

## To find standard deviation:

**To find standard deviation:** *Since this question deals with the complete set, we will be using "population" form, not sample form.*

Go to one-variable stats for "population" standard deviation. STAT → CALC #1 1-Var Stats

```

EDIT [2nd] [MODE] TESTS
1:1-Var Stats
2:2-Var Stats
3:Med-Med
4:LinReg(ax+b)
5:QuadReg
6:CubicReg
7:↓QuartReg
    
```

► **NOTE!** The standard deviations found in the CATALOG, stdDev, and also found by 2nd LIST → MATH #7 stdDev are both **Sample** standard deviations.

CATALOG	stdDev(L1)
startTmr	12.0503573
stdDevC	
stop	
storeGDB	
storePic	
stringEquC	
subC	

```

1-Var Stats L1
1-Var Stats
x̄=24.1
Σx=241
Σx²=7115
Sx=12.0503573
σx=11.43197271
↓n=10
    
```

- $\bar{x}$  = mean
- $\sum x$  = sum of the data
- $\sum x^2$  = sum of squares of the data
- $Sx$  = sample standard deviation
- $\sigma x$  = population standard deviation
- $n$  = sample size (# of pieces of data)
- min**  $X$  = smallest data entry
- $Q_1$  = first quartile
- med** = median (second quartile)
- $Q_3$  = third quartile
- max**  $X$  = largest data entry

**Population Standard Deviation = 11.43**

*FYI:* Using the lists, the calculator can simulate a spreadsheet style "by hand" computation of standard deviation. [Click here](#) to see the spreadsheet-style approach.

## To find variance:

**To find variance:** The "population" variance is the square of the population standard deviation.

The  $\sigma x$  symbol is under VARS - #5 Statistics

Y-VARS	Σ EQ TEST PTS
1:Window...	1:n
2:Zoom...	2:Σx
3:GDB...	3:Σx²
4:Picture...	4:Sx
5:Statistics...	5:σx
6:Table...	6:σy
7:String...	7:↓σy

► **NOTE!** The variance found in the CATALOG and also found by 2nd List → MATH #8 variance are both **Sample** variances.

```

σx²
130.69
Variance
    
```