

Appendix C

Using Formulas in Lists

1. To use a formula in a list:
 - a. Highlight the name of the list you want to assign the formula to. You must be at the very top of the column or you will get an **ERR:DATA TYPE** message.

L1	L2	L3	3
1	1	-----	
1	1		
1	1		
1	1		
1	1		
13	13		
13	21		
L3 =			

Correct Cursor Position

L1	L2	L3	3
1	1	-----	
1	1		
1	1		
1	1		
1	1		
13	13		
13	21		
L3(1) =			

Incorrect Cursor Position

- b. Use any operations or calculator functions with real numbers and previously defined lists. If $L3=L2/L1$, for example, press 2nd [STAT] and retrieve L2 by pressing 2 [] , then 2nd [STAT] 1 [ENTER].

Note: If you select a named list by pressing [] or [] to move up or down, you will have to press [ENTER] twice.

L1	L2	L3	3
1	1	-----	
1	1		
1	1		
1	1		
1	1		
13	13		
13	21		
L3 = L2 / L1			

L1	L2	L3	3
1	1	-----	
1	1	2	
1	1	1.5	
1	1	1.6667	
1	1	1.6	
13	13	1.625	
13	21	1.6154	
L3(1) = 1			

2. You can use a formula like a formula in a spreadsheet by inserting the formula in quotation marks.

- ◆ When you enter new numbers in the independent list, the dependent list with the formula assigned to it does the calculation. In the screen at the right, **HEIGH** is independent, whereas **NAVAL** is dependent.
- ◆ Another difference you will notice when you enclose formulas in quotes is that when you go back to the top of the list, the formula will appear in the **Name** field instead of the data in set notation.

HEIGH	NAVAL#	-----	7
70	43.263		
60	37.083		
59	36.465		
63	38.937		
61	37.701		
58	35.847		
-----	-----		
HEIGH(9) =		68	

HEIGH	NAVAL#	-----	8
65	40.173		
62	38.319		
70	43.263		
60	37.083		
59	36.465		
63	38.937		
61	37.701		
NAVAL = "LHEIGH/1.6			

Formula with quotes

L1	L2	---	3
1	1	1	
1	2	2	
2	3	1.5	
3	5	1.6667	
5	8	1.6	
8	13	1.625	
13	21	1.6154	
L3 = (L1, L2, 1.5, 1.6...			

Formula without quotes

A very common error that occurs when using formulas is the **DIM MISMATCH** error, which means the lists being used in the formula do not have the same number of elements.

1. To correct this problem, go to the List editor, press **[CLEAR]**, and scroll down the lists used in the formula.
2. Either add or delete elements to make the lists contain the same number of elements.

L1	L2	---	3
1	2		
1	3	-----	
2	5		
3	8		
5	13		
8	21		
13	-----		
L3 = L2 / L1			

ERR: DIM MISMATCH			
1: Quit			
2: Goto			

L1	L2	L3	2
1	3		
2	5		
3	8		
5	13		
8	21		
13	-----		
21			
L2(5) =		13	