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.

\[
z = \frac{x - \mu}{\sigma}
\]

\[
z = \frac{110 - 100}{15} = \frac{10}{15} = \frac{2}{3} \approx 0.667
\]

Begin: Select the program key PRGM then select NEW

EXEC EDIT NEW
1: Create New
PROGRAM
Name=ZSCORE

BEGIN
:
ClrHome
:Disp "ENTER X"
:Input X
:Disp "ENTER MEAN"
:Input M
:Disp "ENTER STD DEV"
:Input S
:(X-M)/S \rightarrow Z
:ClrHome
:Disp "Z ="
:Disp Z
:

Note: This symbol \( \rightarrow \) 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

\[:(X-M)/S \rightarrow Z\]

we subtract the mean \( \mu \) 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.