

Graphing raw and cumulated values

You can display raw and cumulated values in the same graph.
Here are the steps to create this example.

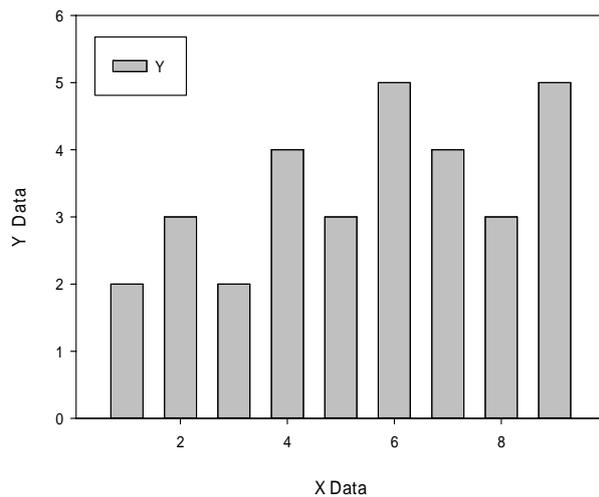
1. Create a simple XY graph (an XY scatter plot, or a simple bar graph).
2. Compute the cumulated Y values with a user-defined transform.
3. Add a line plot to the graph, with the cumulated values.
4. Add a second Y axis for the cumulated curve.
5. Change some graph details.
6. Use cumulated percentage Y values for the line plot.

These are the data:

	1-X	2-Y
1	1,0000	2,0000
2	2,0000	3,0000
3	3,0000	2,0000
4	4,0000	4,0000
5	5,0000	3,0000
6	6,0000	5,0000
7	7,0000	4,0000
8	8,0000	3,0000
9	9,0000	5,0000
10		

1. Create a simple XY graph (an XY scatter plot, or here: a simple bar graph)

XY Pair, from col 1 and 2.



2. Compute the cumulated Y values with a user-defined transform

From the worksheet, select Analysis ribbon > Transform > User-Defined.

In the transform edit window, type:

```
col(3) = sum(col(1))
```

or copy it from here, and paste it into the edit window with Ctrl-V, or Right-click > Paste.

Click the Run button.

This writes the cumulated values into col(3).

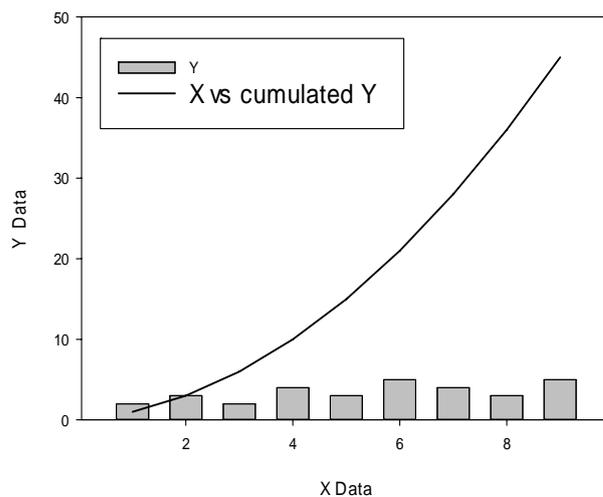
	1-X	2-Y	3
1	1,0000	2,0000	1,0000
2	2,0000	3,0000	3,0000
3	3,0000	2,0000	6,0000
4	4,0000	4,0000	10,0000
5	5,0000	3,0000	15,0000
6	6,0000	5,0000	21,0000
7	7,0000	4,0000	28,0000
8	8,0000	3,0000	36,0000
9	9,0000	5,0000	45,0000
10			

You find a description of sum() and other functions in Help > Transform Function Reference: "sum: The sum function returns the cumulative sum of a range of numbers."

3. Add a line plot to the graph, with the cumulated values

Right-click on the graph, and select Add New Plot (or select Add Plot from the Graph Page ribbon > Graph Additions).

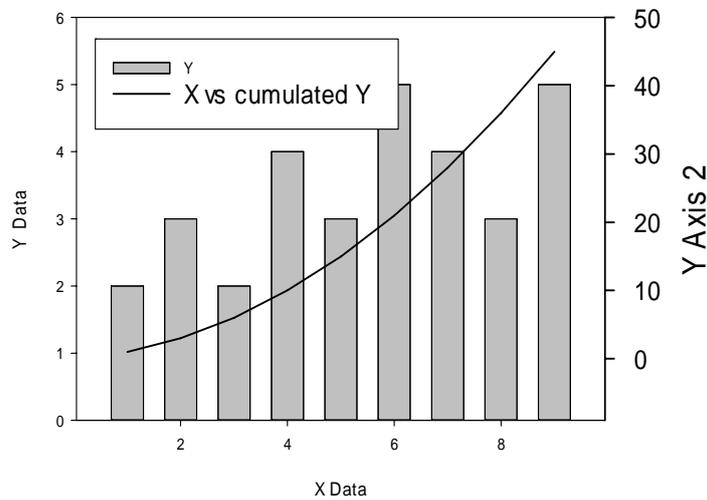
Line Plot > Simple Straight Line > XY Pair > col 1 and 3.



Add a second Y axis for the cumulated curve

Both to show the curve's values on the axis, and to adjust the scaling. Select the graph, select Graph Page > Graph Additions > Add Axis.

In the following dialogs, select Plot 2 > Y Axis > Right > Finish.



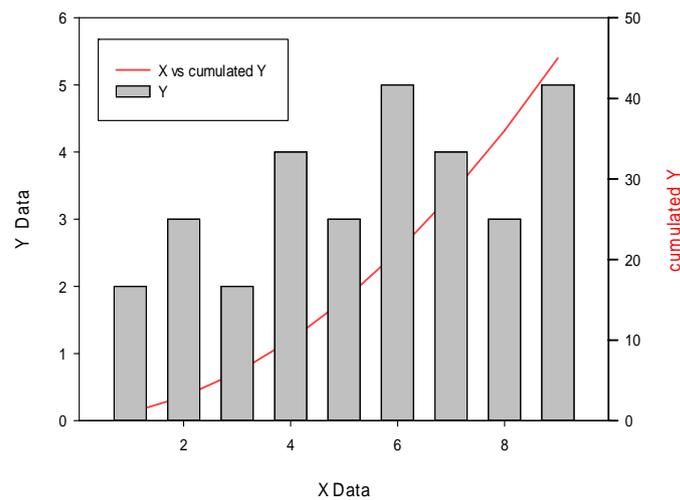
4. Change some graph details

Modify axis title, tick labels, and legends.

Change the second axis' title.

Change the color of the plot 2 line and its axis title.

Change the start value of the second axis to zero (Axis > Scaling).



You could also move the cumulated line behind the bars with the Send to Back/Bring to Front option of the right-click menu, or with the corresponding option in the Graph Page ribbon > Format section.

5. Use cumulated percentage Y values for the line plot

Change the plot from absolute to relative cumulated values.

Add this line to the transform edit window:

```
col(4) = sum(col(1)) / total(col(1)) * 100
```

or copy it from here, and paste it into the edit window with Ctrl-V, or Right-click > Paste.

Click the Run button.

This writes the cumulated percentages into col(4).

	1-X	2-Y	3-cumulated Y	4-cumulated Y%
1	1,0000	2,0000	1,0000	2,2222
2	2,0000	3,0000	3,0000	6,6667
3	3,0000	2,0000	6,0000	13,3333
4	4,0000	4,0000	10,0000	22,2222
5	5,0000	3,0000	15,0000	33,3333
6	6,0000	5,0000	21,0000	46,6667
7	7,0000	4,0000	28,0000	62,2222
8	8,0000	3,0000	36,0000	80,0000
9	9,0000	5,0000	45,0000	100,0000

You find a description of total() and other functions in Help > Transform Function Reference: "total: The total function returns the value of the total sum of a range."

Apply the new data: Double-click on the graph.

In the Graph Properties dialog, make sure that Plot 2 is selected in the "Plot" dropdownlist in the upper area. You want to modify the line plot.

Select "Plot" in the left side tree, and click on the Graph Wizard button on the right.

With Data format still XY Pair, click on Next, and select columns 1 and 4, and Finish.

