

Calculating the Mean and Standard Deviation

The **STAT** button on the TI Calculators is the key that you will use most often in Statistics. When you hit the **STAT** the following menu appears

```

2001 CALC TESTS
1:Edit...
2:SortA(
3:SortD(
4:ClrList
5:SetUPEditor
    
```

If you hit the blue right cursor key it will take you to the other STAT Menus, CALC and TESTS, which are shown below.

```

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

EDIT CALC TESTS
1:Z-Test...
2:T-Test...
3:2-SampZTest...
4:2-SampTTest...
5:1-PropZTest...
6:2-PropZTest...
7:ZInterval...
    
```

The Mean, \bar{x} , and the Standard Deviation, s , are calculated using the EDIT and CALC menus.

The EDIT menu allows you to enter in your data. We will enter the following data set:

20 32 35 38 42 47 53 62 64 69.

First push **STAT**. Then type **1** to bring up the following screen. If there are already numbers in L_1 then use the Up Arrow Cursor to highlight L_1 . Then push the **CLEAR** key. Do not push the **DEL** key because this deletes the list. If you ever delete a list by accident or you do not see L_1 at the top of the left most column then cursor to where the list should be. For L_1 that would be left most column. Then hit the **2nd** key followed by the **INS/DEL** key. Then hit the **2nd** key again followed by the $L_1/1$ key and **ENTER**

Enter the numbers into the column, L_1 , simply by typing 20 **ENTER** 32 **ENTER** etc.

```

L1      L2      L3      1
38
42
47
53
62
64
69
-----
L1(10) = 69
    
```

Once the list is entered push **STAT**. Cursor over to the CALC option and type **1**. Type **ENTER** to display the following screen.

```
1-Var Stats
x̄=46.2
Σx=462
Σx²=23576
Sx=15.74660457
σx=14.93854076
↓n=10
■
```

The Mean, $\bar{x}=46.2$, and the Standard Deviation, $s_x=15.74660457$, are shown.

Whenever you see the arrow pointing down at the bottom of the screen this means more information can be seen by pushing the down arrow key. If the down arrow key is pushed several times the following screen will appear.

```
1-Var Stats
↑n=10
minX=20
Q1=35
Med=44.5
Q3=62
maxX=69
■
```

This displays the Five-Number Summary.

The 1-Var Stats command assumes that the data is in L_1 . If you put a different list after the command and hit **ENTER** it will run the 1-Var Stats on the specified list