



### Activity Overview

In this activity, you will create three parallel boxplots and compare them.

### Materials

- Technology needed (TI-Nspire™ handheld, computer software)

### Step 1—Preparing the Document

1. Open a new document by selecting **on** > **New Document** > **Add Notes**.
2. Type “**Multiple Boxplots**” as the activity title on the first page.



**Note:** To obtain capital letters, press the **shift** key and then the letter.

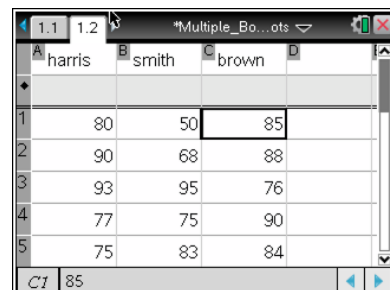
3. Select **doc** > **File** > **Save As**, and type **Multiple\_Boxplots** as the file name. Press **tab** to move the cursor to **save**, and press **enter**.

**Note:** To obtain the underscore, press **ctrl** **\_**.

4. To add a new page, select **ctrl** **doc** > **Add Lists & Spreadsheet**.

	Test Scores								
Harris	80	90	93	77	75	70	68	85	78
Smith	50	68	95	75	83	90	98	55	65
Brown	85	88	76	90	84	74	78	84	80

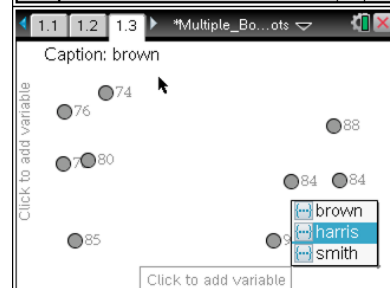
5. The data above represents the test scores of three students in a Statistics class. Enter the data into the Lists & Spreadsheet page as shown.



### Step 2—Creating a Boxplot

**Note:** Statistics graphing is done through the Data & Statistics application.

6. To add a new page, select **ctrl** **doc** > **Add Data & Statistics**.

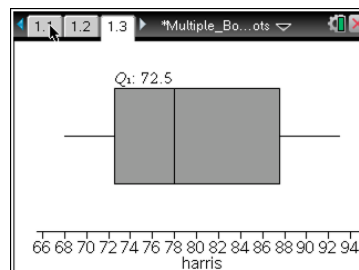




7. Move the cursor to the bottom of the page where it says “click to add variable,” and press . Select one of the students. The screen will display a dot plot of the data.

**Note:** To create a vertical plot instead of a horizontal one, move the cursor to the left of the page where it says “click to add variable,” and press .

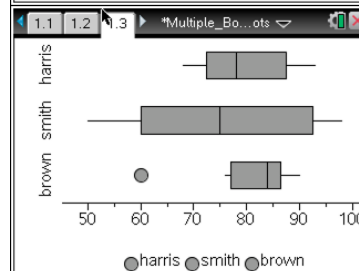
8. To change to the dot plot to a boxplot, select **MENU > Plot Type > Boxplot**.



### Step 3—Creating a Parallel Boxplot

9. Select **MENU > Plot Properties > Add X Variable**.

10. Select another student’s data.

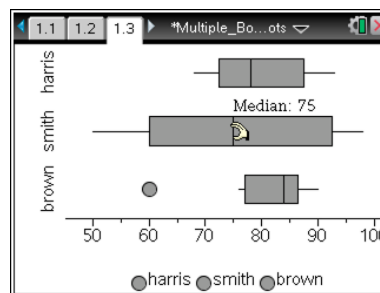


11. Repeat Steps 1 and 2 so that the data for all three students are represented on the same screen.

**Note:** Outliers are displayed by default. To extend the whiskers, select **MENU > Plot Properties > Extend Box Plot Whiskers**.

### Step 4—Data Analysis

12. Move the cursor over the plot to show the key values such as the Median, the  $Q_1$ , and the value of the maximum.



**Note:** To change the color of a boxplot, move your cursor over one of the boxplots, and press . Then, select **doc** > **Edit** > **Color** > **Fill Color** and the color you would like for your data set using the arrow keys. Press **enter** to select a color. To change the color of another boxplot, move your cursor to the white part of the screen, press , and then repeat the directions above.