Appendix 2: Program Sample Size $n$ for a Confidence Interval for a Mean

The following program can be used to calculate the necessary sample size for a confidence interval for a mean. This is a program for the following formula:

$$n = \left( \frac{Z^2 \cdot s^2}{E^2} \right) \text{ rounding up when finished}$$

**PROGRAM:NMEAN**

:ClrHome
:Disp "INTERVAL .95 ETC"
:Input C
:Disp "ENTER $s x$"
:Output(3,8," ")
:Input S
:Disp "ENTER ERROR"
:Input E
:((1-C)/2) → A
:invNorm(A) → Z
:(Z*S/E)^2 → M
:int(M+.9999999999) → N
:ClrHome
:Output(1,1,"CI")
:Output(1,5,C)
:Output(2,1,"$s x$")
:Output(2,2," ")
:Output(2,5,S)
:Output(3,1,"E")
:Output(3,5,E)
:Output(5,1,"N")
:Output(5,5,N)

Note: The symbol $s x$ can be found by pressing the [VARS] key, then 5:Statistics..., then 4: $s x$