

2-6b

Graphing Calculator Investigation

A Follow-Up of Lesson 2-6

Sharp EL-9900

What You'll Learn

Use a graphing calculator to make box-and-whisker plots.

Box-and-Whisker Plots

You can create a box-and-whisker plot using an EL-9900 graphing calculator.

ACTIVITY

Make a box-and-whisker plot of the data at the right. It shows the grades on Miss Romero's last Math 7 test.

Miss Romero's Math 7 Test							
78	94	85	92	72	56	89	92
90	84	98	82	75	100	94	87
92	85	94	70	78	95	70	80

STEP 1 Enter the data.

Begin by clearing any existing data in the first list, L1.

Press **STAT** **ENTER** **▲** **DEL** **ENTER**.

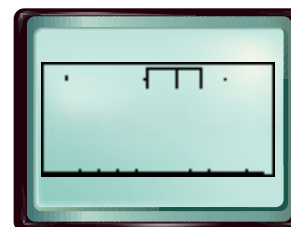
Then enter the data into L1. Input each number and press **ENTER**.

STEP 2 Choose the type of graph.

Press **STAT PLOT** **ENTER** to choose the first plot. Highlight on, X for DATA, L1 for ListX, and 1 as the frequency. To set the graph as a modified box-and-whisker plot, highlight GRAPH and press **STAT PLOT** **ALPHA** **[E]** 4.

STEP 3 Choose the display window.

Press **WINDOW** and choose appropriate range settings for the x values. The window 50 to 110 with a scale of 5 includes all of this data.



STEP 4 Display the graph.

Press **GRAPH**. Press **TRACE** and the arrow keys to determine the five key data points of your graph.

EXERCISES

1. What are the values of the five key data points of the graph? What do they represent?
2. What percent of the test scores are below 78?
3. What percent of the test scores are above the median? What percent of the test scores are below the median?
4. What percent of the scores are between 56 and 86?
5. Suppose you earned a grade of 80. Describe what percent of students scored higher and what percent scored lower than you.