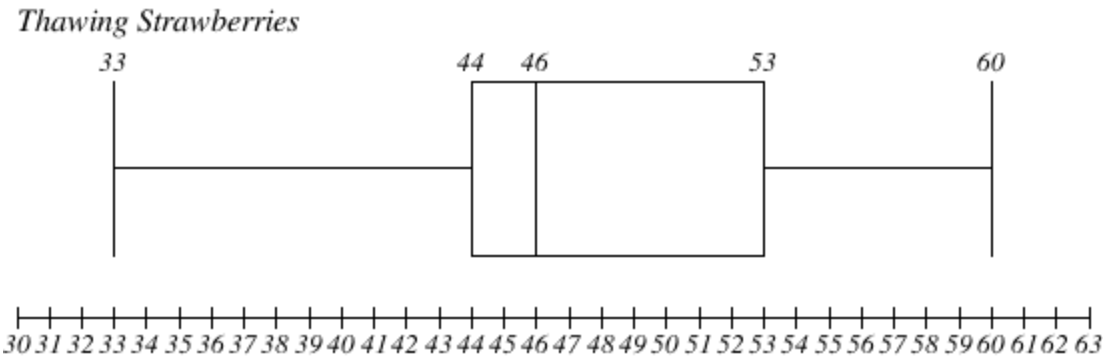
Comparing Data Using Box Plots

1. **The percentage of juice lost after thawing for 19 different strawberry varieties appeared in the article "Evaluation of Strawberry Cultivars with Different Degrees of Resistance to Red Scale" (*Fruit Varieties J.* (1991): 12 – 17*)*:**

46	51	44	50	33	46	60	41	55	46
53	53	42	44	50	54	46	41	48	

a. Are there any observations that are mild outliers? There are none

b. Construct a boxplot and comment on the important features of the plot.



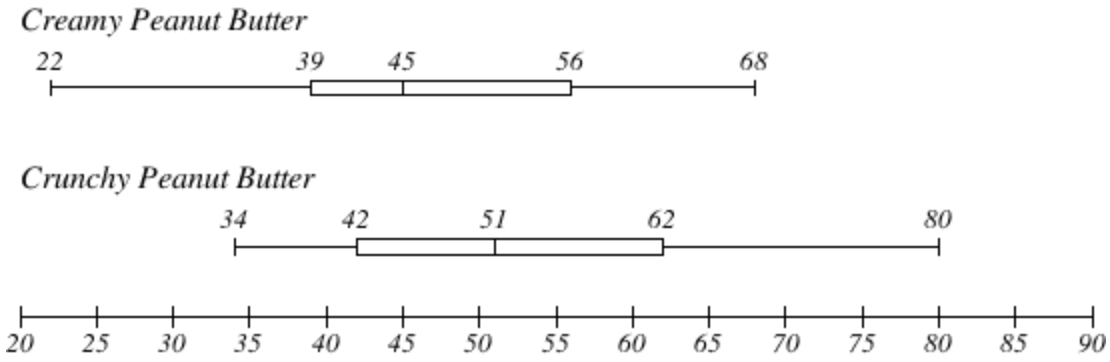
The data is slightly skewed right. The range is much larger than the IQR which shows there is some variance in the data. We would expect the mean to be larger than the median.

2. A *Consumers Reports* article on peanut butter (Sept. 1990) reported the following scores for various brands:

56	44	62
36	39	53
50	65	45
22	40	56
68	41	30
40	50	56
30	**Creamy**	

62	53	75
42	47	40
34	62	52
50	34	42
36	75	80
47	56	62
	Crunchy	

Draw both box plots to compare this data, what conclusions can you make on the score of creamy peanut butter versus crunchy peanut butter?



I think the boxplots show that Crunchy Peanut butter scored better than Creamy because the median is larger for crunchy peanut butter. Also, the maximum value is much larger than the max value for creamy peanut butter.

Or

I think the distribution of scores for both types of peanut butter are similar based on the range which is the same (46), the IQR for creamy peanut butter is 17 and crunchy is 20 (which is close). Finally the standard deviation is 1.75 units apart (which is close)