How do you find the sample variance on a TI-84 calculator?

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The process of finding the sample variance on a TI-84 calculator involves entering the data values into a list, using the calculator's built-in statistical functions to calculate the mean and sum of squares, and finally dividing the sum of squares by the number of data values minus one to obtain the sample variance. This feature on the TI-84 calculator is useful for quickly and accurately determining the variability of a set of data, making it a valuable tool for statistical analysis.

Find Sample Variance on a TI-84 Calculator

The sample variance tells us how spread out the values are in a given .

Typically denoted as s2, it is calculated as:

$s2 = \Sigma (xi - x)2 / (n-1)$

where:

x: sample meanxi: the ith value in the sample n: the sample size

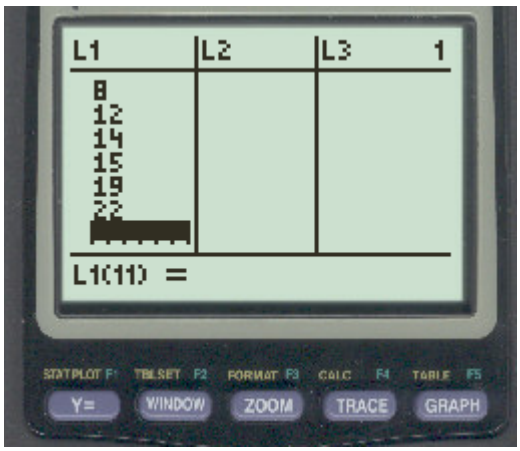
The following step-by-step example shows how to calculate the sample variance for the following sample:

Sample: 2, 4, 4, 7, 8, 12, 14, 15, 19, 22

Step 1: Enter the Data

First, we will enter the data values.

Press Stat, then press EDIT. Then enter the values of the sample in column L1:

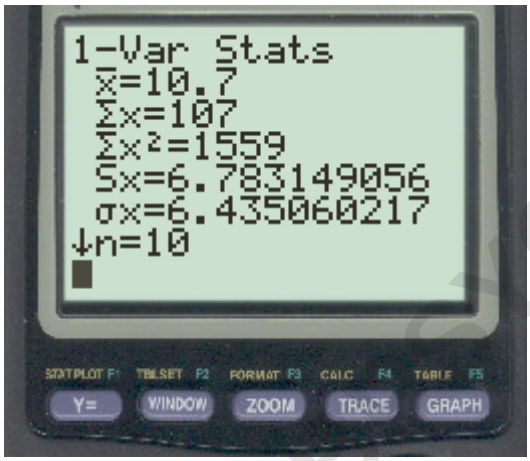


Step 2: Find the Sample Variance

Next, press Stat and then scroll over to the right and press CALC.

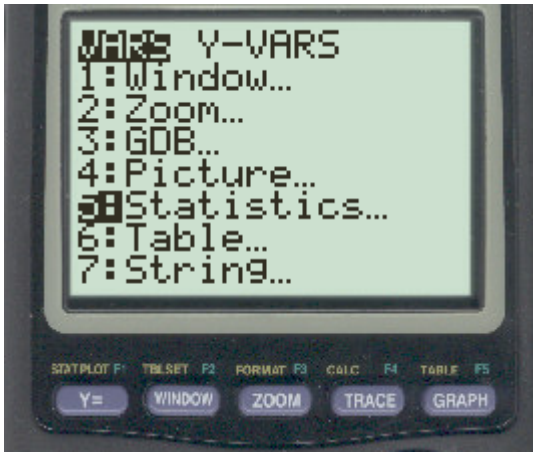
Then press 1-Var Stats.

In the new screen that appears, press Enter.



The sample standard deviation is Sx = 6.783149056.

To find the sample variance, we need to square this value. To do so, press VARS and then press 5:



In the new window that appears, press 3 to select the sample standard deviation:

Lastly, press the x2 button to square the sample standard deviation:

The sample variance turns out to be 46.0111.