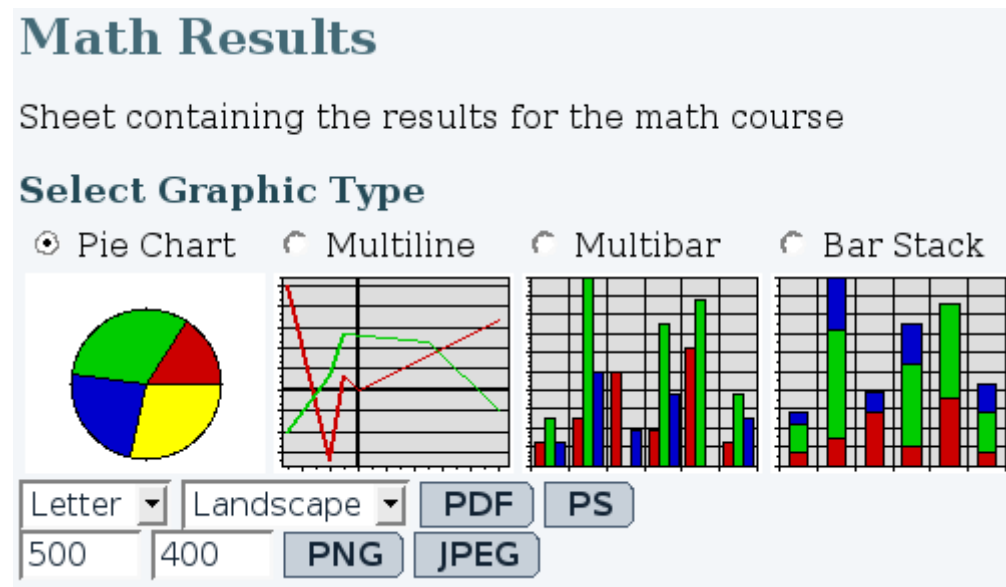


# Spreadsheet Graphics and Charts

Graphics can be created using the Graph button in the spreadsheet view or from the sheet listing, which takes the user to `tiki-graph_sheet.php?sheetId=1` (1 or the numeric id of that sheet). Two simple forms are presented to select the parameters of the graphic.

## Select the Graphic Type and Output Format



The screenshot shows a web form titled "Math Results" with the subtitle "Sheet containing the results for the math course". Under the heading "Select Graphic Type", there are four radio buttons: "Pie Chart" (selected), "Multiline", "Multibar", and "Bar Stack". Below the radio buttons are four small preview images: a pie chart, a multiline graph, a multibar chart, and a bar stack chart. At the bottom of the form, there are two dropdown menus for paper size (set to "Letter") and orientation (set to "Landscape"). To the right of these are buttons for "PDF" and "PS". Below the paper size dropdowns are input fields for width (set to "500") and height (set to "400"). At the bottom are buttons for "PNG" and "JPEG".

Fig. 1: First form

The radio buttons select the type of graphic to be generated. A first example will be made with the Pie Chart and a second one with Multibar. Multiline and Bar Stack use the same parameters as Bar Stack.

Multiple output formats are available. Depending on the installed extensions on the server, some elements might not be available. PDF and PostScript are printable format and require the paper size and orientation parameters. PNG and

JPEG are images and require height and width parameters in pizels.

If the objective is to include the graphic in a wiki page, the selected format will only be used for the preview.

# Parameters

Figure 2 presents the parameters entered to obtain a pie chart from the speadsheet and Figure 3 is the result obtained. The page is divided in three sections:

1. Parameter form
2. Spreadsheet
3. Wiki Plug-in

The parameter form is used to select the elements that will be displayed in the graphic. All parameters under the series label are value ranges from the spreadsheet in A1:Z99 format or comma seperated list of elements (ex: Blue, ))LightBlue,LightGreen(()). The color and style series require special values:

Color

- Red
- Green
- Blue
- Yellow
- Orange
- LightBlue
- LightGreen

Style

- Thin-LineStroke
- Thin-FillStroke
- Normal-LineStroke
- Normal-FillStroke
- Bold-LineStroke
- Bold-FillStroke
- Bolder-LineStroke
- Bolder-FillStroke

The spreadsheet is available as a reference to select the ranges.

The wiki plug-in is updated as the parameters are changed in the form. The code displayed can be pasted in a wiki page to display the graphic. The plug-in does not consider the selected output format. Instead, it will automatically select the best format available. If possible, it will display an image and link to a printable format. Preferred image format is PNG and preferred printable format is PDF.

# Pie Chart Parameters

The following table presents the different field of the form, what they are used for and the behavior if left empty.

Title	Used as the title of the graphic	No title
Label	Caption in the legends	No legend
Value	Values used in the chart	Required
Color	Colors used for the elements	Automatically selected
Style	Change border type	Normal-FillStroke

The amount of elements in every range must be the same.

Title: Weight  
 Series:  
 label B1:D1  
 value B2:D2  
 color  
 style

show

	A	B	C	D	E
1	Student ID	Homework	Midterm Exam	Final Exam	Total
2		10	40	50	
3	A	100	96	74	85.4
4	B	80	80	75	77.5
5	C	75	60	84	73.5
6	D	80	45	90	71
7	E	60	50	75	63.5
8	F	30	40	25	31.5
9	G	75	80	85	82
10	H	90	80	85	83.5
11	I	50	60	60	59
12	J	100	90	95	93.5
13	K	70	75	75	74.5
14	L	80	80	88	84
15	M	45	50	60	54.5
16	N	95	90	87	89
17	O	70	75	75	74.5
18	P	65	65	30	47.5
19	Average	72.8125	69.75	72.6875	71.525
20	Min	30	40	25	31.5
21	Max	100	90	95	93.5

**Wiki plug-in**

```
{CHART(id=>3, type=>PieChartGraphic, format=>Letter,
orientation=>landscape, label=>B1:D1, value=>B2:D2, color=>, style=>,
width=>500, height=>400)}Weight{CHART}
```

Fig. 2: Parameters for the pie chart.

Weight

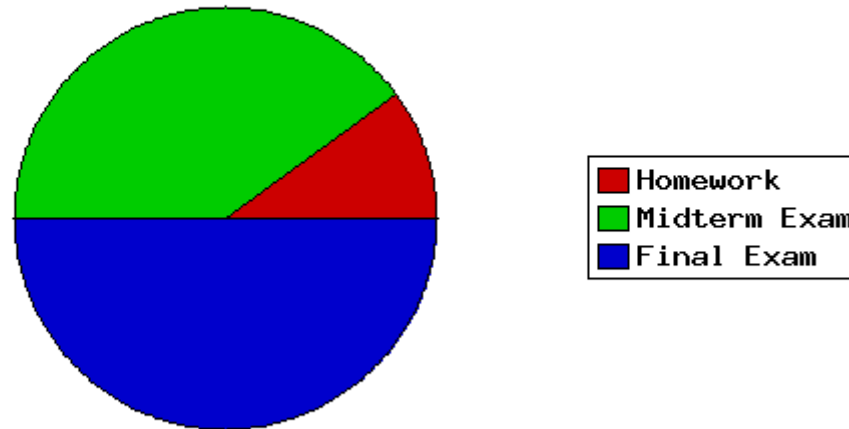


Fig. 3: Resulting pie chart.

# Multibar Parameters

Figure 4 presents the parameters used to create the graphic in Figure 5. Note that different size parameters have been used to suite the large amount of data. Here is the table presenting the different parameters.

Title	Title of the graphic	No title
Independent Scale	Determines if the graphic is vertical or horizontal	
Horizontal Scale	Location of the horizontal scale	
Vertical Scale	Location of the vertical scale	
Label	Caption of the different elements in the legend	No legend
Color	Colors used in the legend	Automatically selected
Style	Border type used	Normal-FillStroke
X	Independent scale range	Required.

The amount of elements in the Label, Color and Style ranges must be equal to the amount of Y ranges used. The amount of elements in the X range and all Y ranges must be the same.

## Math Results

Sheet containing the results for the math course

Title:	<input type="text" value="Math Results"/>
Independant Scale:	<input type="radio"/> Horizontal <input checked="" type="radio"/> Vertical
Horizontal Scale:	<input type="radio"/> Bottom <input checked="" type="radio"/> Top
Vertical Scale:	<input checked="" type="radio"/> Left <input type="radio"/> Right
Series:	
label	<input type="text" value="B1:E1"/>
color	<input type="text" value=", LightBlue, LightGreen, Red"/>
style	<input type="text"/>
x	<input type="text" value="A3:A18"/>
y0	<input type="text" value="B3:B18"/>
y1	<input type="text" value="C3:C18"/>
y2	<input type="text" value="D3:D18"/>
y3	<input type="text" value="E3:E18"/>
y4	<input type="text"/>
<input type="button" value="show"/>	

Fig. 4: Parameters for the multibar graphic

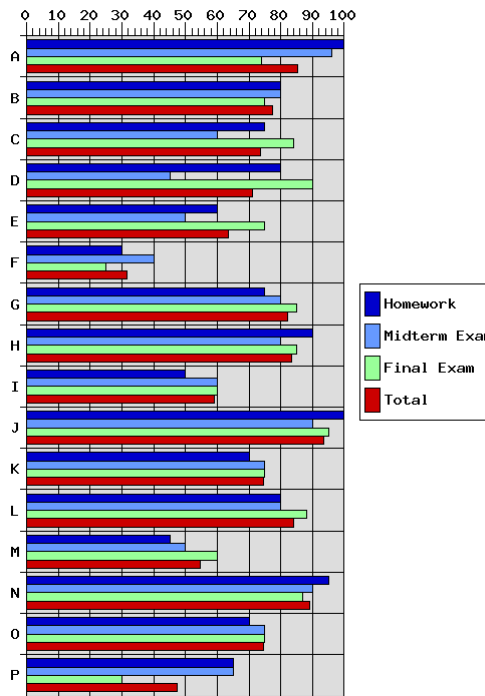


Fig. 5: Resulting multibar graphic

# Spreadsheet JQÂ Charts

Another option is to make the charts reusing the raphael.js charting library embedded in the jquery spreadsheet. See

**Chart Type**   **Example**

**Chart**

**Data**   **Month**   **Year**

Vertical Bar   `"=BARCHART(D2:D13)`

