Formulas

The OpenOffice.org formulas editor lets you create pretty much any formula you can come up with. You can use the symbol lookup editor to enter formulas, memorize and type the commands to do so, or of course use a mixture.

Formula Quick Reference

The online help has an excellent guide to formula commands. The *Formula Reference Tables* online help topic is a good reference. Here's a summary of tips.

Basic Formula Editing

To enter a symbol like pi or rho, type % followed by the standard spelled-out version:

π `%pi`

ρ `%rho`

Θ `%THETA`

You can also click the symbol icon in the left-hand toolbar in the formula editor.

Relations

To type a symbol like – or =, type the symbol or, if not available on the keyboard, type the commonly used spelled-out version:

- $=$ is `=`
- not equals is `<>` or `neq`
- To show division vertically rather than horizontally, type `over`; the result is shown here.

$$\frac{\Phi}{\lambda}$$

Set Operators

For items like intersection or union, type the commonly used spelled-out version:

$a \in b$ For is contained in, type `in`
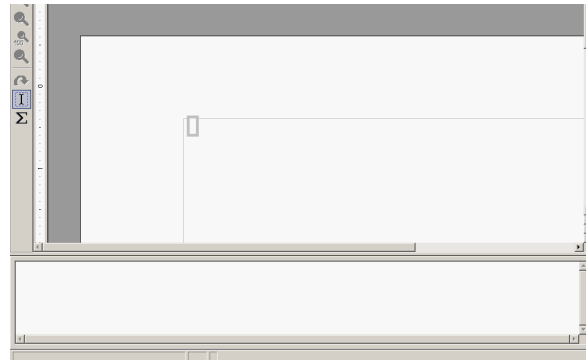
$a \cap b$ For intersection, type `intersection`

$a \cup b$ For union, type `union`

$a / b = \emptyset$ For empty set, type `emptyset`
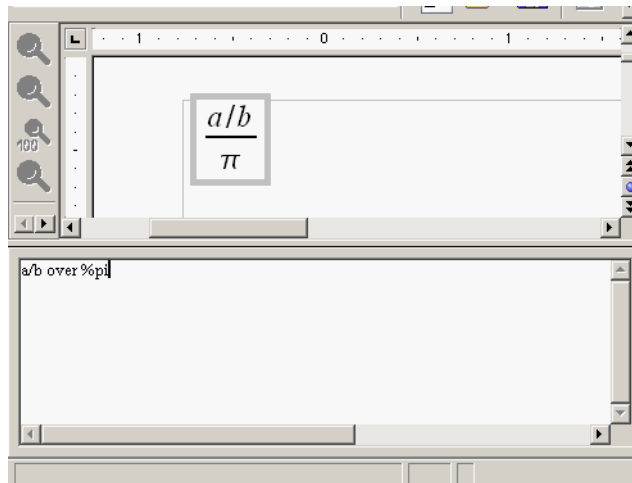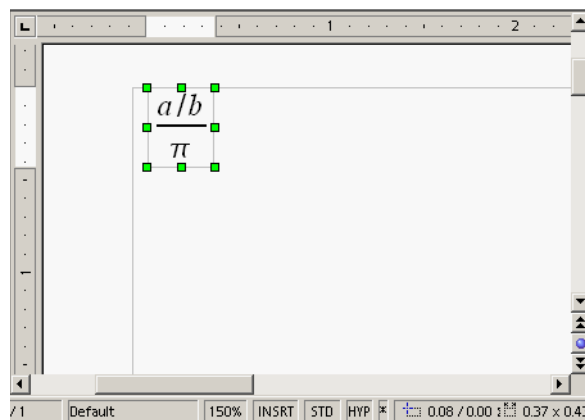
Exercises

Entering a Simple Formula

1   Open a new document.

2   Choose Insert > Object > Formula.
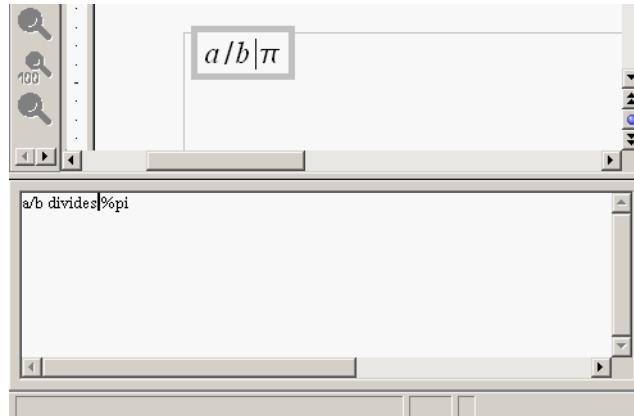
3   The formula entry window will appear.

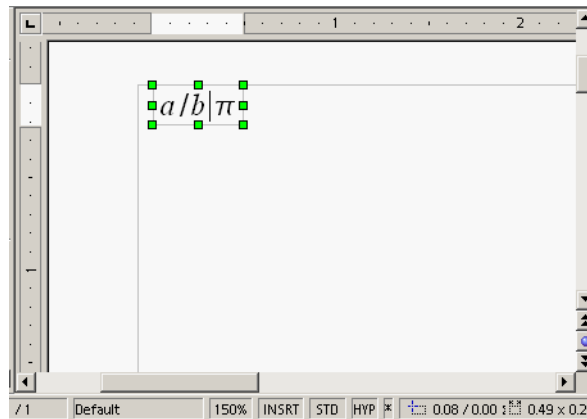4   Type the following in the field at the bottom: **a / b over %pi**

5   Click in the main part of the document; the formula editor window will disappear.

6 You realize you need to make a change. Double-click the formula to make the editor window appear. Delete **over** and type **divides** instead.

7 Click back in the main document to make the formula editor window disappear.

Extra credit: Start a new formula and click in the formula entry area. Press F1 to bring up the help and use the help to determine how to enter, by typing the formula, a formula that you use in your work. The *Formula Reference Tables* online help topic is an excellent reference.

## Ensuring Your Formula Can Be Displayed

Formulas are inserted by default anchored "As Character." This means that they are treated like a character:

- If the leading of the paragraph formatting is single spacing, no problem. If it's exactly .20 inches, for instance, that means that only .20 of a vertical inch of your formula will be shown. This can cause problems.

- It means you can't drag the formula around and put it where you want it.

For all formulas, it's a good idea to follow these steps.
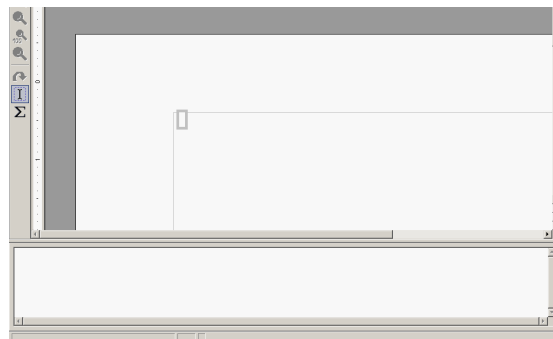
1 Select the formula frame.

2 Right-click on it and choose Anchor > To Paragraph. (If you prefer To Page or To Character, select that instead.)
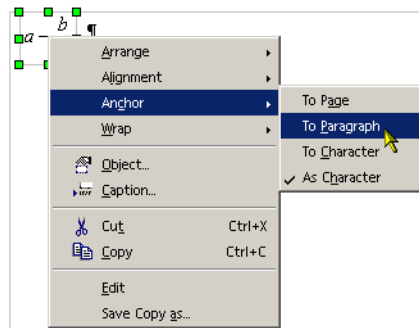
Using the Symbol Lookup Window

You can type any symbol if you know the text version by typing % followed by the text version like %rho, %pi, etc. If you don't know the written out version, use the symbol lookup window.
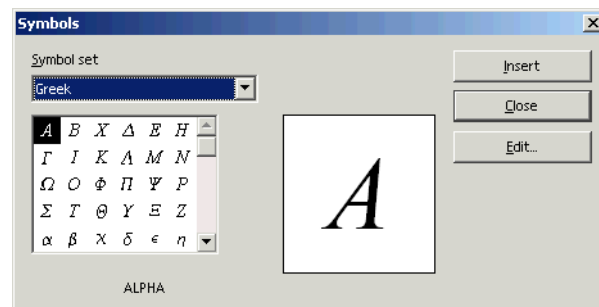
1 In the same document you used before, click in a blank area.

2 Choose Insert > Object > Formula.

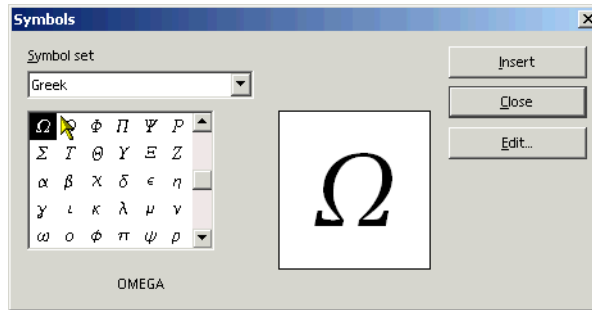**3** The formula entry window will appear.

4 Click the circled symbol in the toolbar at the top.

5 The formula lookup window will appear.
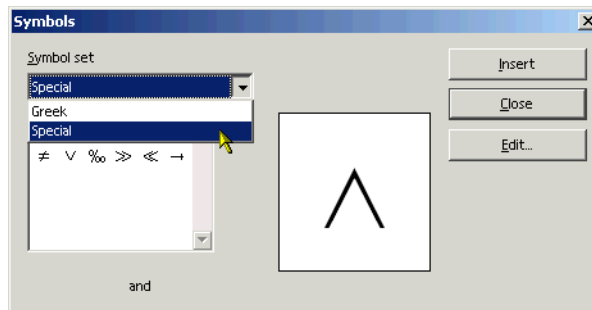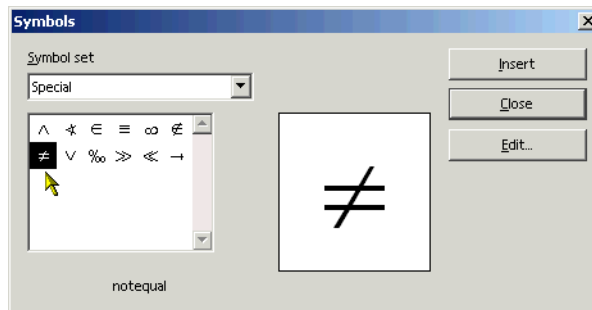
6   Scroll down and find the OMEGA symbol.

7   Click Insert.

8   From the Symbol Set list, select Special.
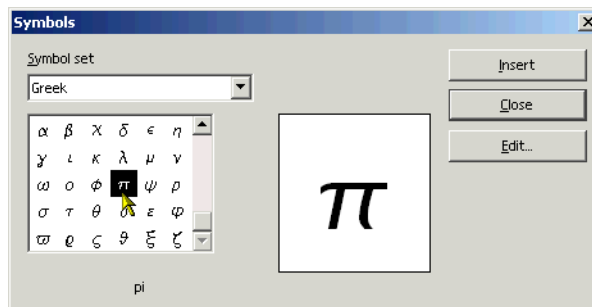

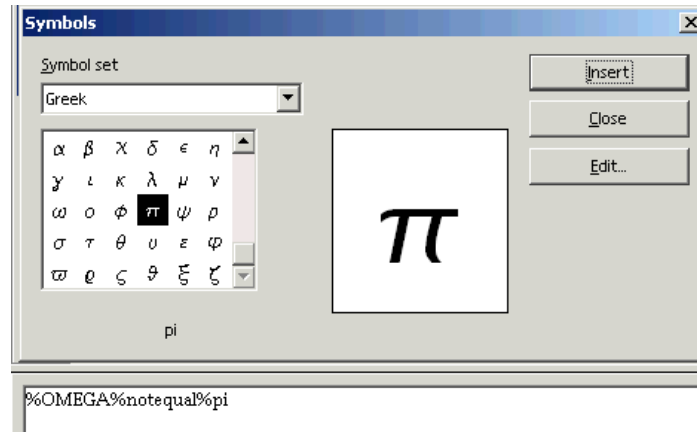**9**   Select the notequal symbol, shown.

10   Click Insert.

11   Select Greek symbols again in the Symbol Set list.

12   Scroll to the end and select pi.

13 Click Insert. The Symbols window and formula entry area will look like this.

14 Click in the document; the formula entry area will disappear and the formula will appear in the document.
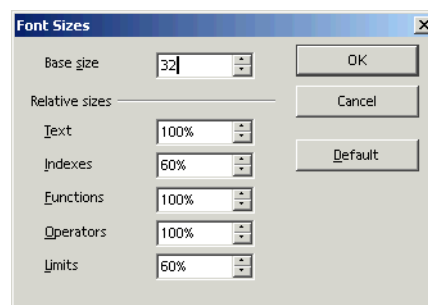
Resizing the Formula Font

You can't resize the formula frame but you can make the text itself bigger in the formula.

1 In any document, choose Insert > Object > Formula.

2 In the editing area, type **a - b over %pi**

3 Select the text in the editing area.

4 Choose Format > Font Size.

5 Change the font size to 32.

6 Click OK. The formula will appear.

$$a - \frac{b}{\pi}$$