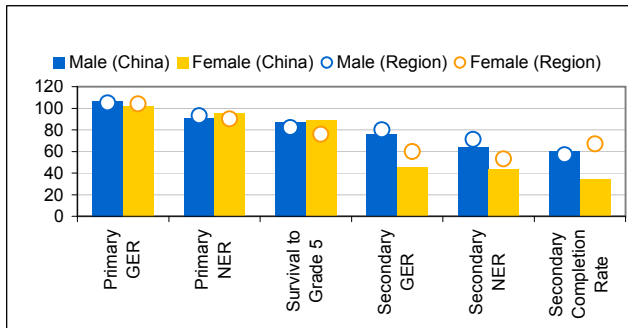


## Dot and Columns Chart

Note: Step 5 requires the electronic version of this tutorial.

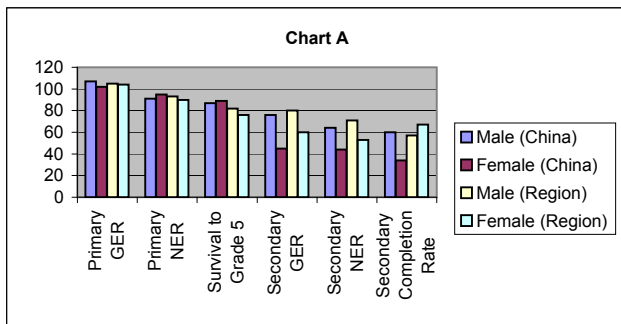


End Result: Dots are aligned over columns

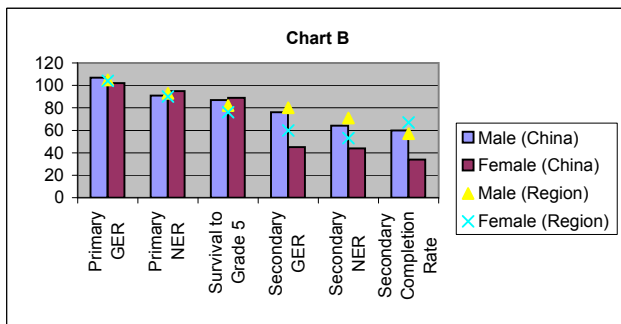
### Instructions

1. Format your data similarly to the cells outlined in red below. In this example, the indicators will be the categories along the x-axis, the male and female values for China will be columns, and the male and female values for the region will be dots aligned over the columns.

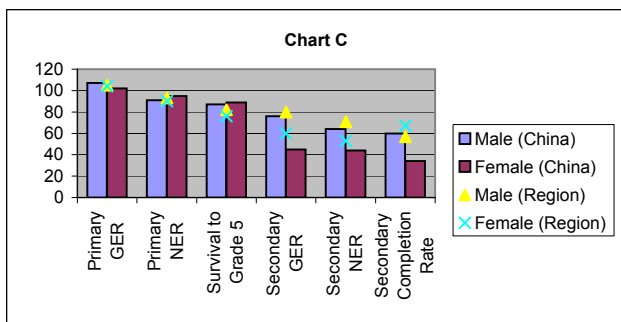
	China		Region	
	Male (China)	Female (China)	Male (Region)	Female (Region)
Primary GER	107	102	105	104
Primary NER	91	95	93	90
Survival to Grade 5	87	89	82	76
Secondary GER	76	45	80	60
Secondary NER	64	44	71	53
Secondary Completion Rate	60	34	57	67



2. Select the cells outlined in red, and click on the chart wizard icon. Create a column chart with series in columns. The result will look something like Chart A.



3. Right click on one of the columns in the Male (Region) series in the chart. Select "Chart Type..." and choose "XY (Scatter)." Do the same for the Female (Region) series. Your chart should look like Chart B.



4. Right click on the chart and choose "Source Data..." Go to the Series tab and select one of the region series. Notice that the field for x-values is referring to the cells with the category names. We're going to change this to refer to cells with numbers in them, so that the markers are aligned above the columns. Click "Cancel."

5. Double click on one of the column series, and go to the "Options" tab. Make sure that "Overlap" is set to 0, and change "Gap Width" to whatever you want. Fill in the blue cells below. In this example, there are two column series (Male China and Female China), and the gap width has been changed to 100% in Chart C\*.

Gap Width	100%
Number of Column Series	2

Width of one column 0.33  
Width of gap 0.33

Placement of first point of first dot series 0.83  
Placement of first point of second dot series 1.17  
Placement of first point of third dot series 1.5

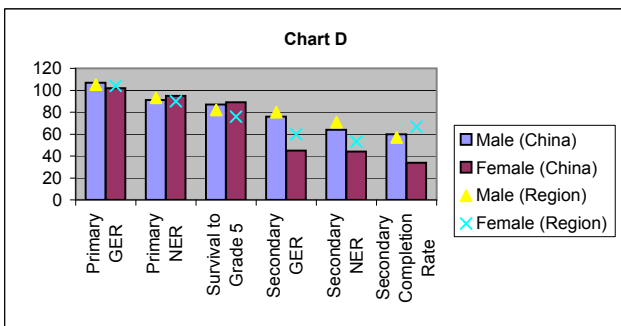
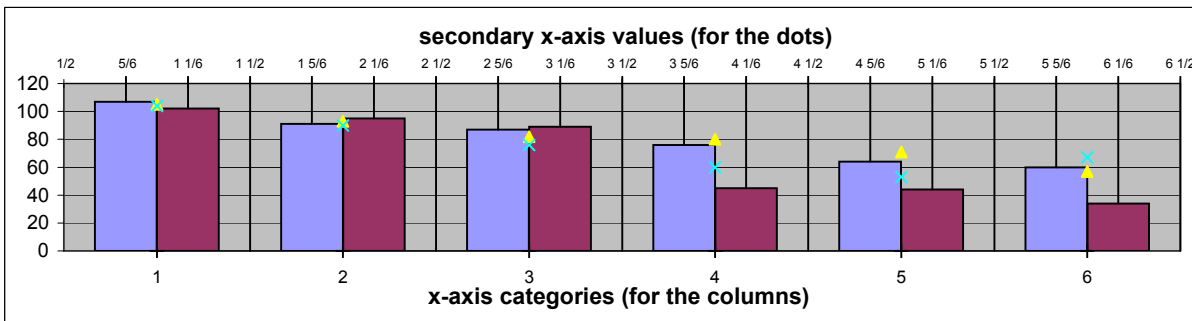
**2 column series**

series 1	series 2
0.83	1.17
1.83	2.17
2.83	3.17
3.83	4.17
4.83	5.17
5.83	6.17
6.83	7.17
7.83	8.17
8.83	9.17
9.83	10.17
10.83	11.17
11.83	12.17

**3 column series**

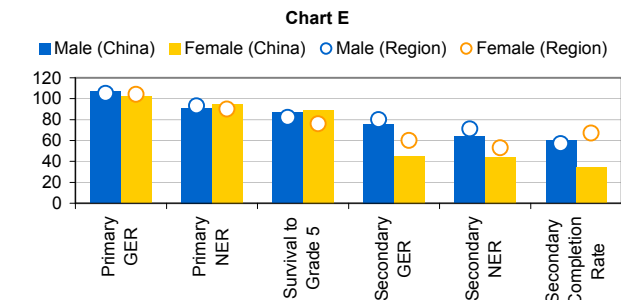
series 1	series 2	series 3
0.83	1.17	1.5
1.83	2.17	2.5
2.83	3.17	3.5
3.83	4.17	4.5
4.83	5.17	5.5
5.83	6.17	6.5
6.83	7.17	7.5
7.83	8.17	8.5
8.83	9.17	9.5
9.83	10.17	10.5
10.83	11.17	11.5
11.83	12.17	12.5

\* Even though the primary axis is a category axis with labels, not numbers, Excel still secretly associates numbers with each of those labels. Primary GER is 1, Primary NER is 2, etc. However, as far as Excel is concerned, "1" on the category axis is centered on the first group of columns, and "2" on the next group of columns. As you can see the chart below, this means that numbering-wise, the category axis starts at 0.5, not at 0. This means that the secondary x-axis needs to also go from 0.5 to 6.5. The rest of the math is just to figure out the placement of the dots, which in the case of 100% spacing and 2 columns, would be 5/6, 1 1/6, 1 5/6, 2 1/6 etc.



6. Right click on the chart and go to "Source Data." Select the "Male (Region)" series, and change the source for the x values to I86:I91. If your chart had more categories on the x axis, you would select more cells for the x values. Select the "Female (Region)" series and change the source for the x values to J86:J91. Click "OK." Your chart should look like Chart D, with the dot series aligned over the column series.

If you were constructing a chart with three column series and three dot series, you would fill in "3" in the appropriate blue cell in step 5, and use the x values in cells L86:N97.



7. Make any formatting changes that you want, and you're done.