

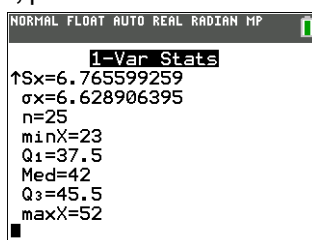
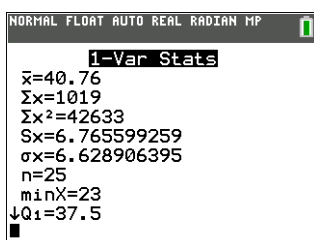
Technology Insight 4 - Measures of Center

Let's find the mean, median, mean, and midrange of the Exam 1 scores.

42 42 38 42 46 34 40 23 41 38
39 46 50 49 45 46 36 52 34 43
44 26 41 45 37

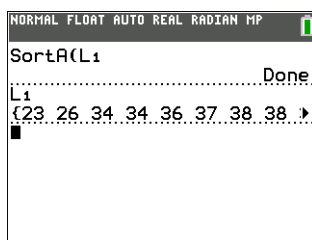
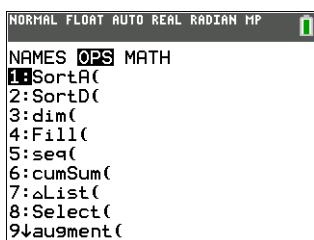
TI-84

- Step 1)** Enter the data into a list using the stat editor.
Step 2) Press **stat** and move the cursor to the CALC menu.
Step 3) Select **1-Var Stats** and then L1, press enter.



We see the mean is $\bar{x} = 40.76$, scroll down for the median: $\tilde{x} = 42$. Calculate the midrange using the $\min X$ and $\max X$ values, $MR = \frac{23+52}{2} = 37.5$. We need to find the mode by inspection after sorting the list.

- Step 4)** Press **2nd** **stat** (LIST), and move the cursor to the OPS menu and select **SortA**(and **L1**. Press enter.
Step 5) Type in **L1** again and press enter. Scroll to the right to find the value that occurs with the most frequency.



It looks like it is bimodal with 42 and 46 occurring three times.

EasyStats

- Step 1)** Open EasyStats and navigate to the Data Set page and copy the Math 146 Exam 1 data set (see Tech Insight 1 for detailed steps.)
- Step 2)** Click back on the Index page and select 1-Descriptive Statistics.
- Step 3)** Paste the data set into **Var1**.

Descriptive Statistics	
Var1	Var2
1	42
2	42
3	39
4	46
5	44
6	26
7	38
8	42
9	46
10	34
11	40
12	23
13	41
14	38
15	50
16	49
17	45
18	46
19	36
20	52
21	34
22	43
23	41
24	45
25	37
26	

	Var1	Var2
Mean \bar{x} =	40.7600	
Sample st.dev. s=	6.7656	
Sample Variance s^2 =	45.7733	
Population st. dev. σ =	6.6289	
Population Variance σ^2 =	43.9424	
Five Number Summary		
Min=	23	
Q1=	37.5	
Med=	42	
Q3=	43.5	
Max=	52	
Mode=	42 46	
Skewness=	-0.8570	
Percentile=	25% 37.5	45%
Outliers	≤ 25.5	≥ 57.5

Displayed are the mean, median, and mode (up to trimodal). The midrange will need to be calculated by hand as above. The Descriptive Statistics page allows you to compare two data sets when needed.

StatCrunch

- Step 1)** Open StatCrunch and enter the data into var1.
- Step 2)** Click Stat, Summary Stat, and column.
- Step 3)** Select var1, and select or deselect the desired statistics. Press Compute!

Options						
Summary statistics:						
Column	Std. dev.	Mean	Median	Min	Max	Mode
var1	6.7655993	40.76	42	23	52	Multiple modes