

Appendix 0: Writing A Program

Writing programs for the TI-83 can be both functional and fun. Take the very simple example of Z-Scores. We can write a program for the TI-83 to calculate Z-Scores for us. This is a simple example for a simple formula.

$$z = \frac{x - \bar{x}}{s}$$

$$z = \frac{110 - 100}{15}$$

$$z = \frac{10}{15} = \frac{2}{3} \approx 0.667$$

Begin: Select the program key PRGM then select NEW

EXEC EDIT NEW

1: Create New

PROGRAM

Name= <--- type **ZSCORE** for the name of your program

PROGRAM:ZSCORE

:ClrHome ← PRGM, >, I/O, 8:ClrHome

:Disp "ENTER X" ← PRGM, I/O, 3:Disp

:Input X ← PRGM, I/O, 1:Input

:Disp "ENTER MEAN"

:Input M

:Disp "ENTER STD DEV"

:Input S

:(X-M)/S|| Z

:ClrHome

:Disp "Z =" ←

:Disp Z

:

the equals symbol " = " is found:
2nd
TEST (MATH)
1: =

Note: This symbol || is the store key. It is located just to the left of the number 1. It means, store the result of the calculation in one of the 26 memory registers (A - Z). In the line

:(X-M)/S|| Z

we subtract the mean **M** from the value **X** and divide that by **S**. The result gets stored in register **Z**.

NOTE: Now that you've written a program for a Z-Score, try writing a program for the Range and Midrange (the idea is similar). Remember: Input, Calculate, Output.