

How do I find the mean absolute deviation on a TI-84 calculator?

Authored by
stats writer

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The mean absolute deviation on a TI-84 calculator can be found by first entering the data set into a list, then using the built-in function "1-Var Stats" to calculate the mean. Next, use the "List" button and select the list containing the data. Finally, use the "Sum" and "Abs" functions to find the absolute value of the difference between each data point and the mean, and then divide this sum by the total number of data points to calculate the mean absolute deviation.

Find Mean Absolute Deviation on a TI-84 Calculator

The mean absolute deviation is a way to measure the spread of values in a dataset.

It is calculated as:

Mean absolute deviation = $(\sum |x_i - \bar{x}|) / n$

Σ : A fancy symbol that means "sum"
 x_i : The i th data value
 \bar{x} : The mean value
 n : The sample size

A low value for the mean absolute deviation tells us that the data values are concentrated close to each other while a high value tells us that the values are more spread out.

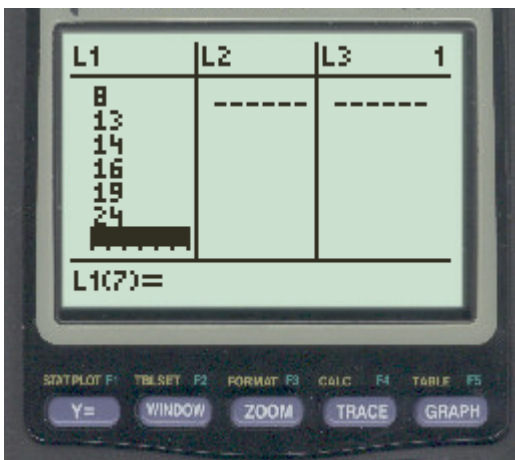
The following step-by-step example shows how to calculate the mean absolute deviation for the following dataset on a TI-84 calculator:

Dataset: 8,13,14,16,19,24

Step 1: Enter the Data

First, we will enter the data values.

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



Step 2: Calculate the Absolute Deviations

Next, we will find the absolute deviation of each individual value from the mean.

To do so, highlight the top of column L2 and type in the following formula:

$=\text{abs}(L1 - \text{mean}(L1))$

Here's how to actually type in this formula:

Press 2nd, then press 0. Then press abs(. This will input abs(in the formula. Press 2nd, then press 1. Now you will have abs(L1 in the formula. Press the minus - button. Now you will have abs(L1- in the formula. Press 2nd, then press STAT. Scroll over to "MATH" and then press 3. Now you will have abs(L1-mean(in the formula. Press 2nd, then press 1. Now you will have abs(L1-mean(L1 in the formula. Press) twice. Now you will have abs(L1-mean(L1)), which is the final formula.



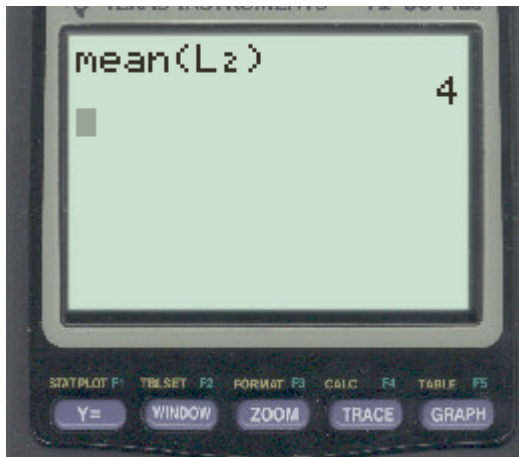
Step 3: Calculate the Mean Absolute Deviation

Lastly, use the following steps to calculate the mean absolute deviation:

Press 2nd and then press MODE to return to the home screen. Press 2nd and then press STAT. Scroll over to "MATH" and then press 3. Press 2nd and then press

2. Press the) button.

Once you press Enter, the mean absolute deviation will be displayed:



The mean absolute deviation turns out to be 4.

This tells us that the average distance between the individual values and the mean value in this dataset is 4.