

TI-83/84 How To Series

Topic: Comparing Two Sets of Data using Box Plots

Sometimes it is necessary to compare two sets of data at the same time. The TI calculator can help you do this.

Enter in the ages of “Best Actresses” for 1951 – 2000 into list L1.

38, 45, 24, 26, 48, 41, 27, 40, 38, 28, 27, 31, 37, 30, 24, 34, 60, 61, 26, 35, 34, 34, 26, 37, 42, 41, 35, 31, 41, 33, 30, 74, 33, 49, 38, 61, 21, 41, 26, 80, 42, 29, 33, 35, 45, 49, 39, 34, 26, 25, 32

(There are 51 ages listed because there was a double award in 1968)

Enter in the ages of “Best Actors” for 1951 – 2000 into list L2.

52, 51, 35, 30, 38, 41, 43, 49, 35, 47, 31, 46, 39, 56, 41, 55, 52, 53, 62, 43, 40, 48, 48, 56, 38, 60, 32, 40, 42, 37, 76, 39, 55, 45, 35, 61, 33, 51, 52, 32, 42, 54, 52, 37, 38, 31, 45, 60, 45, 40, 37

Steps

1. Enter the above data into lists L1 and L2.

Now we have two sets of data. Notice that we have one less data point than L2.	L1	L2	L3	2
	49	31		
	49	45		
	60	60		
	61	45		
	61	40		
	74	32		
80				
L2(51) =				

2. To see the first data set, we must turn on the plot and choose the modified box plot option.

<div style="display: flex; gap: 10px;"> <div style="border: 1px solid black; border-radius: 5px; padding: 2px 5px; background-color: #e0e0e0;">2nd</div> <div style="border: 1px solid black; border-radius: 5px; padding: 2px 5px; background-color: #e0e0e0;">Y=</div> </div> <p>This is the first set of data, so it should be set in plot number 1.</p>	<pre> STAT PLOTS 1:Plot1...Off L1 L2 2:Plot2...Off L1 L2 3:Plot3...Off L1 L2 4↓PlotsOff </pre>
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Turn on Plot 1 and set it to a modified box plot. The Xlist is already labeled as L1, so there is no need to change it.

```

Plot1 Plot2 Plot3
Off Off
Type: [box] [line] [bar]
      [line] [box] [line]
Xlist: L1
Freq: 1
Mark: [box] + .
  
```

3. Now we turn on Plot 2 and make sure the appropriate information is set correctly.

You should see something like this.

The plot type is still a modified box plot but the Xlist has been changed from L1 to L2

```

Plot1 Plot2 Plot3
Off Off
Type: [box] [line] [bar]
      [line] [box] [line]
Xlist: L2
Freq: 1
Mark: [box] + .
  
```

4. Graph and compare.

Both box plots are displayed.

5. You can display just the summary information for each set of data. Shown below is for Best Actor data.

In this case, we are over riding the default of L1 and replacing it with L2.

```

1-Var Stats L2
  
```

Scroll up and down to get the information you need.

```

1-Var Stats
↑Sx=9.613850553
σx=9.517226487
n=50
minX=30
Q1=38
↓Med=42.5
  
```

