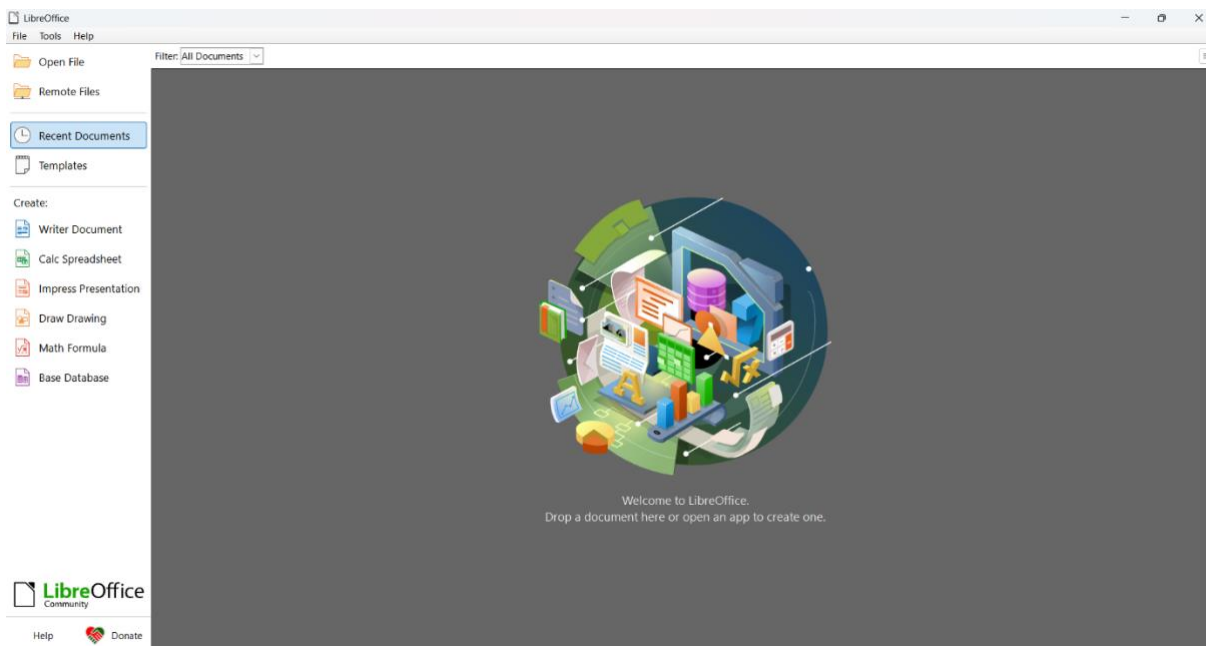
Expression	Formula Syntax	How would this expression render
Fraction	a over b	$\frac{a}{b}$
Superscript	x^2	$x^2$
Subscript	x_1	$x_1$
Square Root	sqrt{x}	$\sqrt{x}$
nth Root	nroot{3}{x}	$\sqrt[3]{x}$
Sum	sum from {i=1} to {n} a_i	$\sum_{i=1}^n a_i$
Integral	int from {a} to {b} f(x) dx	$\int_a^b f(x) dx$
Greek $\pi$	%pi	$\pi$
Infinity	infinity	$\infty$
matrix	left[matrix{a#b#c##d#e#f##g#h#i}right]	$\begin{bmatrix} a & b & c \\ d & e & f \\ g & h & i \end{bmatrix}$
Limit	lim from{x rightharpoonup 0}f(x)	$\lim_{x \rightarrow 0} f(x)$

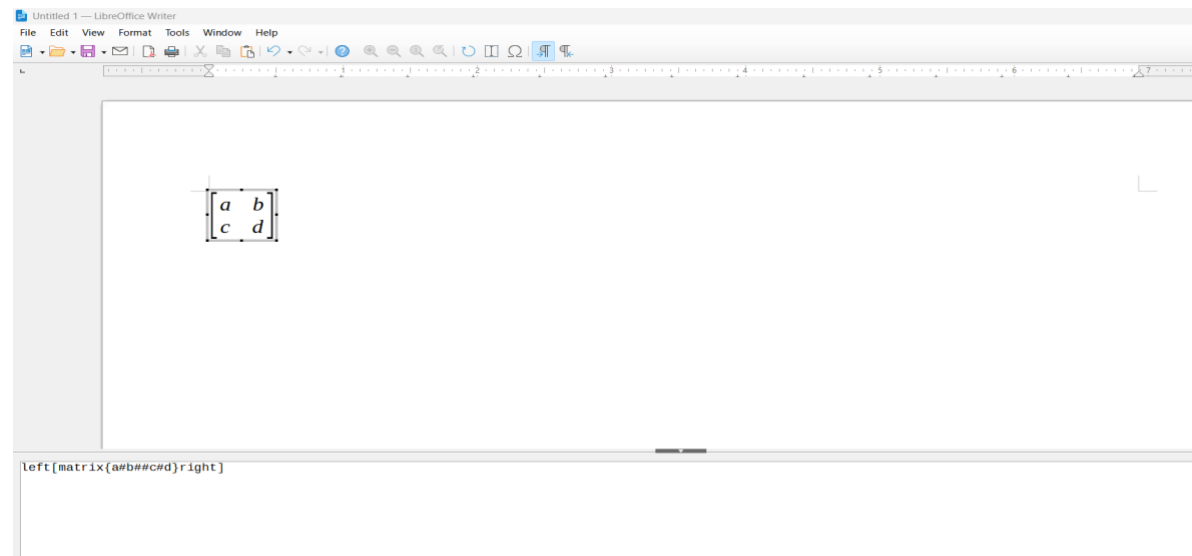
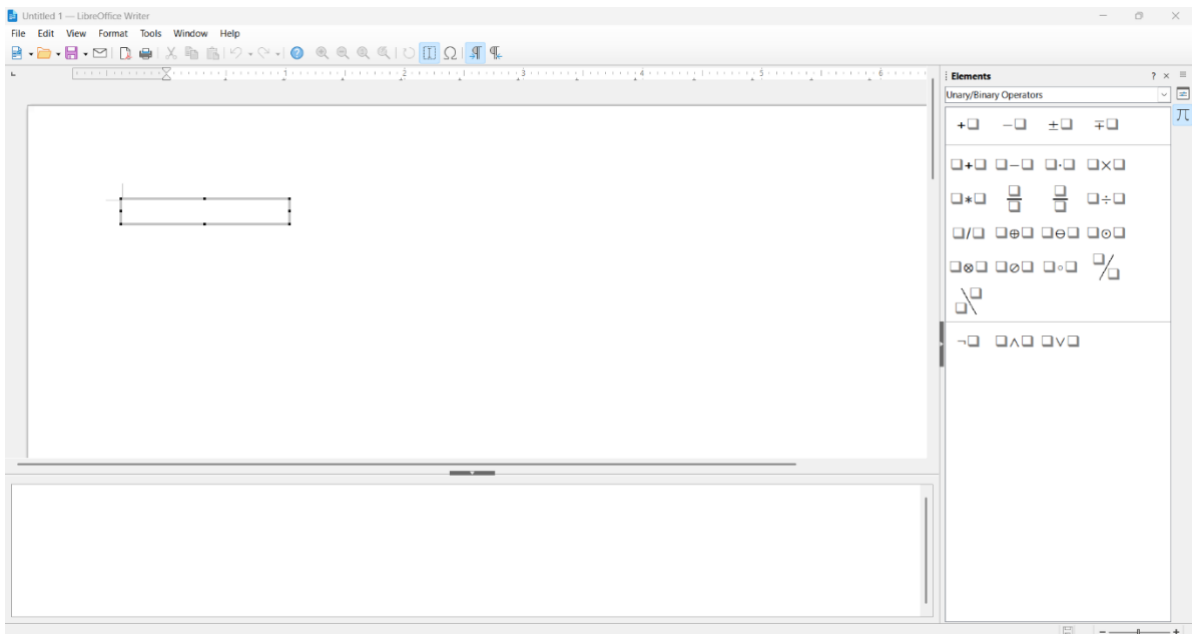
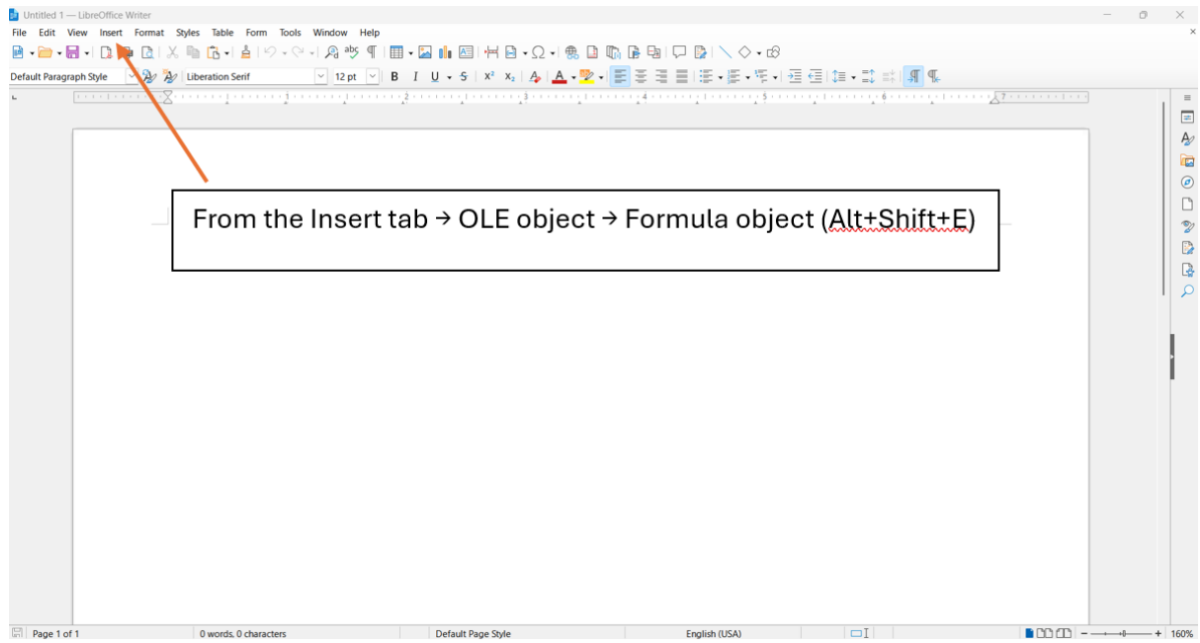
Most of these formulas are built-in functions that you can insert by going to the Insert tab → OLE Object → Formula Object (Alt+Shift+E), and then selecting from the dropdown list on the right-hand side of the page.

#### 4. Inserting Special Characters

You can insert special characters either by typing the names (like alpha, beta, rightarrow) or using the Elements panel, which provides clickable symbols.

To insert a math formula, follow the steps as in the pictures.





## 5. Editing Formulas

- Click the formula object to edit.
- Use the bottom editor to make changes.
- You can resize and align formulas just like images.

## 6. Tips for Using LibreOffice Math

- Use parentheses {} to group expressions.
  - Use spaces carefully, especially in compound formulas.
  - For nested expressions, wrap parts of the formula in {} to control formatting.
- Example:  $(a + b) \text{ over } \{c - d\}$

## 7. Saving and Exporting

- Formulas are saved as OLE objects in Writer.
- You can also copy/paste them into other LibreOffice apps.
- Export to PDF maintains high-quality math rendering.