



Graphing Calculator Investigation

A Follow-Up of Lesson 12-3

Sharp EL-9900

Box-and-Whisker Plots

You can use a Sharp EL-9900 graphing calculator to create box-and-whisker plots.

Example

The table shows the ages of the students in two karate classes.

Class	Age (years)														
A	39	33	37	26	39	25	39	40	27	25	35	31	29	28	35
B	19	26	40	19	20	32	16	24	24	16	27	23	22	25	16

Make box-and-whisker plots for the ages in Class A and in Class B.

Step 1 Enter the data.

- Clear any existing data.

KEYSTROKES: **STAT** **ALPHA** [A] **ENTER**
▲ **DEL** **ENTER**

- Enter the Class A ages in L1 and the Class B ages in L2.

KEYSTROKES: Review entering a list on page 45.

Step 2 Format the graph.

- Turn on two statistical plots.

KEYSTROKES: Review statistical plots on page 45.

- For Plot 1, select the box-and-whisker plot and L1 as the Xlist.

KEYSTROKES: **STAT PLOT** **ALPHA** [A] **ENTER**
ENTER **▼** **ENTER** **▼** **2nd F**
[L1] **▼** **▼** **STAT PLOT** **ALPHA** [E] 4

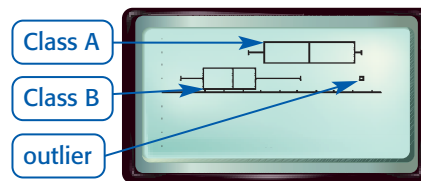
- Repeat for Plot 2, using L2 as the Xlist, to make a box-and-whisker plot for Class B.

Step 3 Graph the box-and-whisker plots.

- Display the graph.

KEYSTROKES: **ZOOM** 9

Press **TRACE**. Move from one plot to the other using the up and down arrow keys. The right and left arrow keys allow you to find the least value, greatest value, and quartiles.



Exercises 1-5. See margin.

- What are the least, greatest, quartile, and median values for Classes A and B?
- What is the interquartile range for Class A? Class B?
- Are there any outliers? How does the graphing calculator show them?
- Estimate the percent of Class A members who are high school students.
 - Estimate the percent of Class B members who are high school students.
- If you were a high school student, which class would you join? Explain.



www.pre-alg.com/other_calculator_keystrokes