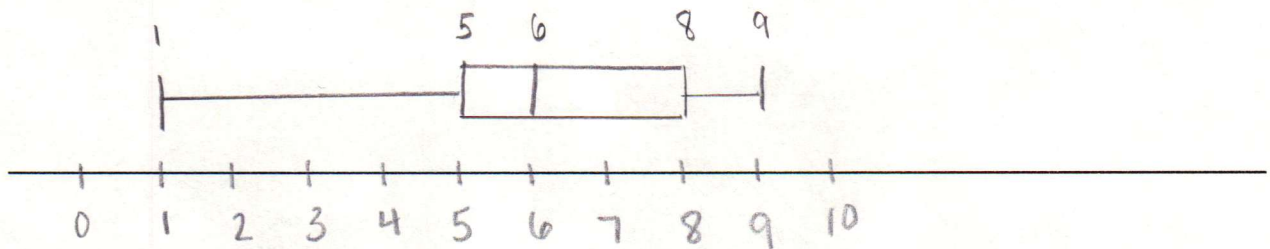


Notes 4.2 – Statistics

Warmup

a. Make a box and whisker plot for the following quiz scores.

~~1, 5, 8, 6, 8, 9, 5, 8, 6, 7, 5, 5, 7, 5, 7~~ 1, 4, 5, 5, 5, 6, 6, 7, 7, 8, 8, 8, 9



b. Make a histogram with an interval of 2 for the following quiz scores.

9, 8, 10, 5, 9, 7, 8, 9, 8, 5, 8, 10, 8, 8, 5

Score	Frequency
1-2	
3-4	
5-6	
7-8	
9-10	

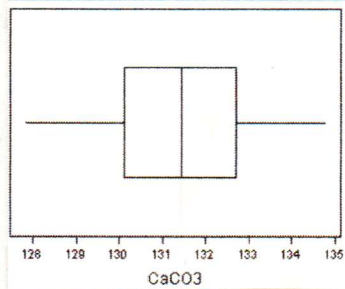


Lesson – Data Distribution

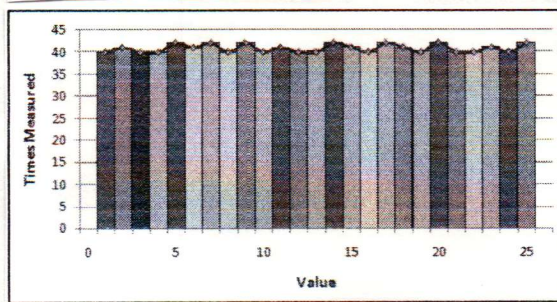
Word	Meaning/Notation	Example
Shape	Describing the data distribution using modality, skew, outliers, and variability	The data is bimodal, skewed left, with low variability

Modes:

Uniform

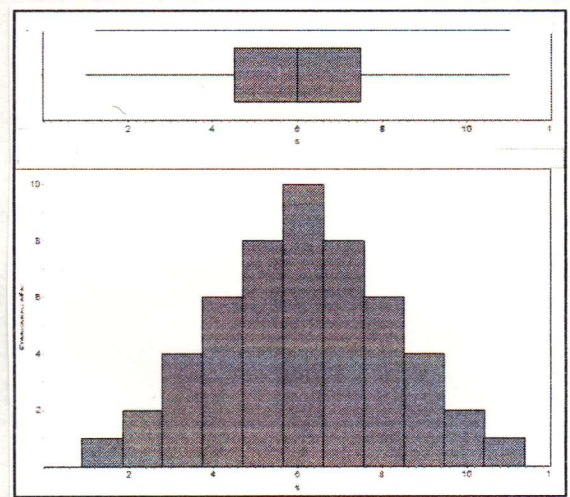


each section about the same width
bars about same height

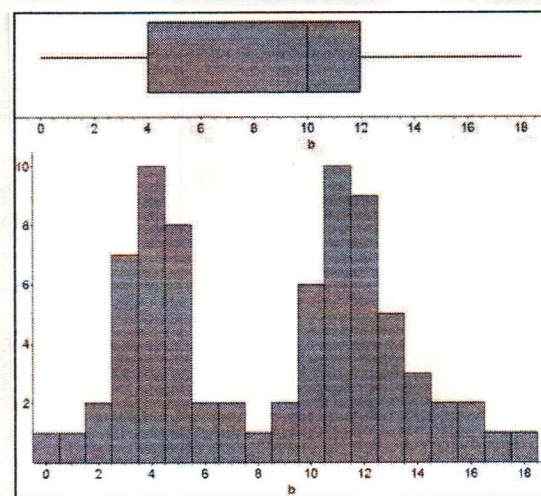


Unimodal

one peak

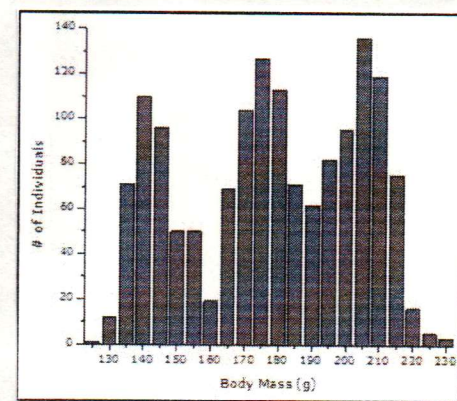


Bimodal



two peaks

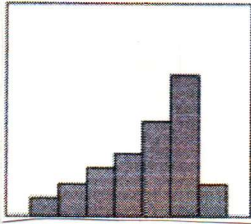
Multimodal



more than two peaks

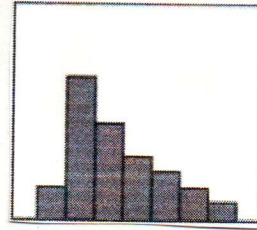
Skew

Skewed Left



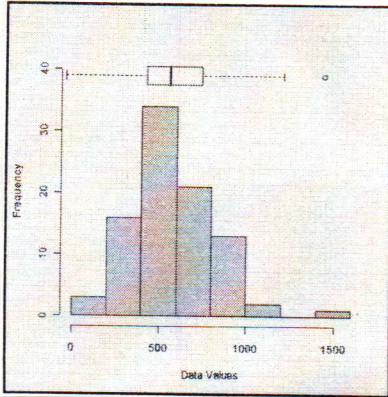
tail of data is on the left

Skewed Right



tail of data is on the right

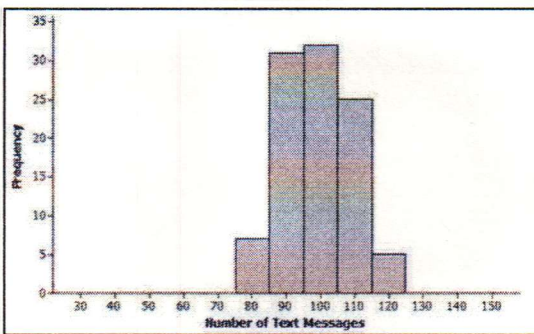
Outlier



there is a data point set apart from the rest

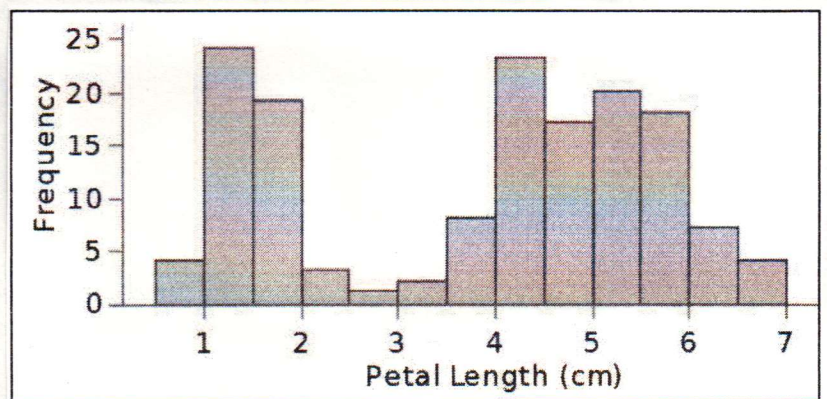
Variability

Low Variability



data is close together

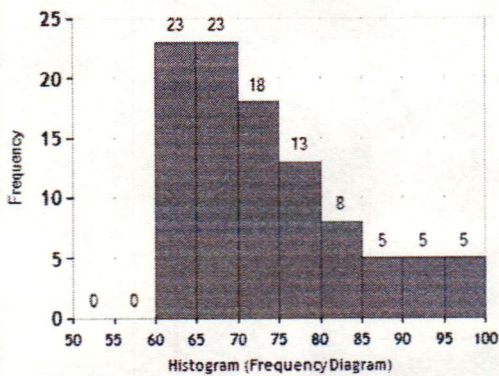
High Variability



data is spread out

Describe each data distribution and show (highlight) approximately where the center is for each teachers set of test scores.

1. William's Class



Mode: unimodal

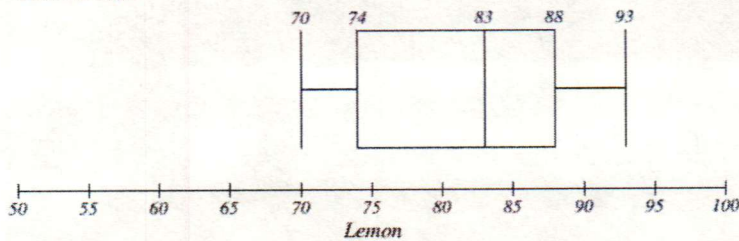
Skew: skewed right

Outliers: none

Variability: low, scores are only using less than half of possible range or normal

2. Lemon's Class

Lemon's Class



Mode: unknown

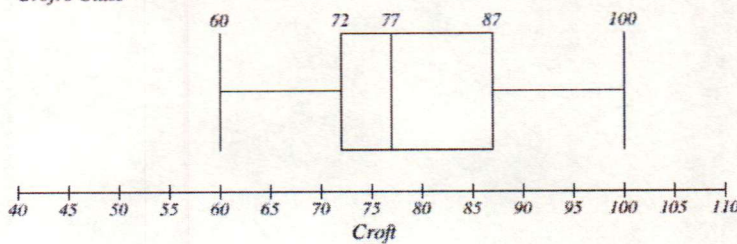
Skew: none

Outliers: none

Variability: low, 70-93 out of 0-100

3. Croft's Class

Croft's Class



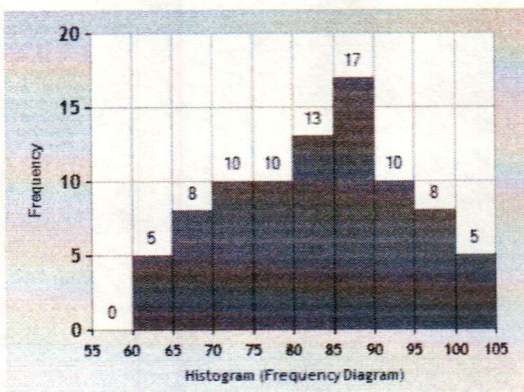
Mode: unknown

Skew: maybe right

Outliers: none

Variability: low, same as #1

4. Anderson's Class



Mode: unimodal

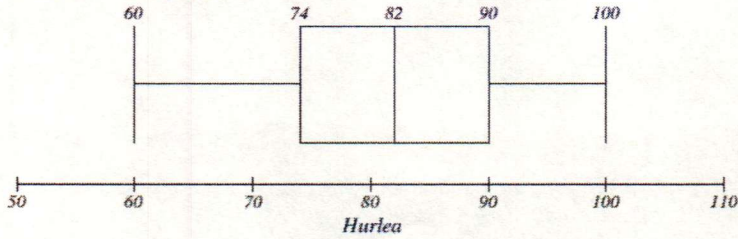
Skew: none

Outliers: none

Variability: low

5. Hurlea's Class

Data set V: Hurlea's class



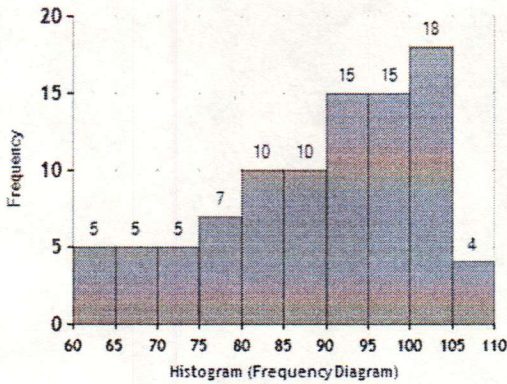
Mode: unknown

Skew: none

Outliers: none

Variability: low

6. Jones Class



Mode: unimodal

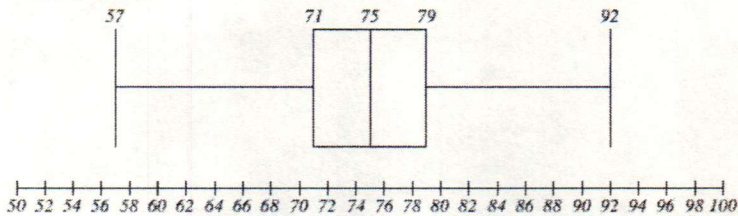
Skew: skewed left

Outliers: none

Variability: low

7. Overall Scores

Test Scores



Mode: unknown

Skew: none

Outliers: none

Variability: low

8. Which distributions are the most similar? Explain.

Anderson / Hurlea / Overall - They seem symmetric with a center peak

9. Which distributions are the most different? Explain.

Williams / Jones - skewed in opposite directions

10. Which type of model was easier to read in this scenario? Why?

Histogram because it shows data distribution more.