

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

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

# HW #14 Box Plots

The following information is the weight of players from the Houston Rocket's roster for 2007-2008 basketball season.

260	<del>238</del>	<del>210</del>	<del>175</del>	<del>185</del>	<del>165</del>	310	290	<del>220</del>
261	<del>210</del>	<del>195</del>	<del>238</del>	<del>220</del>	<del>225</del>	<del>223</del>	<del>200</del>	

1 165

2 175

3 185

4 195

5 200 <sup>Q1</sup>

6 210

7 210

8 220

9 220 med

10 223

11 225

12 238

13 238

14 260 <sup>Q3</sup>

15 261

16 290

17 310

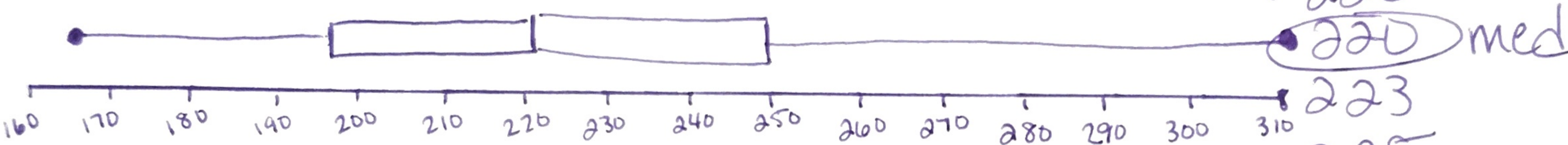
1) Find all necessary data to make a box and whisker plot

Count: 17  
min 165 max 310 median 220

8-1-8  
↑  
med.

Q1 197.5 Q3 249  
4-4                      4-4

2) Make the box and whisker plot



3) Is the data skewed? Explain.

What does it mean that either your data is or is not skewed?

Yes its skew right. This means the average (mean) will be slightly higher than the median.

4) Find the exact mean of the data? Does your answer to this question support your answer to #3?

Explain. 225 Yes b/c 225 is higher than 220.

5) What percent of players are above the average weight?

$$\frac{6}{17} \approx 35\%$$

6) What is the inter-quartile range?

$$249 - 197.5 = 51.5$$

7) Make one true and one false statement about the data.

True: 50% of players weigh more than 220 pounds.

False: The minimum weight is 197.5 pounds.

8. The following comment was posted on a story about the economy over the summer. The article used an expert whose last name was Sinclair in the article. Explain to "Roger H." what mistake(s) he is making about statistics in his comment. THEN, find an example in your notes that could help him see his error.



Roger H 20 hours ago ...  
 "Employment is so strong and people are working," Sinclair says. "For 60% of us, things are great. But there's 40% out there that are really on the edge."  
 How few people understand that 50% of the people are below average. duh!

50% of people are below the median, not the average

Reply Replies (12) 63 10

You could use the data on the front (only 35% of players are above average)  
 OR Large Frogs 13 out of 19 are below average

9. Complete the comparison matrix of data displays

	Dot plot	Stem and Leaf	Histogram	Box Plot
Statistic(s) that are immediately visible	min, max mode, shape	min, max	Shape	Shape max min median
Statistics that can be easily calculated or found	Count, range median	range, count median Shape mode	Count	range
Statistics that can be found with work	mean	mean	None	None
Statistics that are impossible to find	None	None	EXACT values of min, max, range, median, mode, & mean but all are *easily* estimated	COUNT & mode EXACT mean is impossible but it can be estimated easily