

Math Work Sample
Practice - Statistics

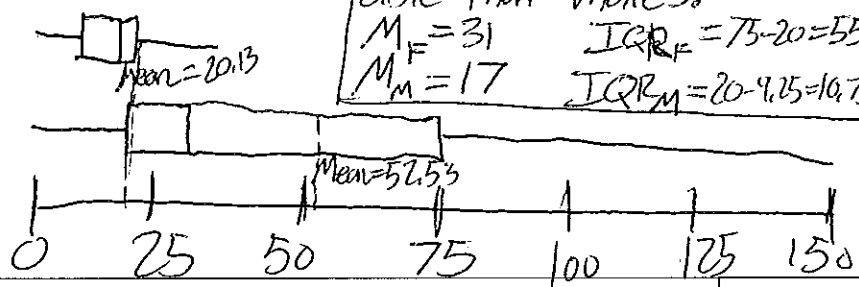
Name _____ Date _____

Seventy-five female college students and 24 male college students reported the cost (in dollars) of his or her most recent haircut. The resulting data are summarized in the following table:

	Females	Males
No. of observations	75	24
Minimum	0	0
Maximum	150	35
1st Quartile	20	9.25
Median	31	17
3rd Quartile	75	20
Mean	52.53	20.13

Provide a graphical representation of the data and describe the difference in haircut costs between males and females.

I made a box plot of males & females to compare their distributions.



Female hair cuts cost more and are more variable than males.
 $M_F = 31$ $IQR_F = 75 - 20 = 55$
 $M_M = 17$ $IQR_M = 20 - 9.25 = 10.75$

Both distributions seem to have a right skew, but females are much more skewed. Female range is much bigger than males. Because data is skewed, median & interquartile range are appropriate.

Strand: <input type="checkbox"/> algebra <input type="checkbox"/> geometry <input type="checkbox"/> statistics	Score:		
Standards: HS.S-ID.A (1) Represent data with plots on the real number line (dot plots, histograms, and box plots). (2) Use statistics appropriate to the shape of the data distribution to compare center (median, mean) and spread (interquartile range, standard deviation) of two or more different data sets. (3) Interpret differences in shape, center, and spread in the context of the data sets, accounting for possible effects of extreme data points (outliers).	Making sense of the task	Representing and solving the task	
	Communicating reasoning	Reflecting and evaluating	Accuracy