

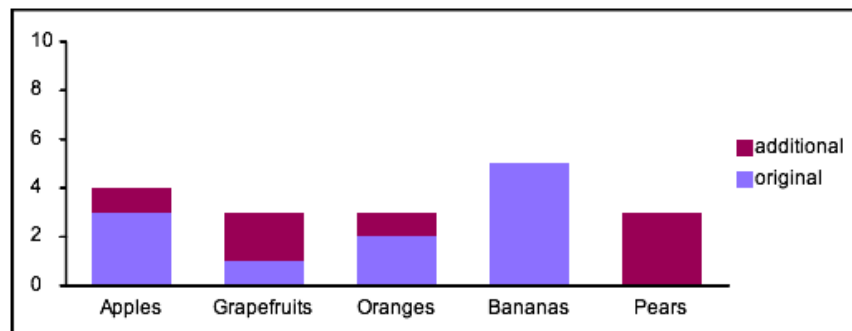
## TABLES AND CHARTS

The example below shows numbers which have been entered into a table and then represented on a chart. See page 1 of the Cabri Author file *tablescharts*.

Original numbers:

3	1
1	2
2	1
5	0
0	3

	original	additional
Apples	3	1
Grapefruits	1	2
Oranges	2	1
Bananas	5	0
Pears	0	3

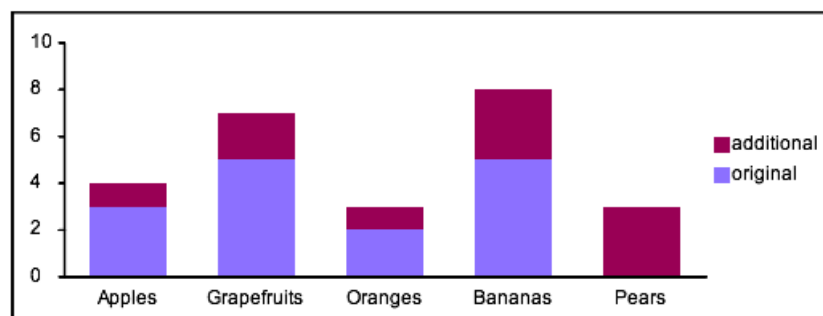


When any of the numbers are changed (as for grapefruits and bananas), the table and chart will change accordingly.

Original numbers:

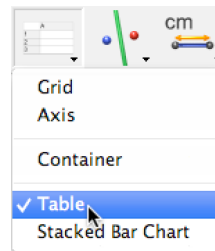
3	1
5	2
2	1
5	3
0	3

	original	additional
Apples	3	1
Grapefruits	5	2
Oranges	2	1
Bananas	5	3
Pears	0	3



## 1. CREATING A TABLE

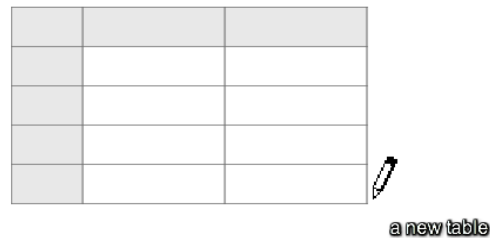
Select the **Table** tool.



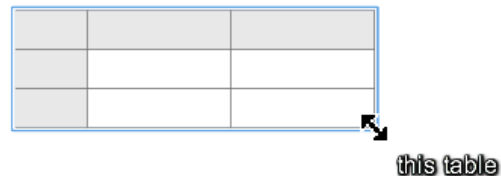
Click on the page to place the top left corner of the table.



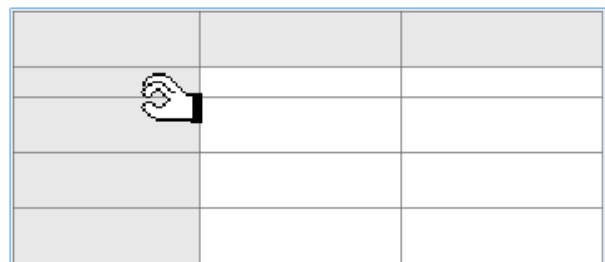
Move the cursor near the bottom right corner of the table until the table has the correct dimensions, and click to finish.



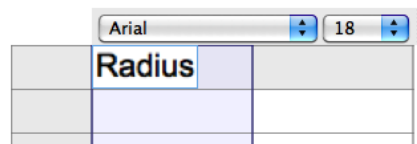
The table may be later moved or resized by dragging on its border or its bottom right corner.



Column width and row height may be changed by dragging on the dividing lines.



To give names to rows and columns, double-click on the appropriate cell and type a name.



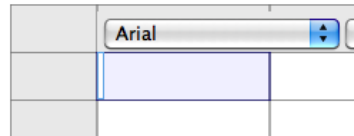
## 2. ENTERING DATA IN A TABLE

Tables can contain text, numbers (including fractions) and Booleans.

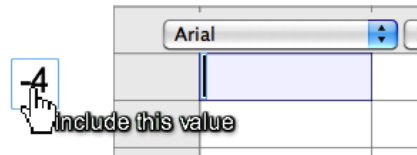
To enter text, double-click on a cell and type. Note that anything typed directly into a cell is treated as text.

To enter numbers or Booleans, drag the number or Boolean and drop it into the required table cell.

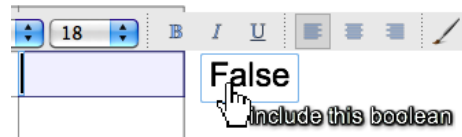
Alternatively, first double-click on the cell into which you want to put the number or Boolean.



Now move the cursor so that it is over the number or Boolean that you wish to enter.



Make sure the tooltip says “include this value” or “include this boolean”



Click to enter the number or Boolean.

	Temperatur < normal?
-4	False

Note that all numbers and Booleans entered into a table are dynamic copies of the originals and will change as the originals change. Objects in tables may be used in further operations.

If you want to change a number (or a Boolean) in a table, do NOT directly edit the number in the table. This will have the effect of replacing the number with text. You will need to change the original number from which the number was copied, or delete the number in the table and insert a new number.

### 3. CHANGING THE APPEARANCE OF A TABLE

If you select the table or any part of the table, changing color and fill using the **Attributes** panel will affect text color and background color for the table as a whole.

	original	addition
Apples	3	1
Grapefruits	1	2
	7	4
Bananas	5	0
Pears	0	3


You may change the font of the data by selecting the table as a whole, or by selecting individual cells and using the Text pane in the **Attributes** panel. If you select a row or column header, these changes will be applied to the entire row or column.

To change the font or color of row or column headers without changing the data, double-click on individual headers and then edit as normal text.

### 4. CREATING A CHART

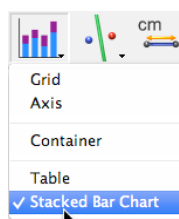
Once you have created a table and entered some data into it, you may create a bar chart to display the data in the table.

When a chart is created, it will automatically represent the cells highlighted in the associated table (by default the top left cell). You may select the cells you want to represent before you create the chart, or change the default selection after the chart has been created.

To select cells, activate the **Manipulation** tool  and use a selection rectangle to select the table cells which you want to represent in the chart.

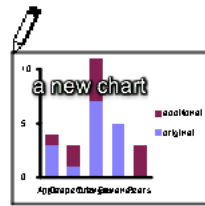
	original	additional
Apples	3	1
Grapefruits	1	2
Oranges	7	4
Bananas	5	0
Pears	0	3

Select the **Stacked Bar Chart** tool and then click to select the table.

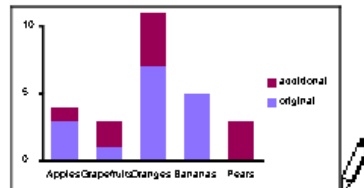


The chart to the right will appear.

Click on the page to position its top left corner.

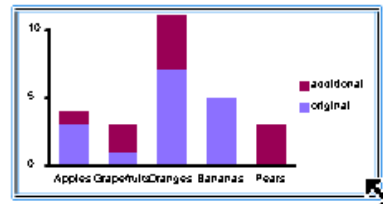


Move the cursor and click to position the bottom right corner of the chart.



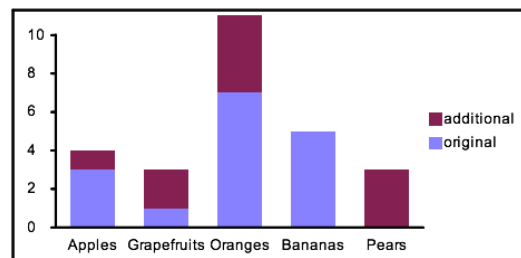
a new chart

The chart may be resized by dragging the bottom right corner.

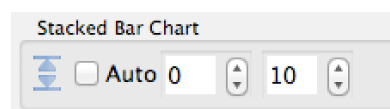


this chart

Note that the row titles are used as column labels and the column titles are used in the key. The markings on the vertical axis automatically change as the chart is resized.

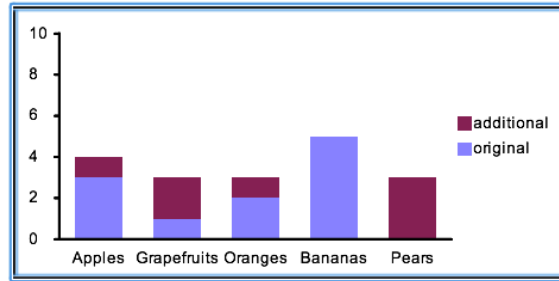


It is possible to control the length of the vertical axis using the [Chart](#) pane in the [Attributes](#) panel.

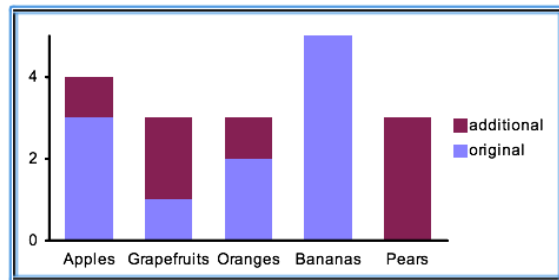


Select the chart and then either set the minimum and maximum values, or click on [Auto](#) for the axes to change to fit the data.

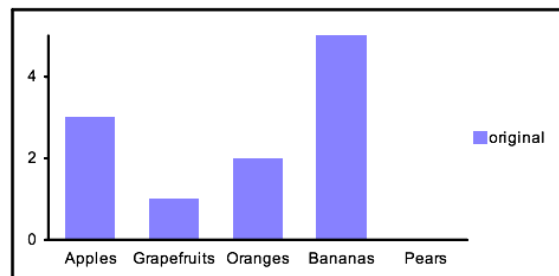
The original number of oranges has been changed. Here is the chart without changing the vertical axis:



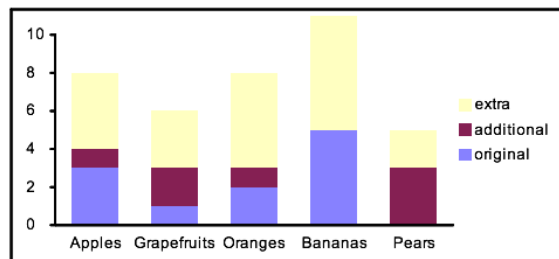
If **Auto** is selected in the **Chart** pane, this is the result:



If you change the cells selected in the table (without deselecting the table), the chart will change accordingly.



You may have more than two columns of data, and may make as many different charts from different sections of the table as you like. See page 2 of the Cabri Author file **tablescharts**.



#### Notes:

- If the data contains Booleans, **TRUE** is represented on a chart by the value 1, and **FALSE** by the value 0. Any text in the data is represented by the value 0.
- It is also possible to represent negative numbers in a table or chart as shown on the next page. See page 3 of the **tablescharts** file.

	Initial Value	Change
p1	3	-5
p2	4	-2
p3	1	-7
p4	5	-6

