

# How many States have you spent the night in?

## Graphing Box & Whisker on the TI-84

1. Have the students complete the attached handout requiring them to list all States they have “spent the night in.” Be sure to clarify this does not include sleeping for a couple of hours at a rest stop, or flying over in an airplane.

L1	L2	L3	1
9			
10			
4			
22			
1			
0			

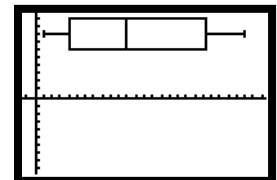
L1(?)=0

2. Use the TI-Navigator to collect all data (or an alternative method) so the students can have the class data in a list. Information may be put into any List as in the top figure to the right.

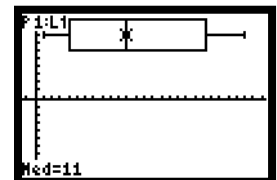
3. Have students work under STAT PLOTS and be sure to remind them to turn off all plots, except for number one, the one they will be using. Have the students set up the STAT PLOT screen as shown in the second picture to the right (be sure to highlight the Box & Whisker plot).



4. The next step will be to set up the graphing screen. You may choose to have the students set a window if they do not have much practice doing so, or you may have them use the ZOOM buttons. Time permitting, allow students to switch between ZOOM buttons to see which format provides the best graph. The third figure down (to the right) shows a ZOOM STAT setting.



5. The final step involves students interpreting the data by using the TRACE feature of the graphing calculator. This allows students to toggle back and forth between the Minx, Quartiles, Median, and Maxx. The bottom figure to the right shows the TRACE feature on the Median for this example problem.



- \* CMT Strands met: 19A: Identify correct information from tables, graphs, and charts.  
19B: Create graphs from data in tables and charts.  
20A: Draw reasonable conclusions from data in tables, graphs and charts.  
20B: State a conclusions and explain why an answer is or is not reasonable based on the data  
20C: Solve problems involving means, medians, modes and ranges of sets of data.