Edit Interface

To edit the content of the spreadsheet from your web browser, click on the title of the spreadsheet in the list and then on edit when the spreadsheet page is being displayed. If the spreadsheet is new, it will appear with a single cell (see Fig. 1).

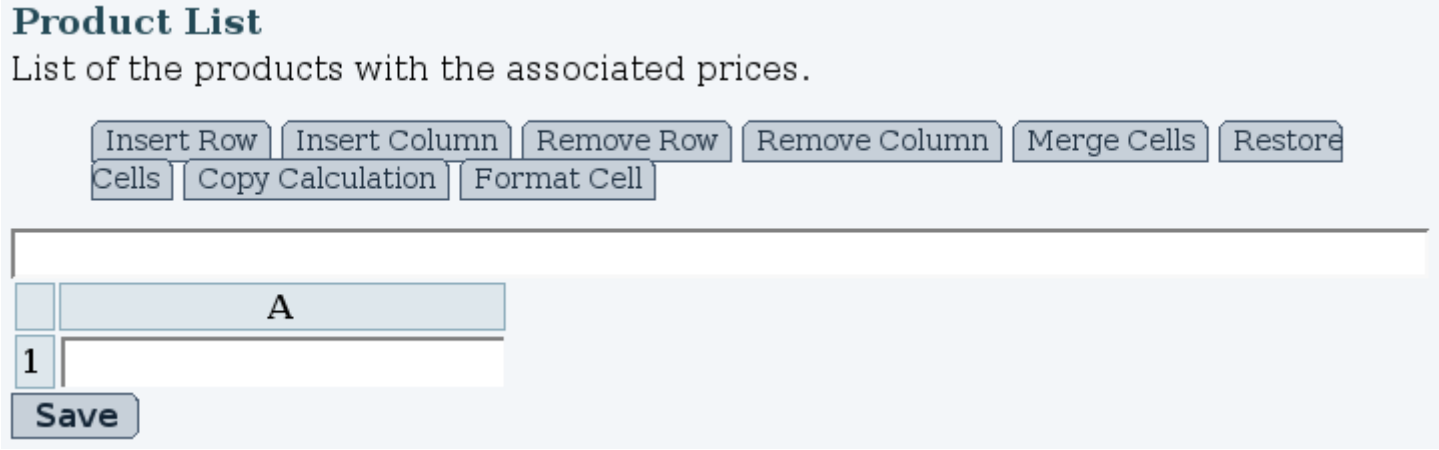


Fig. 1: Blank spreadsheet

Editing content of a cell

To edit the content of a cell:

- Double-click on the cell
- The current content of the cell appears on the edit bar located at the top of the spreadsheet
  - To **replace** the current content of the cell with something else, just start typing.
  - To **modify** the current content of the cell, click in the edit bar, and modify its content.
- Once your edit is done, press **Enter**

Modify the Spreadsheet Structure

Multiple options are available to change the structure of the spreadsheet. Here is a summary table.

Insert Row	Insert one or multiple rows at a specified location
Insert Column	Insert one or multiple columns at a specified location
Remove Row	Delete a single row
Remove Column	Delete a single column
Merge Cells	Merge the selected cells into a single cell
Restore Cells	Unmerge the selected cell to the original state
Copy Calculation	Copy the calculation to an adjacent cell
Format Cell	Applies formatting to a cell (ex.: currency)

Columns and rows can be added using the "Insert Row" and "Insert Column" options (see Fig. 2 and Fig. 3). Both will present radio buttons to select if the cells should be added before or after the selected reference. The reference is selected from a combo box listing the row numbers or column letters. A text field is used to specified the amount of items to add.

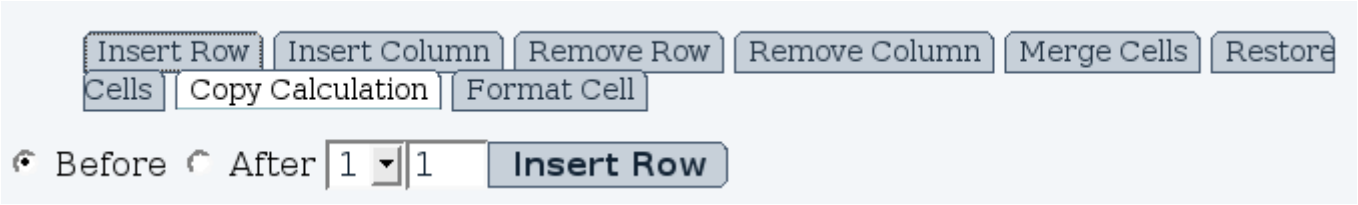


Fig. 2: Insert row form

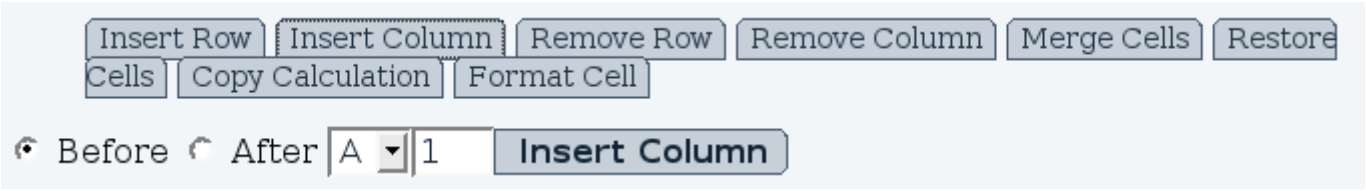


Fig. 3: Insert column form

Note: If you add new rows or columns and save the sheet before entering data into them, Tiki will actually delete the empty rows or columns__.

Columns and rows can be removed one at a time using the "Remove Row" and "Remove Column" options (see Fig. 4 and Fig. 5)

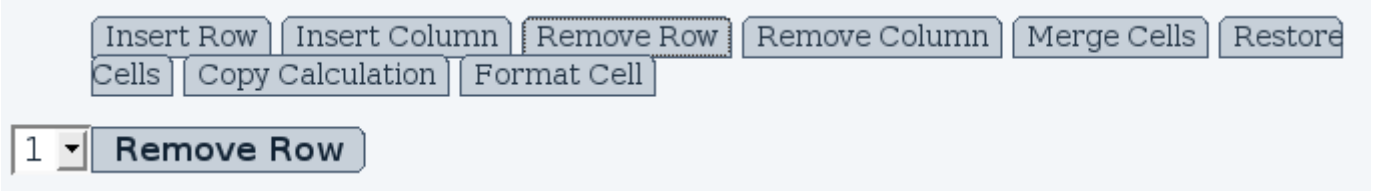


Fig. 4: Remove row form

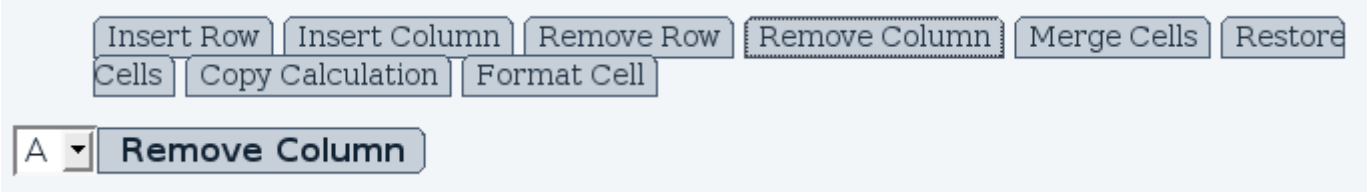


Fig. 5: Remove column form

Calculations can be copied across multiple cells using the "Copy Calculation" option (see Fig. 6). Before the direction is selected, the affected cells must be selected. To do so, first select a cell, hold shift and select the last cell. The selected range will be highlighted. In a vertical range where the calculation is written in the first cell, using the "Down" option will copy the calculation in every cell until the end of the range based on the first row.

When the calculation is being copied, the references to other cells are modified to suit the new location. In the example above, the row numbers would increment on every row. Elements in the calculation can be made static. For more information about calculations, see the section on "Calculations and Formulas".

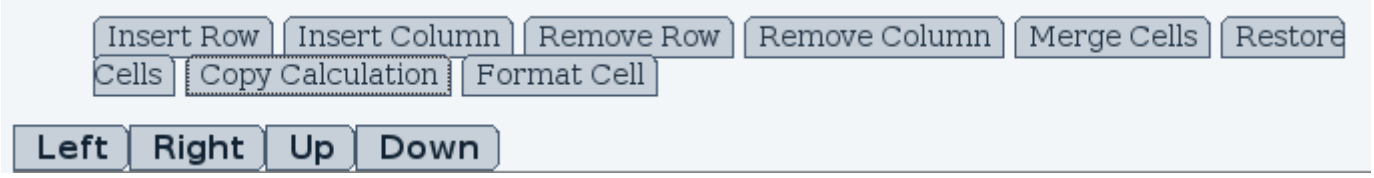


Fig. 6: Copy calculation form

Cell formatting is used to display the numeric values in a different format, such as replacing *2.5* for *$2.50* when displaying currencies. Applying format on a cell does not affect the real value, allowing to perform calculations. The cell formatting can be applied on a range of selected cells using the "Format Cells" option (see Fig. 7).

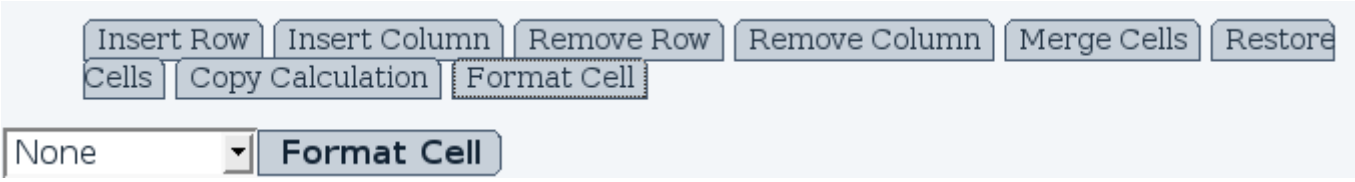


Fig. 7: Format cells form

Here is a summary of the available formats available.

currency	Displays the numeric value with 2 digits precision (ex: 2.00)
currency_us	Displays the numeric value as currency, preceded by dollar sign (ex: $2.00)
currency_ca	Displays the numeric value as currency, apended by dollar sign (ex: 2.00$)

Calculations and Formulas

Formulas work in a similar way to those in Excel or OpenOffice.org Calc. Once a cell is selected, a formula can be entered by clicking in the text bar above the spreadsheet and typing *=*, which is the character to indicate the entered value is a formula. Figure 8 contains an example formula.

Note:_ Entering a formula directly into the cell will not work. You need to enter the formula in the text bar located at the top of the spreadsheet (the one that displays the content of the currently selected cell).
Note:_ Names of formulas are **NOT case-sensitive**, and must be entered all caps (ex: *=SUM*, as opposed to *=sum*).

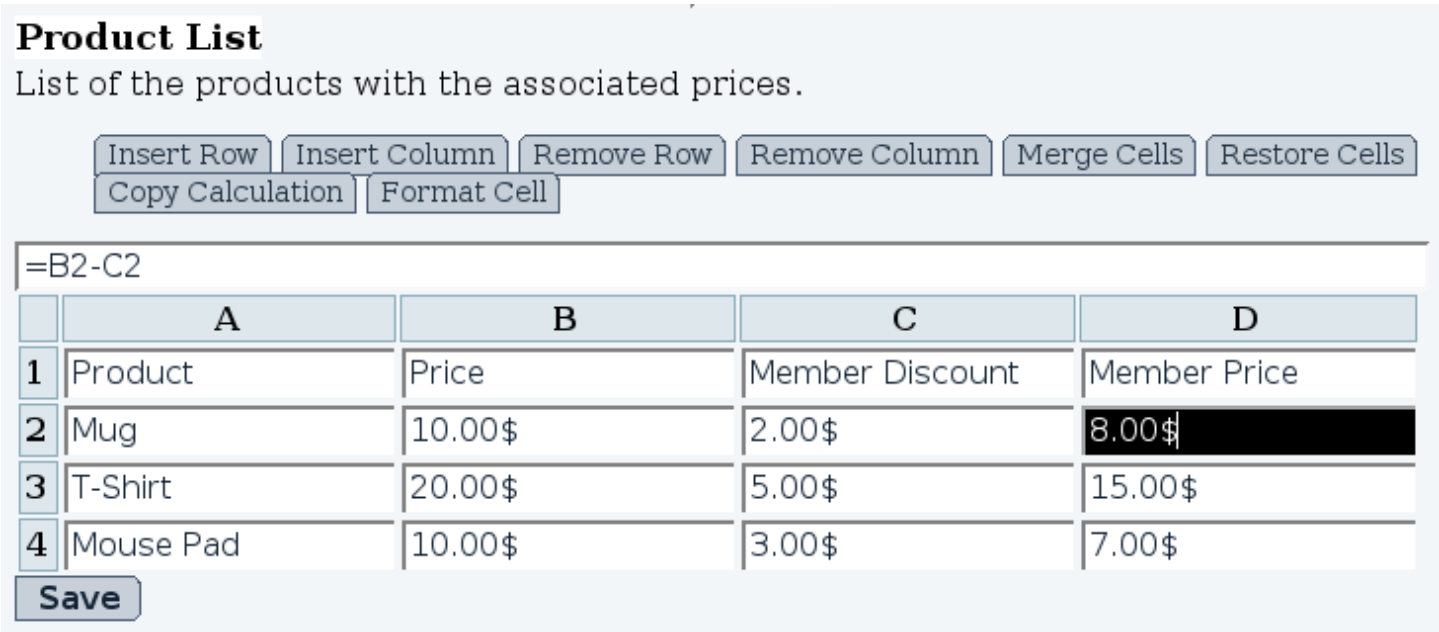


Fig. 8: Example sheet containing a formula

Values from other cells can be included in a formula using the column letter and the row number. The example above substracts the Member discount from the regular price to produce the member price. Most common operators are supported.

Note: Formulas are interpreted as JavaScript after a few transformations. Most constructs and functions of the language can be used. This documentation describes the elements required for common use and customized elements

Functions can also be used in formulas. Most functions are applied on a range. Ranges can be obtained using A1:Z99 syntax, where the part before the colon is the top left corner of the selection and the part

after the colon is the bottom right corner.

Math Results

Sheet containing the results for the math course

Student ID	Homework	Midterm Exam	Final Exam	Total
	10	40	50	
A	100	96	74	85.4
B	80	80	75	77.5
C	75	60	84	73.5
D	80	45	90	71
E	60	50	75	63.5
F	30	40	25	31.5
G	75	80	85	82
H	90	80	85	83.5
I	50	60	60	59
J	100	90	95	93.5
K	70	75	75	74.5
L	80	80	88	84
M	45	50	60	54.5
N	95	90	87	89
O	70	75	75	74.5
P	65	65	30	47.5
Average	72.8125	69.75	72.6875	71.525
Min	30	40	25	31.5
Max	100	90	95	93.5

edit history export import graph

Fig. 9: Spreadsheet not in edit mode

Figure 9 is a sample spreadsheet result. The following formulas have been used to obtain these results:

Student total result	=B7/100*B$2+C7/100*C$2+D7/100*D$2	Sum of the obtained results with ponderation
Column average	=AVG(B3:B18)	Average of all results in the column
Column min	=MIN(B3:B18)	Lesser value in the column
Column max	=MAX(B3:B18)	Highest value in the column

In the student total result, a dollar sign has been added (D$2) in the reference to the field at the top of the page. The dollar sign symbol indicate the value should not be incremented when the calculation is being copied to other cells. Using $D2 would lock the column to D while the row number could increment. Both can be used together (D2). As in Excel worksheets, formulas can be replicated in next cells by simply dragging the small square icon at the bottom-left corner of a cell. The corresponding free cells (not locked by $) will change accordingly.

Note:_ (As of Tiki 12), replicating formula cells across a column is **NOT possible** when there are locked cells of type $D2 or D3 used in the formula. For e.g. "=D3*E3+C$4 will fail with errors. In this case,

you will need to copy & paste by hand the formula in each cell and change the numbering of the free cells (here E3 to E4, E5, ...). Hopefully, this will improve in the coming versions of Tiki.

A range can also be created using brackets. For example, a range containing cells from A1 to A4, excluding A2 could be created using: [A1, A3, A4] .

Here is a list of the functions available:

SQRT(val)	Square root of val
MIN(range)	Finds the lesser value in range
MAX(range)	Finds the largest value in range
SUM(range)	Sums all values in range
AVG(range)	Average value in range
SUMIF(testRange, val or range, sumRange)	Sum of elements in sumRange if matching value in testRange is equal to val or any value in range

Note: You must enter function names in UPPER case. Function names appear to be case sensitive e.g. entering "sum(A1:A12)" will not work, you must enter "SUM(A1:A12)".

Math methods

Because the spreadsheet is implemented using Javascript, the Math object's methods can be used. For example, **Math.round()** will round to the nearest integer. This use is more fragile than native TikiWiki functions, and these methods should be added to the spreadsheet functions in the future.

abs	Returns the absolute value of a number.
acos	Returns the arccosine (in radians) of a number.
asin	Returns the arcsine (in radians) of a number.
atan	Returns the arctangent (in radians) of a number.
atan2	Returns the arctangent of the quotient of its arguments.
ceil	Returns the smallest integer greater than or equal to a number.
cos	Returns the cosine of a number.
exp	Returns Enumber, where number is the argument, and E is Euler's constant, the base of the natural logarithm.
floor	Returns the largest integer less than or equal to a number.
log	Returns the natural logarithm (base E) of a number.
max	Returns the largest of zero or more numbers.
min	Returns the smallest of zero or more numbers.
pow	Returns base to the exponent power, that is, base exponent.
random	Returns a pseudo-random number between 0 and 1.
round	Returns the value of a number rounded to the nearest integer.
sin	Returns the sine of a number.
sqrt	Returns the square root of a number.
tan	Returns the tangent of a number.