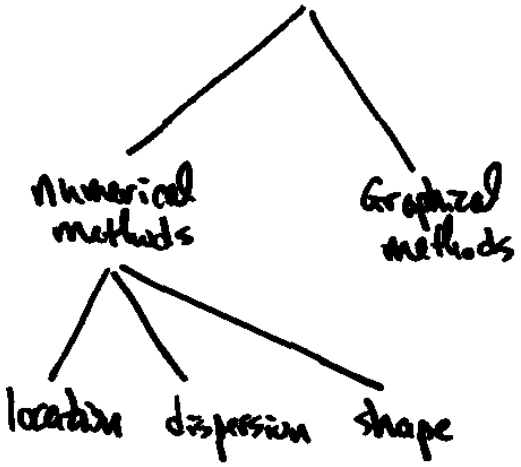
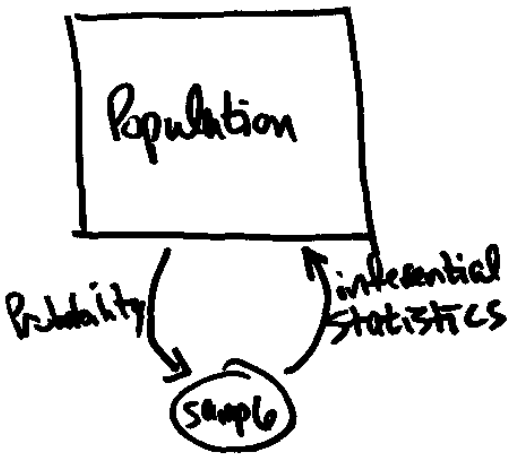
Stat 573
3-31-15

Free textbook:

www.openintro.org/stat/textbook.php

Descriptive Statistics





skewed to the left

skewed to the right

multi-modal

(3)

55 66 71
75 65 74
32 66 55

Sample of 9 observations from an unknown source

Stem-and-leaf plot

stems	leaves
3	2
4	
5	5
6	656
7	514
8	5

3	2
4	
5	5
6	566
7	145
8	5

(4)

Measures of location

Sample mean = $\bar{x}$ = arithmetic average

$$= \frac{\sum_{i=1}^{n} x_i}{n}$$

} not robust because a single outlier can substantially change its value

Sample median = Q_2 = "2nd quartile"

= "50th percentile"

= middle value (or average of 2 middle values)

is robust

Sample mode = most frequent value

Sample midrange = average of the largest + smallest values