

Izdelava starostne piramide z Excelom

V Excelu moramo vnesti tri stolpce podatkov:

- starostni razredi (na primer 0-4, 5-9,...)
- število moških v posameznem starostnem razredu
- število žensk v posameznem starostnem razredu

Za vnos starostnih razredov v zgoraj navedeni obliki pripravimo prvi stolpec tako, da ga označimo, s Format-Cells-Number izberemo Text ter s tem preprečimo, da bi vnešene razrede pretvoril v datume. Če vnašamo za vsako leto starosti novo vrstico, tega problema seveda ni in tega stolpca ni potrebno "pripravljati" za vnos.

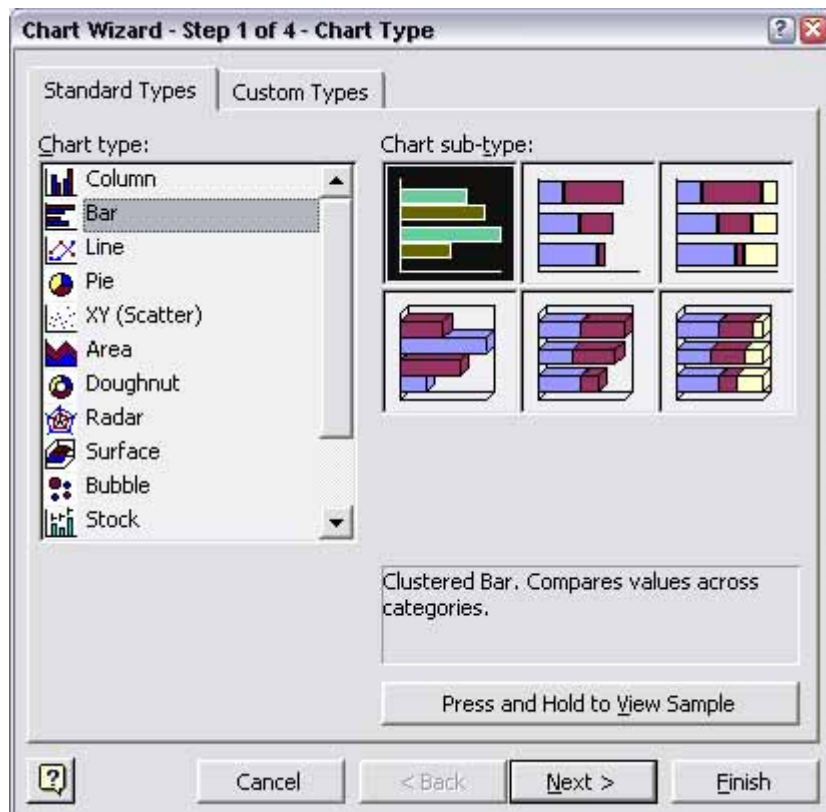
Vnesemo vrednosti za vse tri stolpce. Pri vnosu prvega stolpca začnemo z razredom najmlajših prebivalcev; stolpec z najstarejšimi prebivalci je najnižje. V drugem stolpcu vnesemo negativne vrednosti. Tretji stolpec vnesemo "normalno".

Po končanem vnašanju številk izračunamo vsoti v drugem in tretjem stolpcu ter tako preverimo, če smo se pri vnosu zmotili. V tabelah, iz katerih pretipkavamo podatke, so vsote praviloma že izračunane.

Izberemo celotno tabelo, razen izračunanih vsot pod drugim in tretjim stolpcem.

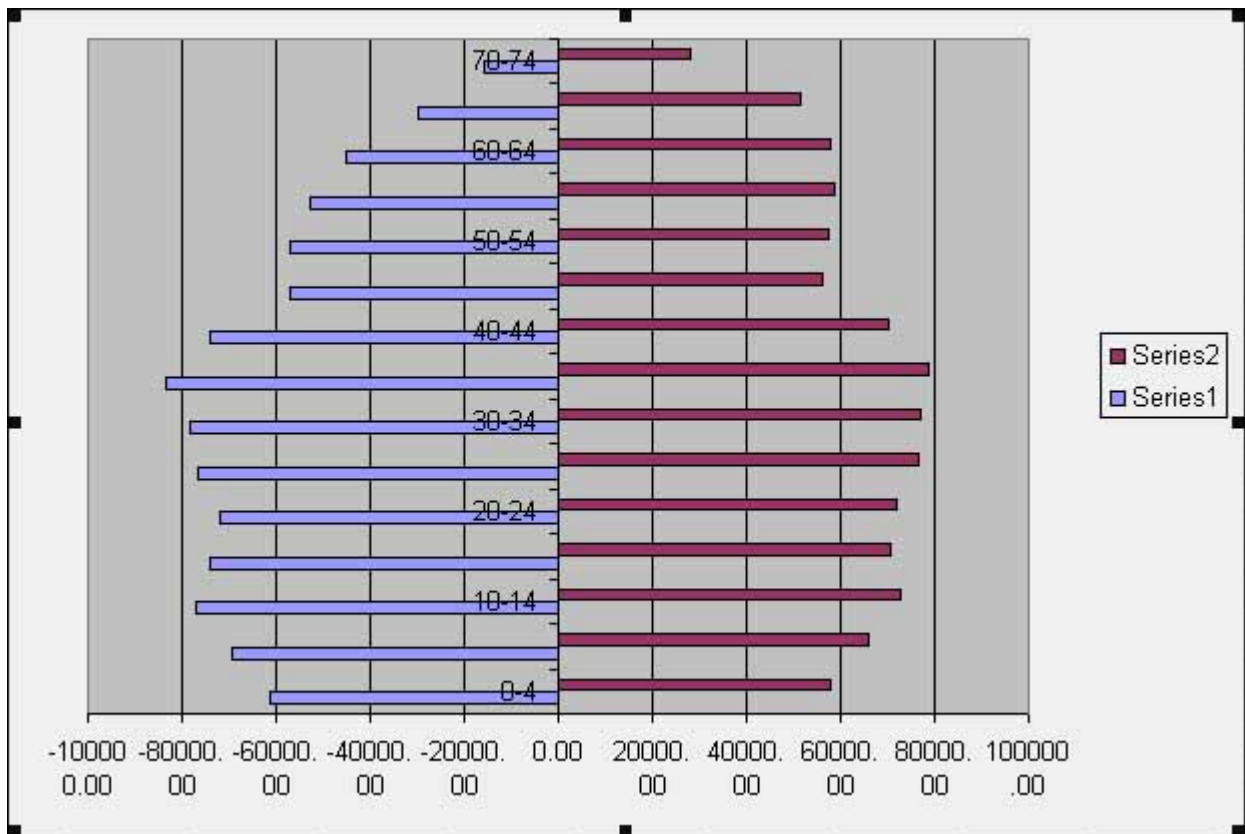
Pritisnemo gumb "Chart Wizard" ter izberemo Stacked Bar.

Od tukaj naprej grafikon oblikujemo po lastnem okusu. To pomeni, da bi zdaj lahko pritisnili "Finish".



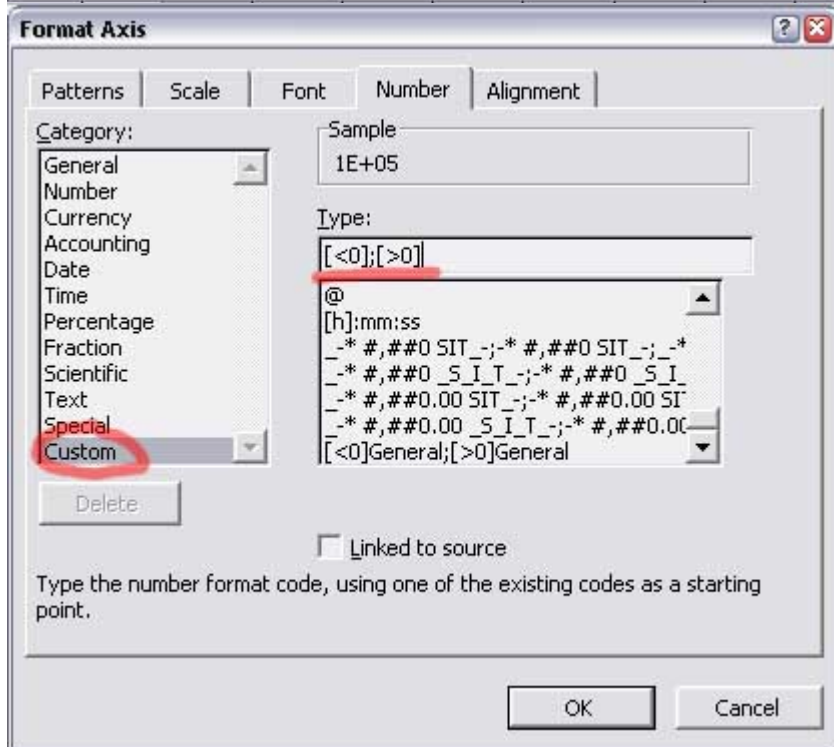
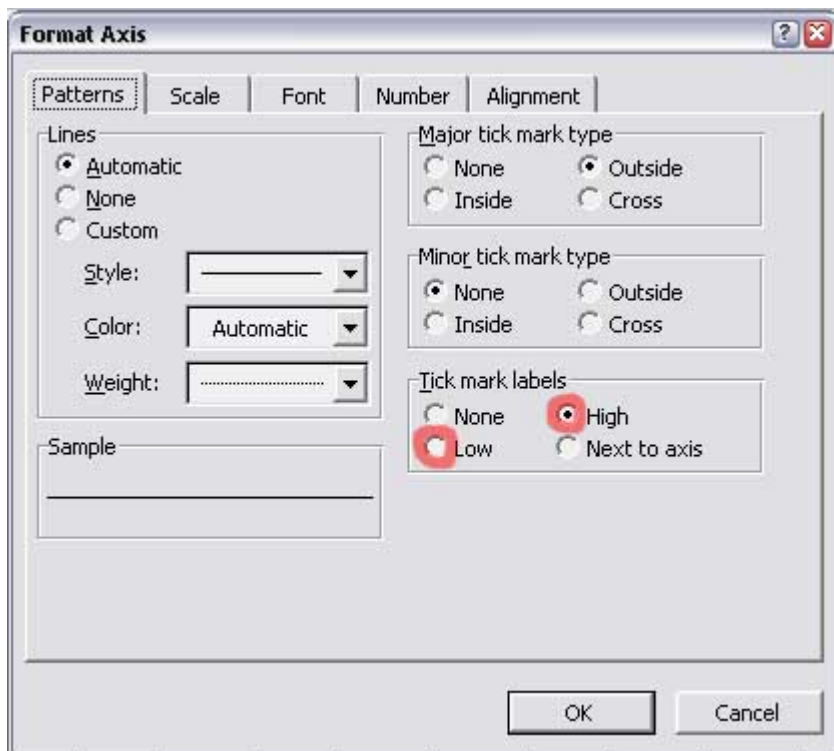
Nekaj popravkov je vendarle še potrebnih. Motita dve zadevi:

- vrednosti ob osi y so zapisane preko stolpcev,
- vrednosti ob osi x so za moške zapisane z negativnimi vrednostmi.

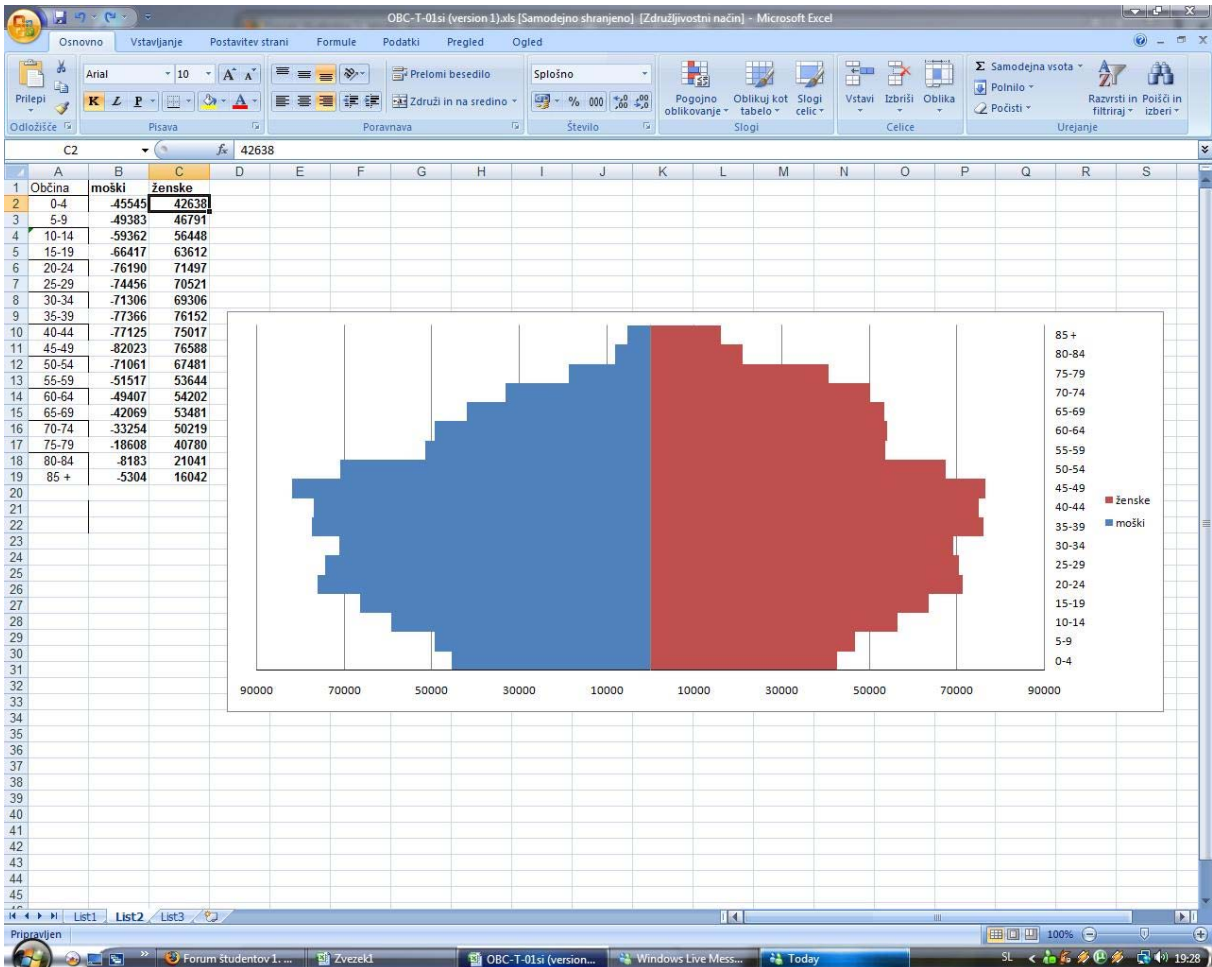
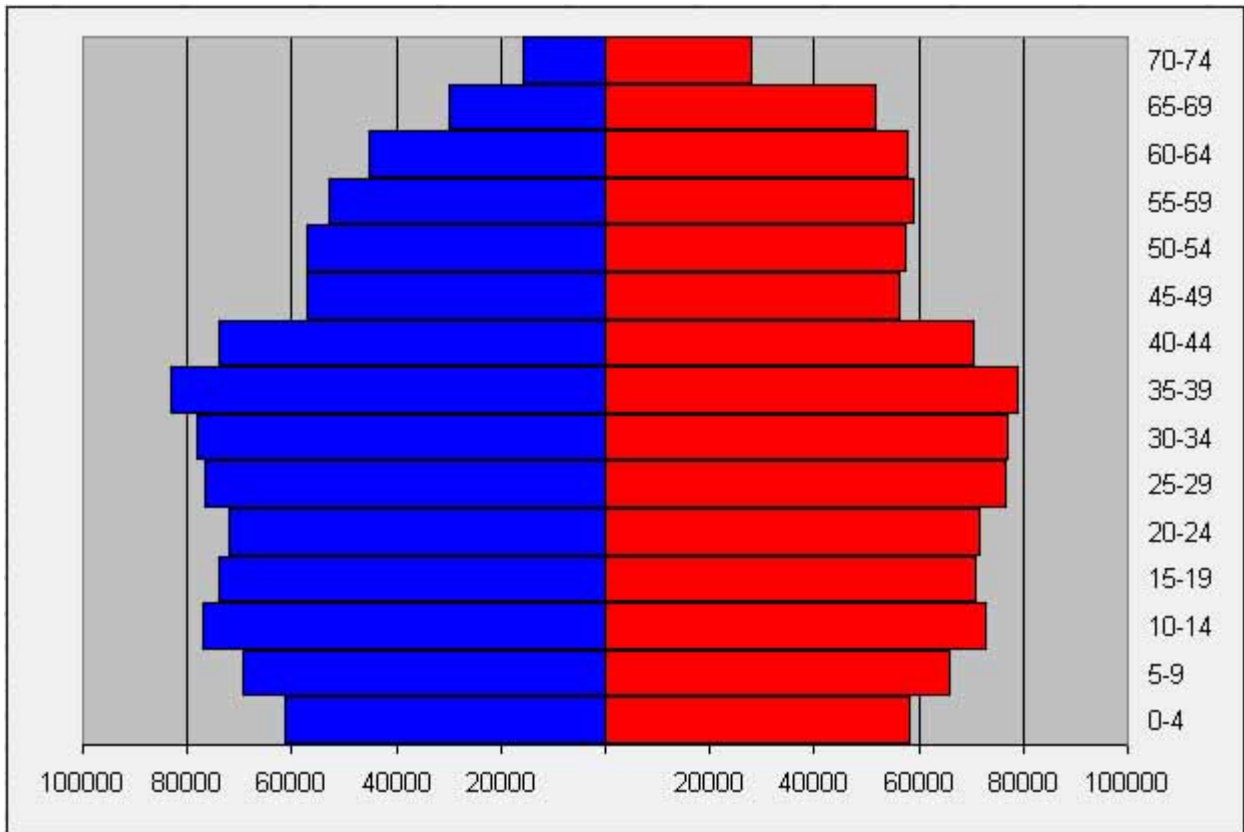


Nobene izmed navedenih težav ne moremo rešiti na način, ki je "standarden". Napise ob osi y lahko premaknemo le k levemu ali desnemu robu grafikona.

Prvi problem rešimo na naslednji način: dvakrat kliknemo na os y ter v "Tick mark labels" nastavimo "high" če želimo številke na desni strani ali "low" če jih želimo na levi strani. Negativne vrednosti spremenimo v pozitivne tako da izberemo x os (dvoklik) in v "Number" izberemo "Custom", v polje vpišemo "[<0];[> 0]".



V našem primeru so spremenjene še barve ter prekrivanje stolpcev (Overlap = 100) in razmak med stolpci (Gap width = 0) v "Options". Izbrisana je bila (nepotrebna) legenda in decimalne vrednosti x osi.



Klimogram pa:

Označimo, podatke, iz katerih želimo izdelati graf (oznake za mesce in mesečne podatke)

Izberemo ukaz Čarovnik za grafikone:

•Odpri se nam okno Vrsta grafikona:

–kliknemo zavihek

Vrste po meri

–izberemo

Črtnostolpčnina 2

osehin Naprej >

Naslednja dva koraka izpustimo

–kliknemo Naprej >:

Graf shranimo

Kot predmet v List1

Na klimogramumoramo urediti sledeče:

–izbrisati legendo

–dodati naslov in oznake podatkov

–izbrisati vrzeli med meseci

–spremeniti skalo (razmerje padavine/temp. = 5:1)

–urediti obliko podatkov (barve in debelino črt)

•Brisanje legende:–kliknemo na legendo in jo izberemo z ukazom Delete(na tipkovnici)

Dodajanje naslova in oznake podatkov

–z desnim gumbom na miški kliknemo na območje grafa. V oknu, ki se nam odpre izberemo:

Možnosti grafikona.

V oknu Možnosti grafikonaizberemo zavihek Naslovi:–v polje Naslov grafikona vnesemo

KlimogramLjubljana –Bežigrad;–v polje Os vrednosti (y):vnesemo padavine (mm)–v polje

Sekundarna Os vrednosti (y): vnesemo temperatura (°C)

Sledi izbris vrzeli med meseci:

–dvokliknemo na enega od stolpcev in odpre se nam okno Oblikuj nize podatkov, kjer v zavihku Možnostivnesemo vrednost 0za Prekrivanjein Širino vrzeli.

Sprememba skale za padavine...

–dvokliknemo na oznake za padavine, odpre se nam okno Oblikuj os, kjer v zavihku

Merilovnesemo spodaj naštete vrednosti:

•...in za temperature (razmerje 5:1):–dvokliknemo na oznake za temperature, odpre se nam okno Oblikuj os, kjer v zavihku Merilovnesemo spodaj naštete vrednosti:

Zaradi opravljenih sprememb moramo pomakniti oznake za mesece navzdol:

–dvokliknemo na oznake za mesece in v oknu Oblikuj osizberemo zavihek Vzorciiin pri možnosti Oznake črticizberemo Nizko.

Na koncu bom uredili obliko podatkov (barve in debelino črt ter barva ozadja):

–dvokliknemo na sivo ozadje grafa ter v oknu Oblikuj risalno površinov polju

Področjeizberemo možnost Brez.

Barve in debelino črt:

–dvokliknemo na enega od stolpcev ter v oknu Oblikuj nize podatkovizberemo zavihek

Vzorciv polju Področjeizberemo katerokoli modro barvo.

Barve in debelino črt:

–dvokliknemo na črto, ki predstavlja temperature ter v oknu

Oblikuj nize podatkovizberemo zavihek Vzorciv polju

Črtadoločimo debelino in barvo črte v polju Predstavitelj

pa izberemo opcijo

Brez.

(to je copy paste iz prosojnic iz naših vaj na geografiji, tko da bi mogla dobit prfektn klimogram)

How to construct a population pyramid in Excel 2003, 2007, and 2010

You may search Google for "Population Pyramids in Excel 2007" for instructions for Excel. For example this link might be useful: <http://www.docstoc.com/docs/7183430/How-to-Create-Population-Pyramids-using-Microsoft-Excel>

Go to the US Census Bureau's Site on International Demographic

Data: <http://www.census.gov/ipc/www/idb/informationGateway.php> and click on the Data tab, choose the International Data Base (IDB) link, choose a country, and click the Submit button below. Then, when the next screen comes up, click on the tan-colored "Population Pyramids" Tab. You should then see an example of what your population pyramid should look like. Below the Pyramid, click on the small "Excel" link, and then click on the OK to download the data into Excel. You should cut the Totals row and move it to the bottom of the spreadsheet, and you should cut the "Both Sexes Population" Column and move it to the right of the Male and Female columns. Format the spreadsheet so it looks similar to the China example below.

To practice, you may download the China example below [here](#) .

Age	Male (000s)	Female (000s)	Total (000s)	% male	%female
00-04	50,111	45,772			
05-09	54,199	49,416			
10-14	62,817	57,148			
15-19	51,386	47,673			
20-24	49,357	46,532			
25-29	61,095	57,719			
30-34	64,435	60,704			
35-39	52,752	50,054			
40-44	42,780	39,492			
45-49	43,199	40,832			
50-54	31,731	29,323			
55-59	23,851	21,973			
60-64	21,071	19,655			
65-69	17,488	17,146			
70-74	12,131	12,954			
75-79	7,055	8,845			
80-84	3,114	4,793			
85+	1,203	2,668			
Total	649,775	612,699			

In cell **D4** enter the formula **=B4+C4**.

Copy Cell **D4** down to the bottom of the column (cell **D21** in example above)

Put the active cell in cell **B22** above and click on the AutoSum and Enter. This will calculate the total population of males.

Copy this cell across to row **D** (**D22** in example above).

To calculate the percent males in cell **E4**, enter the formula **=100*B4/\$D\$22** (notice the direct cell reference to the total population cell with the use of the \$). Some of the demographic tables do not include ages 85 and older, so the total population cell reference may be different than the example above (for example **D21** instead of **D22**).

Copy the formula from cell **E4** down to the bottom of the column, **E22** in the example above. Format cells **E4** to **E22** to two decimal places by blocking that range and choosing **Format-->Cells, Number Tab, Number, 2-decimal places**.

To calculate the percent females in cell **F4**, enter the formula **=100*C4/\$D\$22**

Copy the formula from cell **F4** down to the bottom of the column, cell **F22** in example above.

Format Cells **F4** to **F22** to two decimal places by blocking that range and choosing **Format-->Cells, Number Tab, Number, 2-decimal places**.

If you have not done so already, Autosum the percent male and female columns in the cells **E22** and **F22** in the example above and below.

We must fool Excel by making the % male column negative, to make the population pyramid. Alter the formula in cell **E4** to be $= -1*100*B4/ \$D\22 and copy this formula down to cell **E21**

The spreadsheet should now look like:

Age	Male (000s)	Female (000s)	Total (000s)	% male	%female
00-04	50,111	45,772	95,883	-3.97	3.63
05-09	54,199	49,416	103,615	-4.29	3.91
10-14	62,817	57,148	119,965	-4.98	4.53
15-19	51,386	47,673	99,059	-4.07	3.78
20-24	49,357	46,532	95,889	-3.91	3.69
25-29	61,095	57,719	118,814	-4.84	4.57
30-34	64,435	60,704	125,139	-5.10	4.81
35-39	52,752	50,054	102,806	-4.18	3.96
40-44	42,780	39,492	82,272	-3.39	3.13
45-49	43,199	40,832	84,031	-3.42	3.23
50-54	31,731	29,323	61,054	-2.51	2.32
55-59	23,851	21,973	45,824	-1.89	1.74
60-64	21,071	19,655	40,726	-1.67	1.56
65-69	17,488	17,146	34,634	-1.39	1.36
70-74	12,131	12,954	25,085	-0.96	1.03
75-79	7,055	8,845	15,900	-0.56	0.70
80-84	3,114	4,793	7,907	-0.25	0.38
85+	1,203	2,668	3,871	-0.10	0.21
Total	649,775	612,699	1,262,474	51.47	48.53

To build the pyramid, we need to choose a horizontal bar chart with two series of data (% male, and % female) and the age labels in column A as the Category X-axis labels. Block out the range **A3** to **A21**, hold down the CTRL key and block out the range **E3:F21**

For Excel 2003 Click on the chart Wizard button, select the default of clustered **BAR** chart with horizontal bars. Click Next.

Click Next again. In the Titles tab enter the title: **Population Pyramid for China, 2000, Data Source: US Census Bureau**

Enter **Percent** for the **Y-Axis** label, click next, and choose as an object in this sheet. Press Finish. You should have a graph that has two series of data.

For Excel 2007 Choose the Insert Menu, Bar chart (2D Cluster Bar). You may need to drag the chart to the upper right to uncover the data on the sheet. Choose the Layout tab in the Chart Tools section of the tool bar, and choose Chart Title, Title Above Chart, and enter **Population Pyramid for China, 2000, Data Source: US Census Bureau**. You may need to lengthen the chart frame so the chart is not so compressed along the vertical axis. Choose Axis Titles, Primary Horizontal Axis Title, Title Below Axis, and enter **Percent** as the axis label. Choose Axis Titles again, Primary Vertical Axis Title, Horizontal Title, and enter **Age Class** as the axis label.

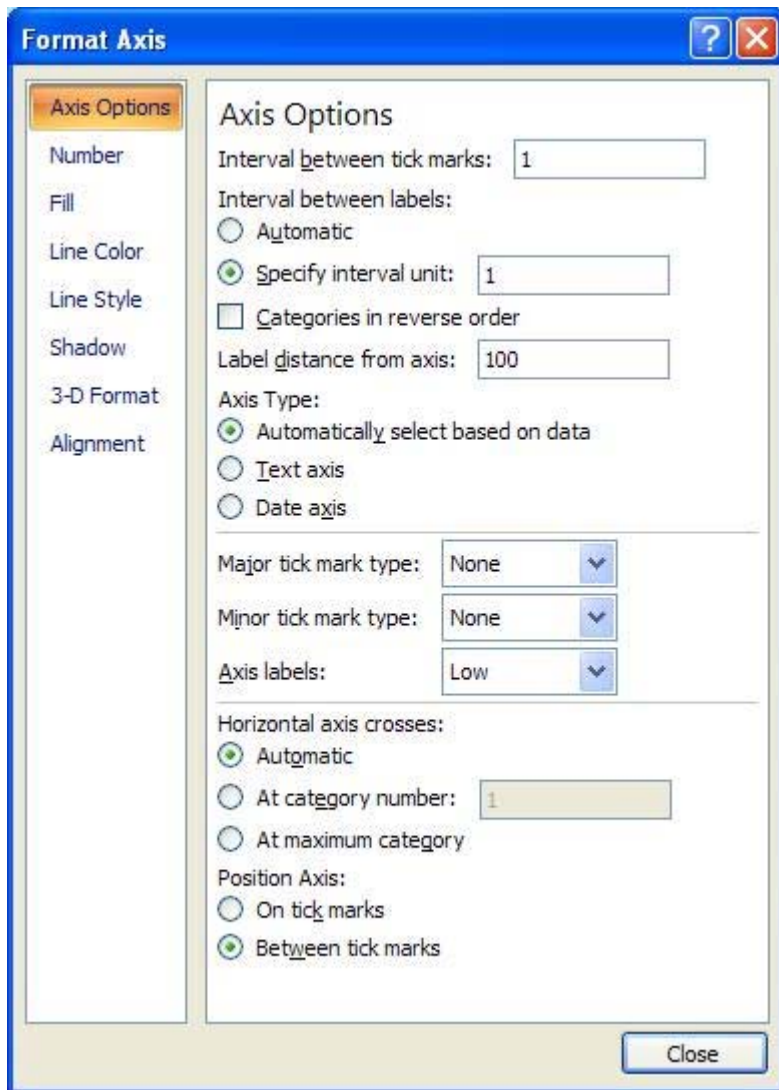
For Excel 2010 Choose the Insert Tab, Bar chart (2D Cluster Bar). You may need to drag the chart to the upper right to uncover the data on the sheet. Choose the Layout Tab in the Chart Tools section of the tool bar, and choose Chart Title, Title Above Chart, and enter **Population Pyramid for China, 2000, Data Source: US Census Bureau**. You may need to lengthen the chart frame so the chart is not so compressed along the vertical axis. Choose Axis Titles, Primary Horizontal Axis Title, Title Below Axis, and enter **Percent** as the axis label. Choose Axis Titles again, Primary Vertical Axis Title, Horizontal Title, and enter **Age Class** as the axis label.

To format the pyramid, grab a corner of the graph and expand it so you can see it clearly.

For Excel 2003 Put the tip of your mouse arrow on one of the bars on the left so it says "Category Axis" and double click. Choose **Patterns tab** and set the major and minor tick marks to **None** , tick mark labels to **Low**, and from the Scale tab set Number of Categories between tick mark labels to **1**, click **OK**.

For Excel 2007 Put the tip of the mouse arrow on one of the bars on the left over the age ranges (for example "30-34") so it says "Vertical (Category) Axis", right click, and choose "Format Axis". In the Axis Options choose the radio button "Specify interval unit:" 1, and Axis Label **Low** (see image below). This should move the age range labels out to the left side, then click on **Close**.

For Excel 2010 Put the tip of the mouse arrow on on of the bars on left over the age range label (for example "30-34") so it says "Vertical (Category) Axis", right click (or double click on Macs), and choose "Format Axis". In the Axis Options choose the radio button "Specify interval unit:" 1, and Axis Label **Low** (see image below). This should move the age range labels out to the left side, then click on **Close**.

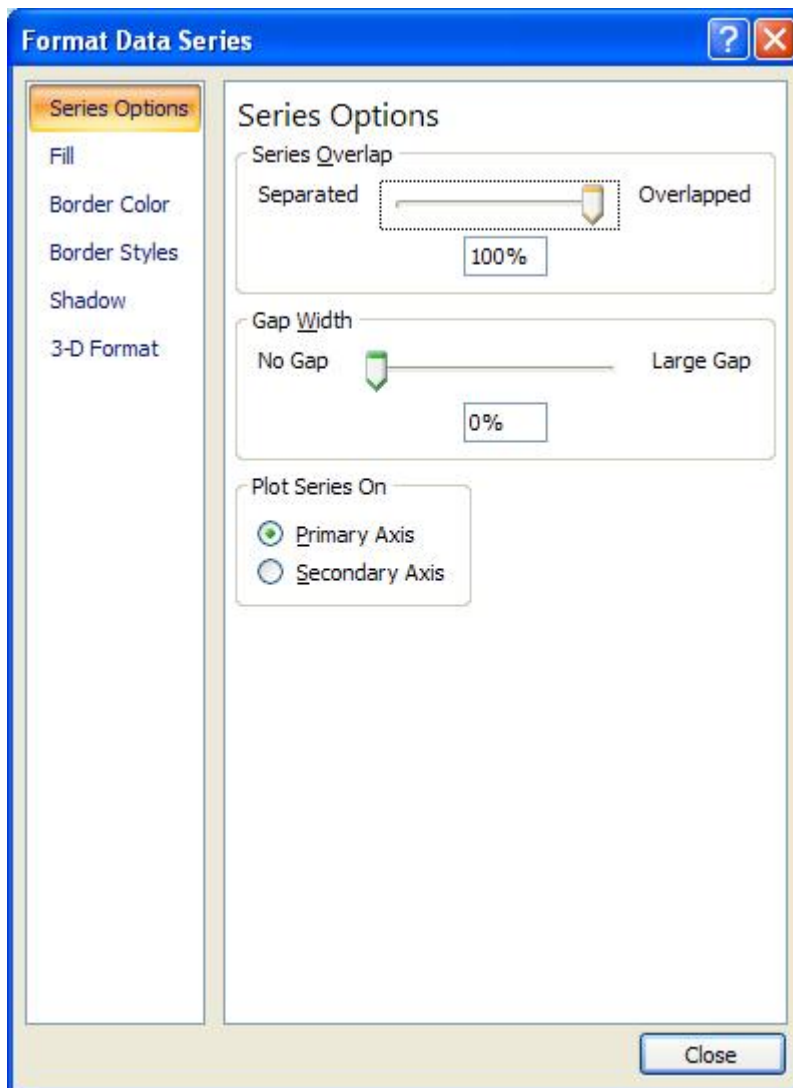


In Excel 2003 Double click on any of the bars in your pyramid, and in the Options Tab area set the **Overlap to 100** and **GapWidth to 0** . Click **OK**.

Double click the horizontal axis, in the **Number Tab** select **Custom** and for type enter **0;0** and click **OK**. Click on the scale tab and set the major unit to **2**, click **OK**.

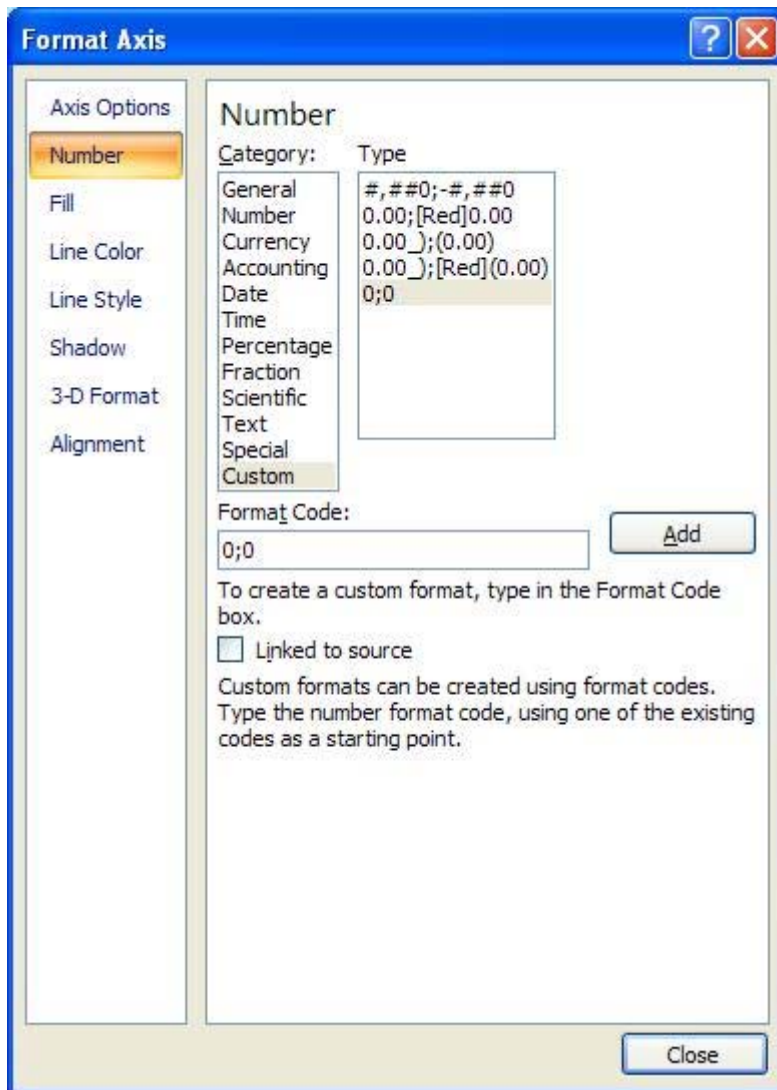
In Excel 2007 Right Click on any of the blue or red horizontal bars, and choose **Format Data Series** and set the overlap to 100% and the gap width to zero, click on **Close** (see image below):

In Excel 2010 Right Click (or double click for Macs) on any of the blue or red horizontal bars, and choose **Format Data Series** and set the overlap to 100% and the gap width to zero, click on **Close** (see image below):



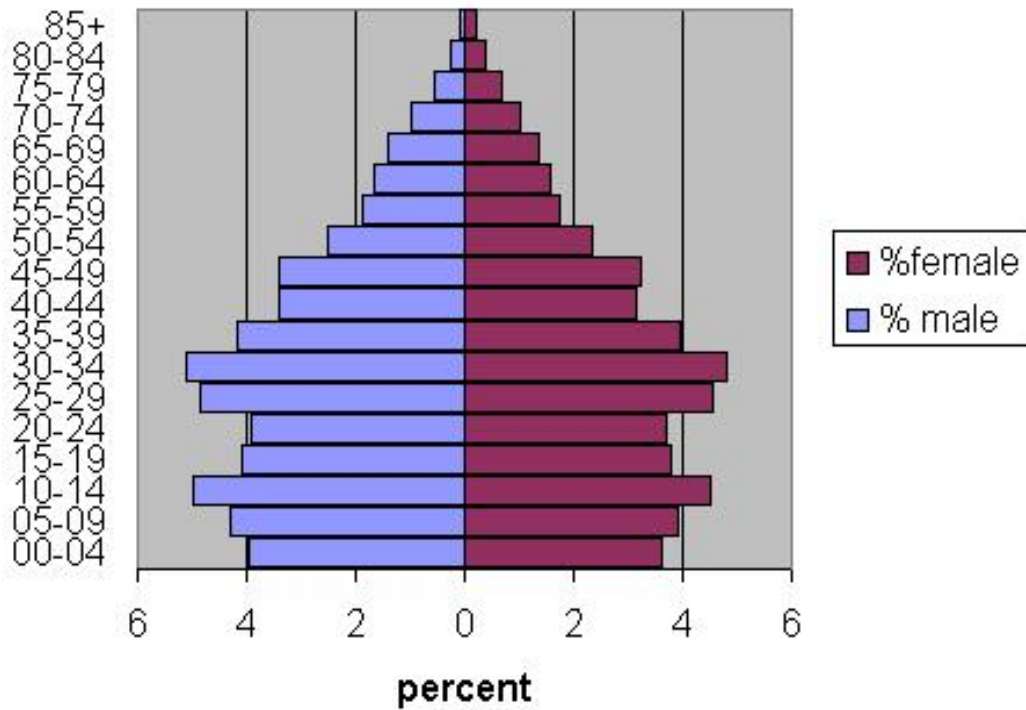
For Excel 2007 Right click on one of the percent numbers in the horizontal axis, and choose **Format Axis**. Click on **Number** in the left navigation bar, and type in **0;0** in the **Format Code:** box and click **Add** and then **Close** (see image below):

For Excel 2010 Right click (double click) on one of the percent numbers in the horizontal axis, and choose **Format Axis**. Click on **Number** in the left navigation bar, and type in **0;0** in the **Format Code:** box and click **Add** and then **Close** (see image below):

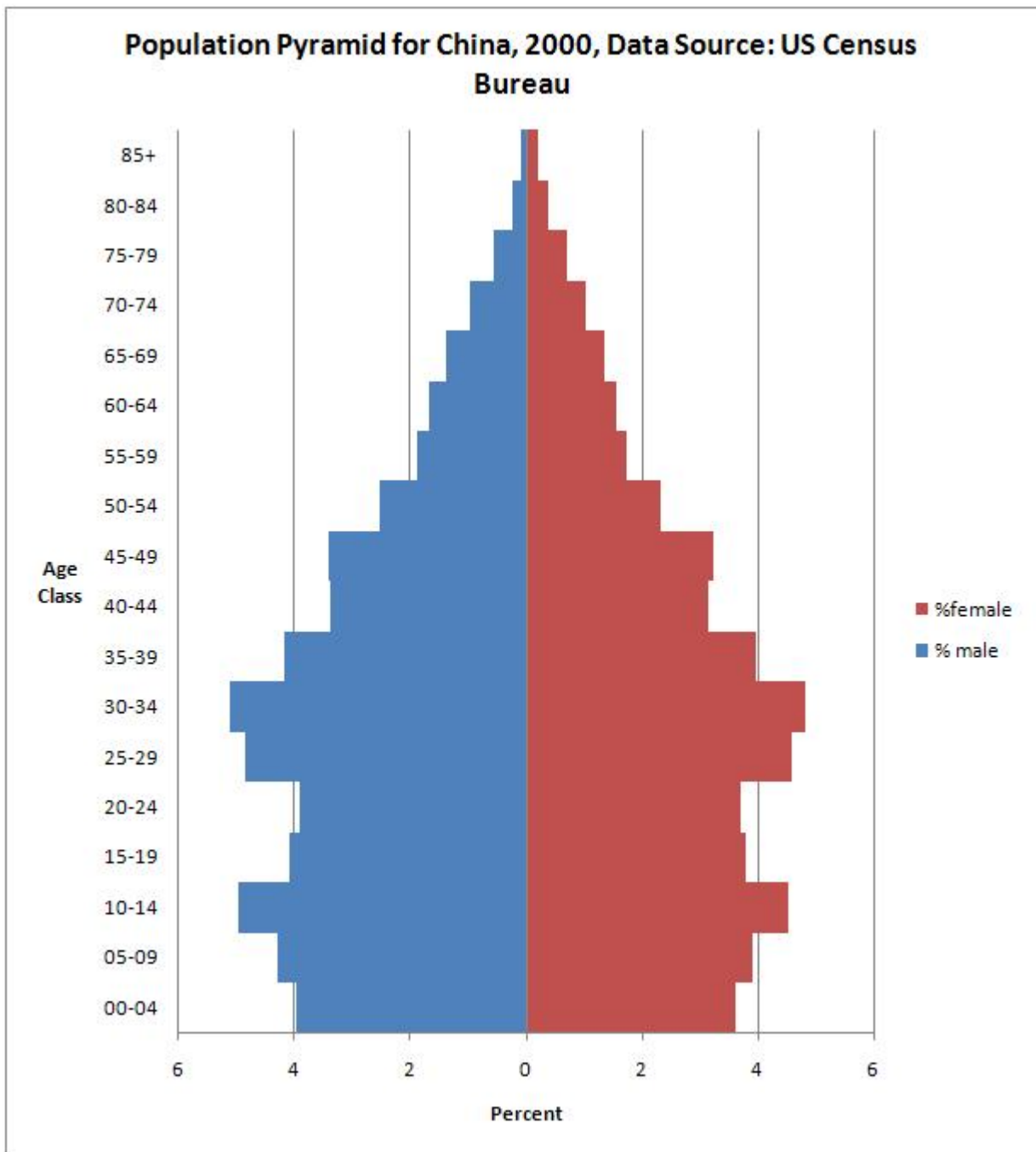


In Excel 2003 Your pyramid should look something close to:

Population Pyramid for China 2000 Data Source: U.S. Census Bureau

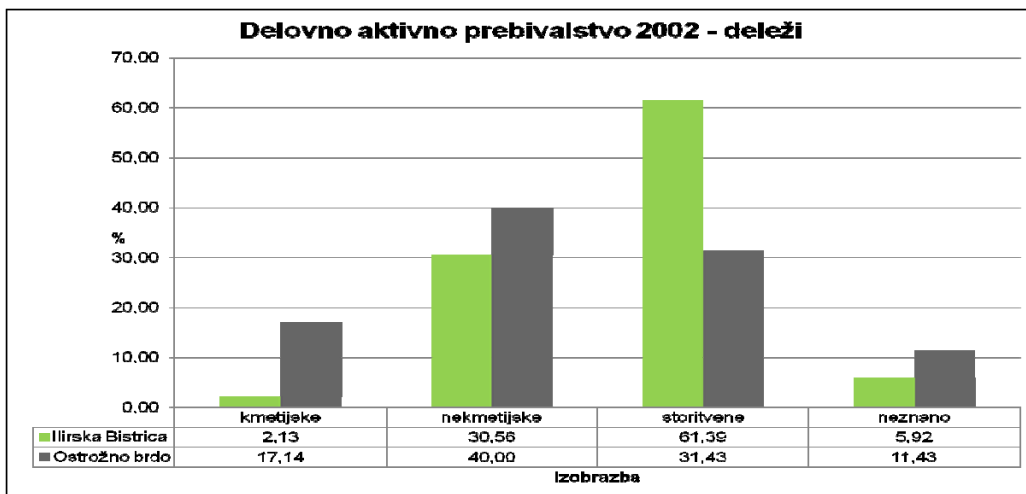
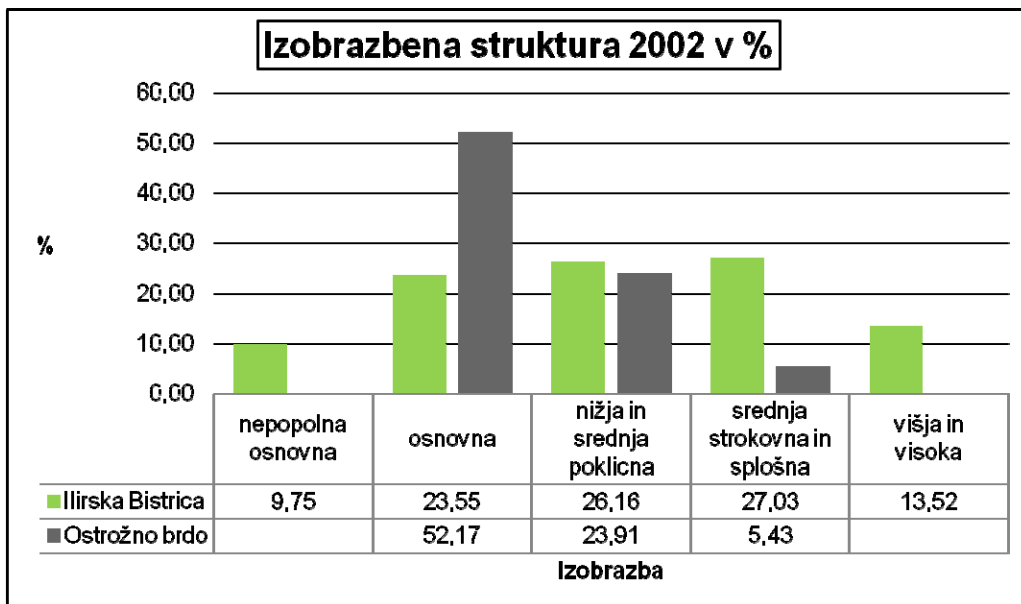


In Excel 2007 and 2010 your pyramid should look something like:



You should notice the percentage of males and females within each age class is not equal. Why might that be? Also why are there two bulges in the pyramid around 10-14 and 30-34 age groups? You should interpret your own population pyramid addressing these types of questions. Assuming reproductive trends remain the same, will the population be growing in the future? Are there any baby booms or echos of baby booms? Are the sex ratios equal? If not, why not?

Primer diagramov, ki prikazujejo zaposlitveno in izobrazbeno strukturo, izdelanih s programom MS Excel



Primer starostne piramide, izdelane s programom MS Excel

Ilirska Bistrica 1971	Moški	Ženske
0-4	-172	157
5-9	-142	172
4-10	-160	157
15-19	-196	179
20-24	-202	202
25-29	-130	135
30-34	-175	182
35-39	-167	150
40-44	-105	158
45-49	-140	154
50-54	-77	85
55-59	-110	120
60-64	-101	98
65-69	-74	86
70-74	-41	79
75+	-21	58

