

# Histograms

Name: \_\_\_\_\_

Per: \_\_\_\_\_

Date: \_\_\_\_\_

## GETTING READY

- A) Open the Statistics Application (I).
- B) Select **Edit** and then **Clear All**.
- C) If there is something already open in Statistics, make sure you save it if you want to keep it. If not, select **OK** when prompted with the **Clear All** menu.

## CREATING A HISTOGRAM

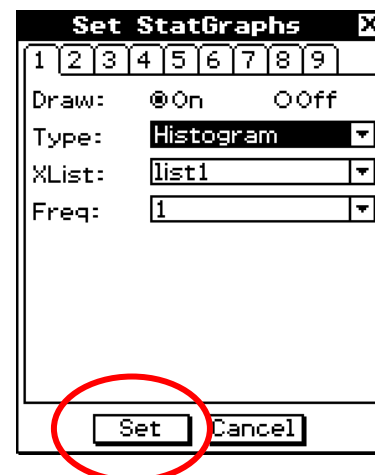
- 1) Enter the data into **list1**. Alternatively, you can open the XCP calculator file for this activity and expand the strip for the **First Data Set**. These are IQ test scores from randomly chosen fifth graders:

145	139	126	122	125	130	96	110	118	118
101	142	134	124	112	109	134	113	81	113
123	94	100	136	109	131	117	110	127	124
106	124	115	133	116	102	127	117	109	137
117	90	103	114	139	101	122	105	97	89
102	108	110	128	114	112	114	102	82	101

Source: Introduction to the Practice of Statistics, 6th ed., Moore, McCabe, & Craig, 2009.

- 2) Go to **Setgraph, Setting...** and change the dialog box so it looks like this:

- 3) Tap **Set**.

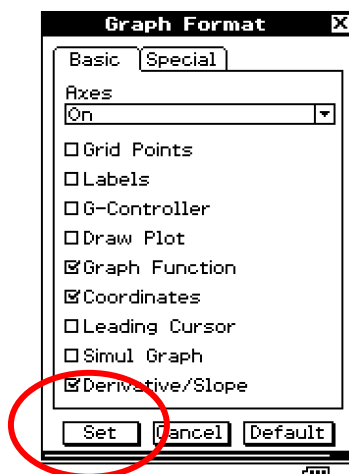


4) We need to change the view window to remove the numbers from the screen. To do this, tap on **O** and select **Graph Format**.

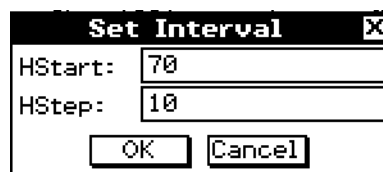
5) Change this window to look like this:

6) Tap **Set**.

7) Tap **y**.



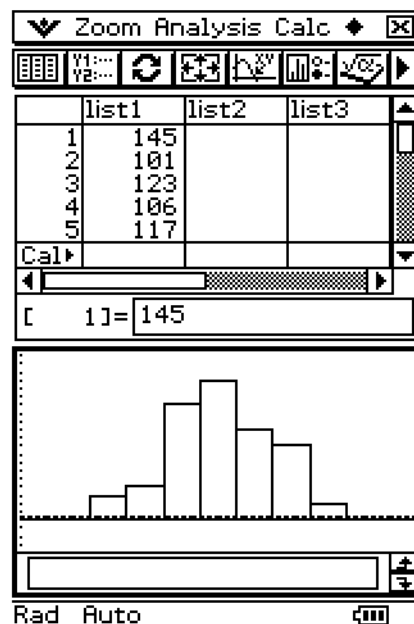
8) Modify the dialog box to look like this:



9) Tap **OK**.

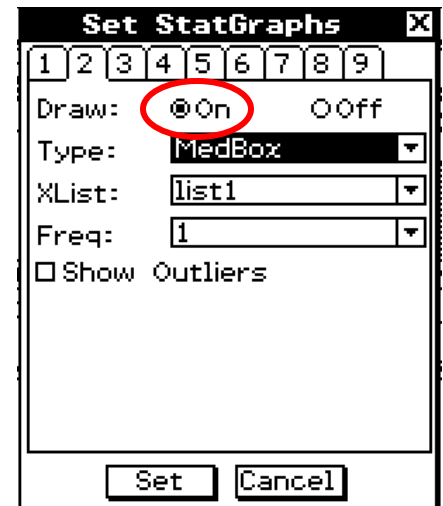
10) If the histogram does not automatically draw, tap **y** and you should get a window that looks similar to this:

11) Write as much as you can about what the histogram tells you about the data.



## ADDING A BOXPLOT

1) Go to **SetGraph, Setting...** and tap on tab 2. Modify the dialog box so it looks like the box to the right; make sure to select the radio button for **On** in the **Draw** category.

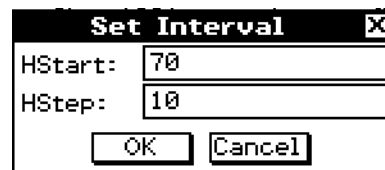


The 'Set StatGraphs' dialog box is shown with the following settings:

- Draw: ☒ On ☐ Off
- Type: MedBox
- XList: list1
- Freq: 1
- ☐ Show Outliers

Buttons: Set, Cancel

2) Tap **Set**. Then tap **y**. Make sure the dialog box matches the one below.



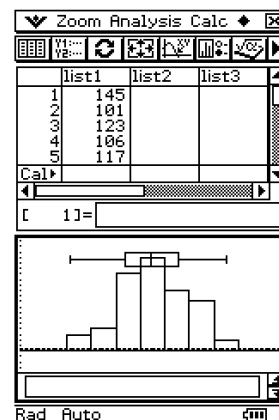
The 'Set Interval' dialog box is shown with the following settings:

- HStart: 70
- HStep: 10

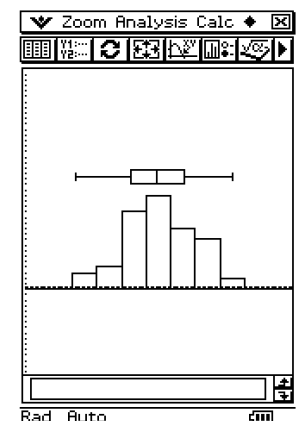
Buttons: OK, Cancel

3) Tap **OK**.

4) Tap **y** and your boxplot will graph:



5) Now choose **x** from the Icon Panel and tap your cursor key in the "up" direction to separate the boxplot and the histogram. You should get something similar to this:



6) What additional information do you know now about the data? How do the box plot and histogram compare? Write down all the information you know now based on both plots.

### PRACTICE

With this new set of data, use your ClassPad to draw a histogram and a box plot. Analyze your results: Write down everything you can deduce about the data based on your plots. These numbers are the breaking strength of different electronic wire connections. You can open the XCP calculator file for this activity and expand the strip for the **Second Data Set**.

0	0	550	750	950	950	1150	1150
1150	1150	1150	1250	1250	1350	1450	1450
1450	1550	1550	1550	1850	2050	3150	

Source: Introduction to the Practice of Statistics, 6th ed., Moore, McCabe, & Craig, 2009.