

Timed Expectations



Each Team needs to connect 4 calculators to the Hub using the cables near the door.

Log into TI Navigator and do Warm Up

Have Assignment out to go over

5 Number Summary

Box-and-Whisker Plots


Histograms

Outliers

Objective: We will be able to use the 5 number summary to create and analyze box-and-whisker plots.

Essential Question: How do outliers affect the distribution?

Five Number Summary

- Used to construct a box-and-whisker plot
1. Minimum
 2. Quartile 1 (Q1) – median of the lower data points
 3. Median
 4. Quartile 3 (Q3) – median of the upper data points
 5. Maximum
- 

Five Number Summary

Getting the Five Number Summary from the Calculator

Enter the data into List 1 (Go to STAT, then select EDIT).

Go to the home screen (Press 2nd, then MODE)

Go to STAT, then CALC, then select 1-Var Stat

Example 2

Use this set of data to generate the Five Number Summary on the Calculator:

59, 27, 18, 78, 61, 91, 52, 34, 54, 93, 100, 87, 85, 82, 68

NORMAL FLOAT AUTO REAL RADIAN MP 

1-Var Stats

\bar{x} =65.93333333
 Σx =989
 Σx^2 =74187
Sx=25.32493595
 σx =24.46621253
n=15
minX=18
↓Q1=52

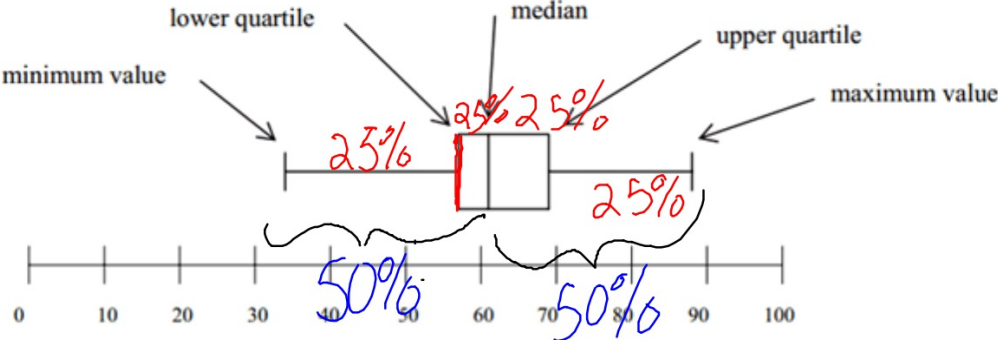
NORMAL FLOAT AUTO REAL RADIAN MP 

1-Var Stats

↑Sx=25.32493595
 σx =24.46621253
n=15
minX=18
Q1=52
Med=68
Q3=87
maxX=100

Box-and-Whisker Plot

The plot below shows how the numbers in the five-number summary correspond to the features of the box plot.



Box and Whisker Plot

Creating a Box and Whisker Plot in the Calculator

Enter the data into List 1 (Go to STAT, then select EDIT).

Go to STAT PLOT (Press 2nd, then Y=)

Turn on the Stat Plot

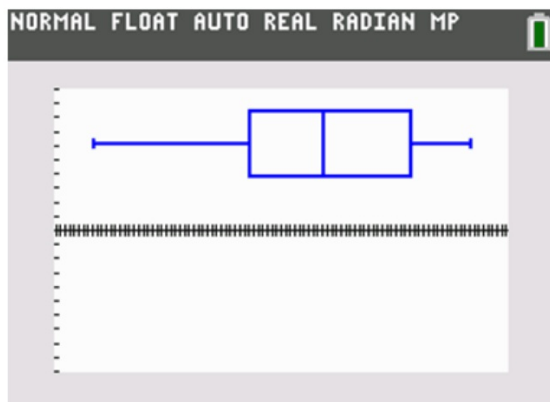
Select the Box and Whisker Plot Option (with Outliers)

Go to ZOOM and the ZoomStat Option

Example 3

Use this set of data to make a box-and-whisker plot:

59, 27, 18, 78, 61, 91, 52, 34, 54, 93, 100, 87, 85, 82, 68



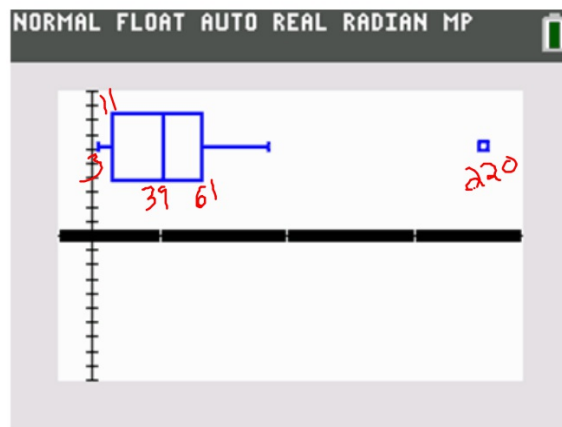
Example 3: You try!

Use the following data set to create a five number summary and construct the box-and-whisker plot.

87, 7, 41, 50, 15, 220, 23, 99, 11, 45, 11, 61, 3, 39,
21

Solution

Minimum:3
Q1:11
Median:39
Q3:61
Maximum:220



Histogram

Creating a Histogram in the Calculator

Enter the data into List 1 (Go to STAT, then select EDIT).

Go to STAT PLOT (Press 2nd, then Y=)

Turn on the Stat Plot

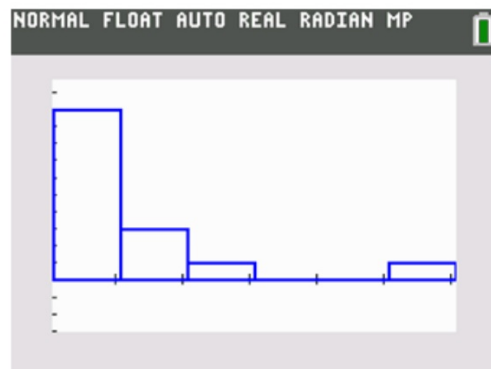
Select the Histogram Option

Go to ZOOM and Zoom Stat Option

Example 4: You try!

Use the following data set to create a histogram of the data.

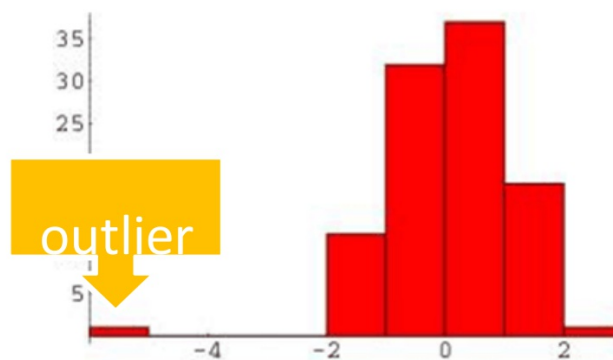
87, 7, 41, 50, 15, 220, 23, 99, 11, 45, 11, 61, 3, 39, 21



Outliers

Outliers are extreme high or low values.

*We will calculate them tomorrow!



So what can we conclude about our data set?
Was this shown in the box-and-whiskerplot? If so, how?

