

4.3 Boxplots and IQR

ALGEBRA

Write your questions here!

Boxplots: _____



5 Number Summary: _____

(Min, Q₁, Med, Q₃, Max)

2016-2017 Golden State Warriors (Regular Season, 50+ games)		
Player	Games Played	Total Number of Points Scored
J M McAdoo, SF	52	147
Kevon Looney, SF	53	135
Kevin Durant, SF	62	1555
David West, PF	68	313
Zaza Pachulia, C	70	427
Patrick McCaw, G	71	284
Draymond Green, PF	76	776
Andre Iguodala, SF	76	574
Shaun Livingston, PG	76	388
Ian Clark, SG	77	527
JaVale McGee, C	77	470
Klay Thompson, SG	78	1742
Stephen Curry, PG	79	1999

Constructing a Basic Boxplot

The instructions below are for horizontal boxplots but easily can be adapted for vertical boxplots.

Step 1: Draw a number line. Add a scale that begins at or below the minimum and ends at or above the maximum.

Step 2: Directly above the number line, draw a rectangular box that extends from Q₁ to Q₃. Divide the box with a vertical line at the median.

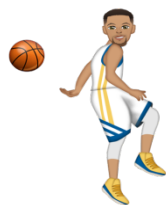
Step 3: Draw two whiskers: one from the middle left side of the box to the minimum and the other from the middle right side of the box to the maximum.

Interquartile Range (IQR): _____

First (lower) quartile: _____

Third (upper) quartile: _____

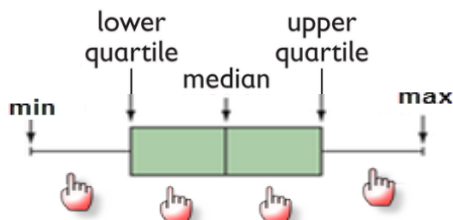
135, 147, 284, 313, 388, 427, 470, 527, 574, 776, 1555, 1742, 1999



Example Create a boxplot of the distribution of points scored by the 1997 - 1998 Chicago Bulls using the following 5 Number summary. Use the same graph.

Min = 167 Q₁ = 288 Med = 416 Q₃ = 841 Max = 2357

Interpreting Boxplots



Each part contains 25% of the data

Example: Bean goes fishing and catches 16 fish, displayed by their length in the stemplot below.

Create a boxplot of the fish lengths.

Stem Leaf

0	778999
1	00223579
2	12

key: 1|0 = 10 inches

- Find the Interquartile Range.
- Between which two values is approximately 50% of the middle data contained?
- Find the range of the data.
- What percentage of the fish were greater than 9 inches long?
- What percentage of the fish were greater than 7 but less than 16 inches long?

Technology Help: 1-VarStats: (\bar{x} is the mean, S_x = the Standard Deviation, scroll down for 5# summary)
Zoom Stat (9) : Fits the window to your data

SUMMARY:

Now,
summarize
your notes
here!

