How can I use my TI-84 calculator to find the coefficient of variation?

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The TI-84 calculator can be utilized to easily and accurately calculate the coefficient of variation. This statistical measure is used to determine the relative variability of a data set by comparing the standard deviation to the mean. By utilizing the built-in functions on the TI-84 calculator, users can input their data set and quickly obtain the coefficient of variation value, providing valuable insights into the spread and consistency of the data. This tool is particularly useful for analyzing and comparing data sets in various industries, such as finance, economics, and research. With its user-friendly interface and efficient calculations, the TI-84 calculator is a reliable and convenient method for finding the coefficient of variation.

Find Coefficient of Variation on a TI-84 Calculator

A coefficient of variation, often abbreviated as *CV*, is a way to measure how spread out values are in a dataset relative to the mean. It is calculated as:

CV = σ / μ

where:

σ: The standard deviation of dataset
μ: The mean of dataset

In simple terms, the coefficient of variation is the ratio between the standard deviation and the mean.

It is often used to compare the variation between two different datasets. For example, in finance it is used to compare the mean expected return of an investment relative to the expected standard deviation of the

investment.

For example, suppose an investor is considering investing in the following two mutual funds:

Mutual Fund A: mean = 9%, standard deviation = 12.4%

Mutual Fund B: mean = 5%, standard deviation = 8.2%

The investor can calculate the coefficient of variation for each fund:

CV for Mutual Fund A = 12.4% / 9% = 1.38
CV for Mutual Fund B = 8.2% / 5% = 1.64

Since Mutual Fund A has a lower coefficient of variation, it offers a better mean return relative to the standard deviation.

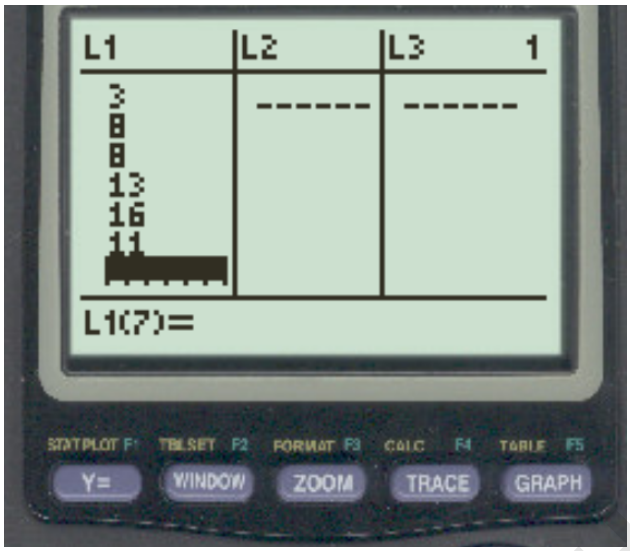
The following step-by-step example explains how to calculate the coefficient of variation for the following dataset on a TI-84 calculator:

Dataset: 3, 8, 8, 13, 16, 11

Step 1: Enter the Data

First, we will enter the data values.

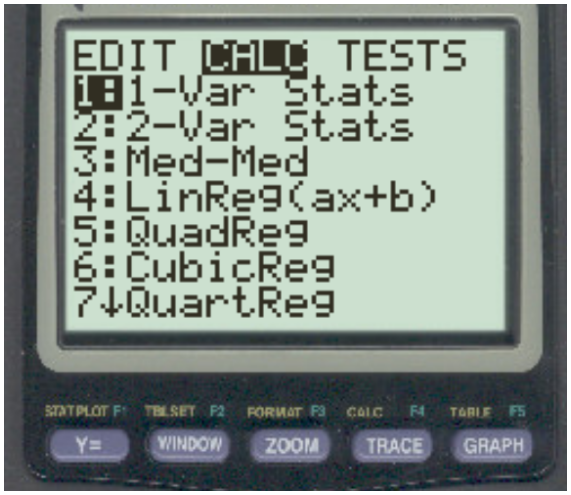
Press Stat, then press EDIT. Then enter the values of the dataset in column L1:



Step 2: Find the Coefficient of Variation

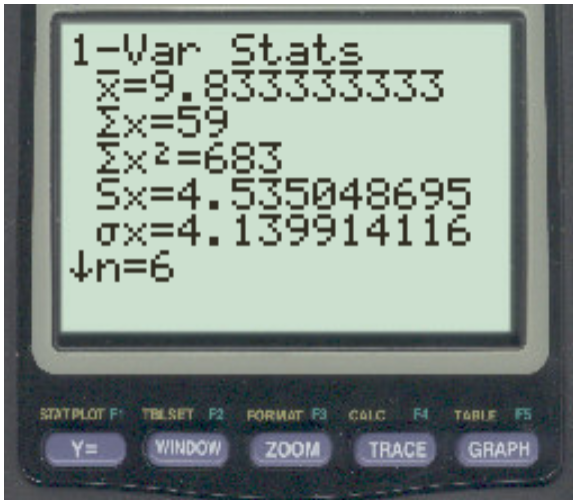
Next, press Stat and then scroll over to the right and press CALC.

Then press 1-Var Stats.



In the new screen that appears, press Enter.

Once you press Enter, a list of summary statistics will appear:



From this screen we can observe the values for the mean and the sample standard deviation:

Mean (x): 9.8333

Sample standard deviation (Sx): 4.535

We can then calculate the coefficient of variation as:

The coefficient of variation for this dataset turns out to

be 0.4611. In percentage terms, this is equal to 46.11%.