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:

```
1: Edit
2: Sort Up
3: Sort Down
4: Clear List
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
8: 1-Var Stats
9: 2-Var Stats
10: Med-Med
11: LinReg(ax+b)
12: QuadReg
13: CubicReg
14: QuartReg
15: 1-PropZTest
16: 2-PropZTest
17: 1-SampZTest
18: 2-SampZTest
19: 1-SampTTest
20: 2-SampTTest
21: 1-Proportion
```

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:

\[
20 \quad 32 \quad 35 \quad 38 \quad 42 \quad 47 \quad 53 \quad 62 \quad 64 \quad 69.
\]

First push STAT. Then type 1 to bring up the following screen. If there are already numbers in L1 then use the Up Arrow Cursor to highlight L1. 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 L1 at the top of the left most column then cursor to where the list should be. For L1 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 L1/1 key and ENTER.

Enter the numbers into the column, L1, simply by typing 20 ENTER 32 ENTER etc.

```
<table>
<thead>
<tr>
<th>L1</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
</tr>
<tr>
<td>32</td>
</tr>
<tr>
<td>35</td>
</tr>
<tr>
<td>38</td>
</tr>
<tr>
<td>42</td>
</tr>
<tr>
<td>47</td>
</tr>
<tr>
<td>53</td>
</tr>
<tr>
<td>62</td>
</tr>
<tr>
<td>64</td>
</tr>
<tr>
<td>69</td>
</tr>
</tbody>
</table>
```

\( \text{L1(10) = 69} \)
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
\bar{x} = 46.2
\sum x = 462
\sum x^2 = 23576
5x = 15.74660457
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
\min x = 20
Q1 = 35
\text{Med} = 44.5
Q3 = 62
\max x = 69
```

This displays the Five-Number Summary.

The 1-Var Stats command assumes that the data is in L1. If you put a different list after the command and hit **ENTER** it will run the 1-Var Stats on the specified list.