

8.4 Graphical Representations

Wednesday, June 19, 2019 2:10 PM

Data Set: 32, 66, 68, 74, 75, 75, 75, 80, 82, 82, 82, 84, 87, 87, 91, 91, 93, 93, 95, 98, 98, 99

48 $Q_1 = 75$ median = 83 $Q_3 = 93$ 120

$\bar{x} = 82.14$
 median = 83
 mode = 75, 82

similar $\rightarrow$ symmetric data set

$Q_1 = 75$

$Q_3 = 93$

IQR = 18

Outliers = 32

Lower Outlier
 $Q_1 - 1.5 \cdot IQR$
 $75 - 1.5 \cdot 18$
 48

Upper Outlier
 $Q_3 + 1.5 \cdot IQR$
 $93 + 1.5 \cdot 18$
 120

symmetric data set - there are similar numbers of data values to the left and right of the data set so the median and mean are similar

right-skewed data set vs. left-skewed data set

1, 2, 2, 3, 3, 4, 5, 19, 20

majority of values
 skewing data

$\bar{x} = 6.56$

median < mean

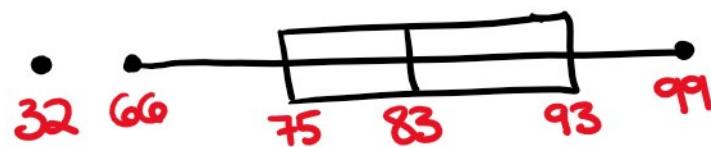
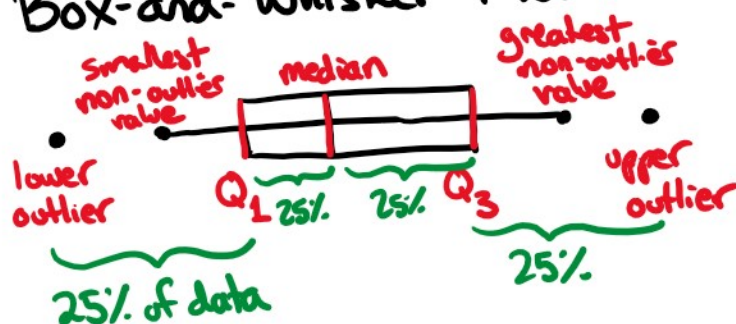
1, 2, 17, 18, 19, 19, 20

skewing data
 majority of values

$\bar{x} = 13.71$

median > mean

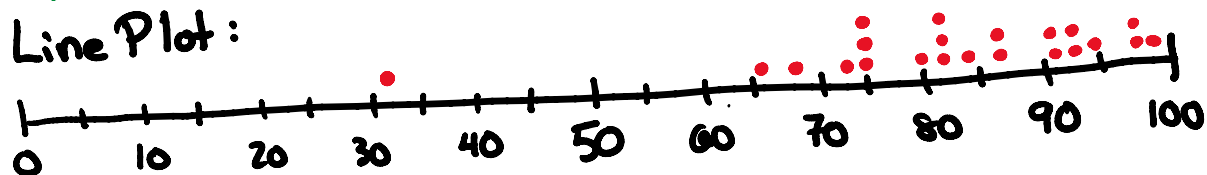
Box-and-Whisker Plot:



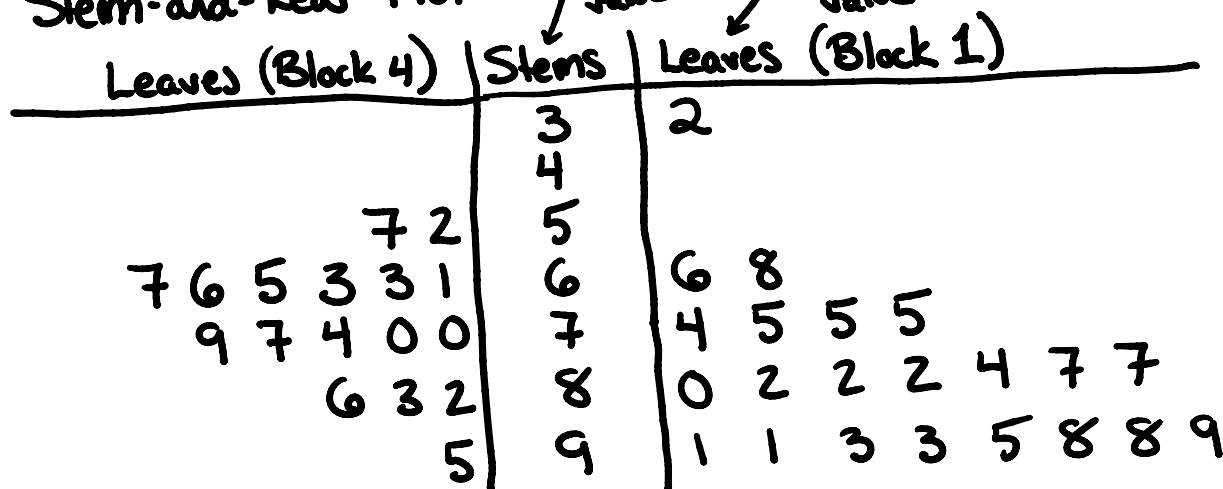
Line Plot:



Line Plot:



Stem-and-Leaf Plot:
 left part of each value
 right part of each value



Frequency Distribution

F	0-59	I
D	60-69	II
C	70-79	IIII
B	80-89	IIII II
A	90-100	IIII III

Histogram (Bar Graph)

