



Calculator Appendix P

(Statistics)



Consider the following set of test grades:

{ 92, 99, 85, 95, 79, 64, 79, 91, 56, 82, 81 }

These numbers can be entered and the following statistics easily produced:

mean, median, standard deviation, lower-quartile, upper-quartile, min, max, ... and more.

Press the **STAT**  button and then select **EDIT** by pressing **ENTER**.

```

CALC TESTS
1:Edit...
2:SortA(
3:SortD(
4:ClrList
5:SetUpEditor
  
```

L1	L2	L3	Z
92	██████	-----	
99			
85			
95			
79			
64			
79			
L2(1)=			

Under **L1**, enter the first number in the list, press the **DOWN ARROW**, and then enter the next number. Continue until all numbers are entered. (If **L1** is not initially empty, **UP ARROW** on top of **L1**, press **CLEAR** and then **ENTER**.)

Now that the data is entered we are ready to display statistical facts about the data:

Press the **STAT**  button, **RIGHT ARROW** over to **CALC**.

Choose **1: 1-Var Stats**.
Press **ENTER** twice.

```

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

The statistics for the data in the **L1** list displays. Use the **DOWN-ARROW** to move down the display to view the remaining statistics.

```

1-Var Stats
x̄=82.09090909
Σx=903
Σx²=75795
Sx=12.91088336
σx=12.31004428
↓n=11

```

mean
standard dev

```

1-Var Stats
↑n=11
minX=56
Q1=79
Med=82
Q3=92
maxX=99

```

lower quartile
median
upper quartile

The following definitions apply to the some of the displayed statistics:

The **mean** (\bar{x}) is the average:

The **median** (Med) is the number in the middle of the **ordered** list:
(If there are two numbers in the middle, average them.)

The **lower quartile** (Q_1) is the median of the lower half of the numbers:

The **upper quartile** (Q_3) is the median of the upper half of the numbers:

(When there are an odd number of data points, the middle value is not used when finding either quartile.)

The **standard deviation** (σ) is a measure of the average “scatter” of the data.