How to Find Deviations, Variance, and Standard Deviation:

(Section 2.5 – Practice with any Example's data from Lecture Notes)

- You are given a list of data in random order

Now in the calculator…

STAT – **ENTER** (to select 1:Edit)

In **L_1** (List 1), enter the Data list. (Type a data value, then ENTER, then the next data value, then ENTER…)

2^{nd} – **QUIT** (This gets you back to the 'Main' screen)

STAT -- ⇒ (To get to CALC) – **1** (To select 1:1-VarStats)

2^{ND} – 1 (This types in L_1 for where your data is listed)

Then hit **ENTER** or scroll down to blink on Calculate then hit **ENTER** (This step depends on your calculator type)

Locate: n=, $\Sigma x=$, and $\bar{x}=$ From these three values you now have the mean

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STAT – **ENTER** (to select 1:Edit)

⇒ (Right arrow over to the next column) , then ⇑ (to be on top of the list)

2^{ND} – 1 (This types in L_1 for where your data is listed) then **MINUS (-)** YOUR mean value, then **ENTER**

(This will auto fill the L_2 with your Deviations)

⇒ (Right arrow over to the next column) , then ⇑ (to be on top of the list)

2^{ND} – 2 (This types in L_2 for where your newest data is listed) -- x^2 -- **ENTER**

(This will auto fill the L_3 with your Squares of Deviations)

2^{nd} – **QUIT** (This gets you back to the 'Main' screen)

STAT -- ⇒ (To get to CALC) – **1** (To select 1:1-VarStats)

2^{ND} – 3 (This types in L_3 for where your newest data is listed)

Then hit **ENTER** or scroll down to blink on Calculate then hit **ENTER** (This step depends on your calculator type)

Look for $\Sigma x=$ (This value will be your Sum of Squares)

If you have a data set that is a **SAMPLE**:
Sum of Squares divided by your **n-1** equals your Variance
Taking the square root of your result for Variance will equal your Sample Standard Deviation

If you have a data set that is a **POPULATION**:
Sum of Squares divided by your **n** equals your Variance
Taking the square root of your result for Variance will equal your Population Standard Deviation