4. Population

In the following exercise you have to work with demographic data. The term demographic data means the number of males and females as well as live births and deaths. The table contains the data related to the change of the Hungarian population from 1950 to 2004.

The data for the given period are located in file `nepesseg.txt` tagged by tabs.

Import the data into the spreadsheet processor and save your work as `nepvaltozas` in the default format of the spreadsheet processor.

During the solution take the followings into consideration.

- *Whenever possible, use a formula or function in the solution.*
- *There are parts in the exercise that use the results from a previous question. If you could not solve the previous part completely, use its solution as it is, or instead of a formula resulting in a number use "**100 000**" and work on with this value.*
- *If required, you can perform auxiliary calculations to the right of column N.*

1. Insert a column before column "Live births". Type text "Total population" into the first cell of the column and calculate the population in the following cells.
2. After column "Deaths" (column *G*), type in text "Natural increase, decrease". In cells *G2:G56* calculate the difference of the number of live births and deaths.
3. Type in texts "Live births per one thousand capita" and "Deaths per one thousand capita" into cells *H1* and *I1*, respectively. Determine the number of live births per one thousand capita in cells *H2:H56.* Similarly, determine the number of deaths per one thousand capita in cells *I2:I56*. For each calculation, round the obtained values to two decimal figures using a function.
4. In cells *K2:K56*, calculate the percentage of males compared to the whole population. In cells *L2:L56*, calculate the percentage of females compared to the whole population. Display the calculated values in percentage format with two decimal figures.
5. Create the following auxiliary table in range *B59:G64*. Type the texts displayed in the example into cells *B59*, *B60*, *B61*, *B63* and *B64* and merge the cells in each row from column *B* to *F*. Align the texts to the left.

Number of years when population decreased:	
Population decrease was the greatest in this year:	
Smallest difference between the number of males and females:	
Your year of birth:	
Number of live births in this year:	

6. In cell *G59*, give the number of years when population decreased based on the annual data using a function. (The population decreases if the number of deaths is greater than the number of live births.)
7. Determine the year when natural decrease was the greatest using a function. Display the obtained year in cell *G60*.
8. In cell *G61*, calculate the smallest difference between the number of females and males in the investigated years.

9. In cell *G64*, give the number of live births in the year given in cell *G63* using a function. If the number entered into cell *G63* is not between 1950 and 2004 then display text "No data" in cell *G64*.

10. Format the table according to the example. While setting the borders, use double line at the bottom of the first row and use a thick vertical line between columns *G* and *H*. Set thousands separation for the numbers. The calculated fields should be in italics and green.

	A	B	C	D	E	F	G	H	I	J	K	L
1	Year	Population (male)	Population (Female)	Total population	Live births	Deaths	Natural increase, decrease	Live births per one thousand capita	Deaths per one thousand capita		Male %	Female %
2	*1950*	4 470 291	4 822 223	*9 292 514*	195 567	106 902	*88 665*	*21,05*	*11,5*		*48,11%*	*51,89%*
3	*1951*	4 517 829	4 865 195	*9 383 024*	190 645	109 998	*80 647*	*20,32*	*11,72*		*48,15%*	*51,85%*
4	*1952*	4 557 733	4 905 154	*9 462 887*	185 820	107 443	*78 377*	*19,64*	*11,35*		*48,16%*	*51,84%*
5	*1953*	4 601 091	4 944 116	*9 545 207*	206 926	112 039	*94 887*	*21,68*	*11,74*		*48,20%*	*51,80%*
6	*1954*	4 654 979	4 990 089	*9 645 068*	223 347	106 670	*116 677*	*23,16*	*11,06*		*48,26%*	*51,74%*
7	*1955*	4 721 011	5 045 589	*9 766 600*	210 430	97 848	*112 582*	*21,55*	*10,02*		*48,34%*	*51,66%*
8	*1956*	4 783 475	5 099 735	*9 883 210*	192 810	104 236	*88 574*	*19,51*	*10,55*		*48,40%*	*51,60%*
9	*1957*	4 733 516	5 095 062	*9 828 578*	167 202	103 645	*63 557*	*17,01*				
10	*1958*	4 743 045	5 107 113	*9 850 158*	158 428	97 866	*60 562*	*16,08*				
11	*1959*	4 778 418	5 134 611	*9 913 029*	151 194	103 880	*47 314*	*15,25*				
12	*1960*	4 804 043	5 157 001	*9 961 044*	146 461	101 525	*44 936*	*14,7*				
13	*1961*	4 828 164	5 177 816	*10 005 980*	140 365	96 410						
14	*1962*	4 851 471	5 198 464	*10 049 935*	130 053	108						
15	*1963*	4 863 372	5 208 343	*10 071 715*	132 335							
16	*1964*	4 880 359	5 223 820	*10 104 179*	132 141							
17	*1965*	4 896 837	5 238 653	*10 135 490*	133							
18	*1966*	4 909 957	5 250 423									
19	*1967*	4 929 411	5 267									
20	*1968*	4 949 843										
21	*1969*											
22												
23												

11. Create a column chart that displays the number of live births and deaths in the last ten years. The chart should not have a background colour. Display the number of deaths in black and the number of live births in red. The title of the chart should be "Deaths and births 1995-2004". The chart should include a legend.

30 marks