

Calculated and Named Lists

Concepts

- Creating calculated lists that are automatically updated as values in another list change
- Saving data into lists with appropriate names

Overview

This activity shows how to (1) define lists that automatically update the values in the list (like a spreadsheet) and (2) give lists meaningful names.

Materials

- TI-84 Plus

Introduction

The sample data in this activity was collected in the °C to °F activity. Alternate data sets may be used.

Calculated Lists

1. Use the **[STAT]** editor to enter the following data into lists L1, L2, and L3 OR use your data from the °C to °F activity (Figure 1).

L1 (Time, sec)	L2 (Temp, °F)	L2 (Temp, °C)
0	34.4	1.8485
10	53.825	11.846
20	65.771	19.881
30	69.886	21.738
40	75.786	24.023
50	78.473	25.318
60	80.349	26.14

2. Press **[STAT]** **[ENTER]** to enter the Stat Editor.
3. Press **[↑]** and **[→]** to scroll to list L4 (Figure 2).
4. Press **[ALPHA]** **["]** **[1]** **[.]** **[8]** **[×]** **[2nd]** **[L3]** **[+]** **[3]** **[2]** (see bottom field of Figure 3).
5. Press **[ENTER]**.

L1	L2	L3	1
0	34.4	1.8485	
10	53.825	11.846	
20	65.771	19.881	
30	69.886	21.738	
40	75.786	24.023	
50	78.473	25.318	
60	80.349	26.14	

L1()=0

Figure 1

L2	L3	4
34.4	1.8485	-----
53.825	11.846	
65.771	19.881	
69.886	21.738	
75.786	24.023	
78.473	25.318	
80.349	26.14	

L4 =

Figure 2

L2	L3	4
34.4	1.8485	-----
53.825	11.846	
65.771	19.881	
69.886	21.738	
75.786	24.023	
78.473	25.318	
80.349	26.14	



L4 = "1.8*L3+32

Figure 3

- Compare the calculated values for °F in L4 to the experimental values in L2. The leading " symbol makes this a calculated list (Figure 4).

- If you change or add a value to L3, notice that list L4 will be automatically updated (Figure 5).

Named Lists

- Use the  arrow to move to the top line of the Stat Editor. Use the  arrow to move to the first "blank" area (Figure 6).
- Enter a name (up to 8 characters) for the list, e.g. DEGF (for Degrees Fahrenheit) (Figure 7).
- Press **[ENTER]**.
- Next copy list L2 into DEGF by typing **[2nd] [L2] [ENTER]** (Figure 8).

- Repeat these steps to put the data in L3 into named list DEGC (for Degrees Celsius) (Figure 9).

Note: Data in named lists will not be overwritten by *EasyData™* (or *DataMate*) and will remain on the calculator until manually deleted (using **[2nd] [MEM]**). You can access named lists using **[2nd] [LIST]**.

L2	L3	L4	# 4
34.4	1.8485	34.4	
53.825	11.846	53.825	
65.771	19.881	65.771	
69.886	21.738	69.886	
75.786	24.023	75.786	
78.473	25.318	78.473	
80.349	26.14	80.349	
L4(1)=35.3273			

Figure 4

L2	L3	L4	# 3
65.771	19.881	67.786	
69.886	21.738	71.128	
75.786	24.023	75.241	
78.473	25.318	77.572	
80.349	26.14	79.052	
-----	0	32	
L3(9) =			

Figure 5

L5	L6	DEGF	#
0	0		
-----	-----		
Name=			

Figure 6

L5	L6	DEGF	?
0	0		
-----	-----		
DEGF =			

Figure 7

L5	L6	DEGF	?
0	0	34.4	
-----	-----	53.825	
		65.771	
		69.886	
		75.786	
		78.473	
		80.349	
DEGF(1) = 34.4			

Figure 8

L6	DEGF	DEGC	#
0	34.4	1.8485	
-----	53.825	11.846	
	65.771	19.881	
	69.886	21.738	
	75.786	24.023	
	78.473	25.318	
	80.349	26.14	
DEGC(1) = 1.84848			

Figure 9