### **TI-83 Plus and TI-84 Plus Families**

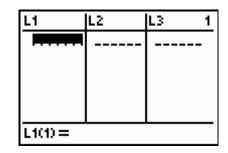
Creating Lists of Data, Using the List Editor to find Percent Change and People per Square Kilometer

#### Creating Lists of Data

- To enter the data from the Snapshot in the activity, press STAT and select 1:Edit to access the List Editor window. Be sure to clear any existing data in the lists by highlighting the list name and pressing
   CLEAR ENTER. If you see a list other than L1 through L6, press \$ 5:SetUpEditor
   ENTER and then follow the above instructions. This will reset the default lists of L1, L2, L3, L4, L5, and L6 in the List Editor.
- 2. Move the cursor to the first data position in L1. Enter data from the table that represent the population for each country in millions for 2002. Move the cursor to the first data position in L2 and enter the corresponding population for 2050.

Using the List Editor

3. Move the cursor to the list heading in L3.



L1	L2	L3 3
1300 1000 288 231 180 131	1400 1600 420 336 228 307	
L3(1)=		

L1	L2	<b>16</b> 3 3
1300 1000 288 231 180 131	1400 1600 336 328 307	
L3 =		

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 To calculate the change in the population from 2002 to 2050 enter [2nd [L2]-[2nd [L1] and press ENTER].

L1	L2	<b>16</b> 3 3
1300 1000 288 231 180 131	1400 1600 336 328 307	
L3 =L2−L1∎		

L1	L2	L3 3
1300 1000 288 231 180 131	1400 1600 420 336 228 307	F00 600 132 105 48 176
L3(1)=100		

5. Next, you will calculate the projected percent change in population for each country. Move the cursor to the list heading in L4 and enter the following formula:
2nd[L3]÷[L1] × 100.

L2	L3	<b>E</b> 1
1400 1600 420 336 228 307	100 6002 1355 148 176	
L4 =L3/L1*100		

6. Press ENTER.

L2	L3	L4 4
1400 1600	100 600	<b>26523</b> 60
420	132	45.833
336 228	105 48	45.455 26.667
307	176	134.35
L4(D=7.692307692		

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7. Enter the land area in L5 in millions for each country in 2002.

L4	L5	L6 7
7.6923 60 45.833 45.455 26.667 134.35	9.5976 3.2876 9.6319 1.9192 9.2377 8.512 92377	
L5(7) =		

 Move the cursor to the list heading in L6 and enter the following formula: [2nd[L1]] ÷ [L5].

L4	L5	बन ह
7.6923 60 45.833 45.455 26.667 134.35	9.597 3.2876 9.63194 1.9192 9.2377	
L6 =L1/L5∎		

9. Press ENTER. The values in L6 represent people per square kilometer for each country.

L4	L5	L6 8
7.6923 60 45.833 45.455 26.667 134.35	9.597 3.2876 9.63194 1.9194 8.512 .92377	<b>1639(17</b> 304.17 29.902 120.35 21.147 141.81
Lett)=135.4595621		

### Creating List Name

10. We have used all the default lists, L1 through L6, so now we need to create new lists and names. Display the Name= prompt by pressing ▲ until the cursor is on the top line, and then press ▶ until you reach the unnamed column. The Name= prompt is displayed and alpha-lock is on.

L5	LG	ii
9.597 3.2876 9.6314 1.9194 8.512 .92377	135.46 304.17 29.902 120.35 21.147 141.81	
Name=		

#### **TI-83 Plus and TI-84 Plus Families**

11. Enter P2050 for the list name by pressing
ALPHAP2050. This list will represent the projected population for each country in 2050. Press ENTER or →to store the list name in the current column. List names can be one to five characters long and the first character cannot be a number.

L5	LG	22030 7
9.597 3.2876 9.6314 1.9194 8.512 .92377	135.46 304.17 29.902 120.35 21.147 141.81	
P2050 =		

12. Now to calculate the people per square kilometer move the cursor to the top of P2050. The population for 2050 is stored in L2 and the land area is in L6. Enter L2/L5 and press ENTER.

L5	L6	22030 7
9.597 3.2876 9.6314 1.9194 8.512 .92377	135.46 304.17 29.902 120.35 21.147 141.81	
P2050 =L2∕L5		

13. The values in the list P2050 represent the projected people per square km in 2050.

L5	L6	P2050 7
9.597 3.2876 9.6314 1.9194 8.512 .92377	135.46 304.17 29.902 120.35 21.147 141.81	486.68 486.68 43.607 175.05 26.786 332.33
P2050(1)=145.87952		