Homework Review - 13.5 and 13.6

1, 1, 1, 1, 1, 1, 1

(20)

275.9
279.3
315.6
406.5
418.5
563.6
719.0
820.6
1027.9
1164.6

mean = 600.16
median = 491.05
mode = none
range ≈ 900
m.a.d. = 267.5

3
6
7

10

mean absolute deviation:

$$\frac{324.26 + 320.86 + 284.56 + 193.66 + 181.66 + 36.56 + 118.84 + 220.44 + 429.74 + 564.44}{10} =$$

267.5

Stem and Leaf Plots and Histograms

14, 25, 16, 33, 17, 28, 13, 14, 36, 26

1	3 4 4 6 7
2	5 6 8
3	3 6

"stem"

Stem and leaf plots organize data based on the leading digit (stem)

Shows how data is distributed

Has to have a key to interpret stem and leaves

Example: Ages of students at CV

stem - 1st digit
leaves - 2nd digit

15 14 15 14

1	4 4 4 4 5 5 5 6 6 6 7 7 7 8 8

Make a stem-and-leaf plot of the data.

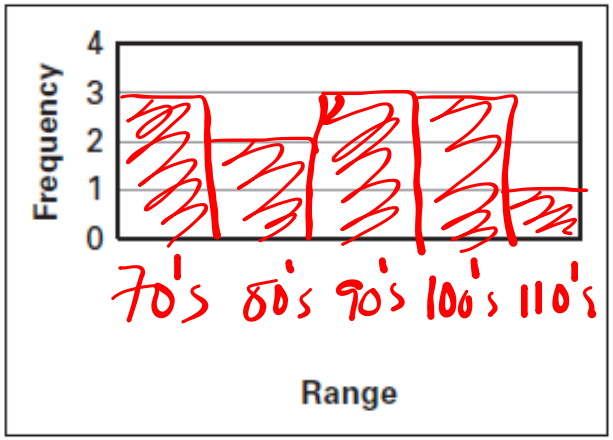
3. 21, 10, 14, 26, 8, 30, 17, 15, 34, 27, 36, 20, 7, 19, 25, 33, 19, 32, 12, 25

0	7 8
1	0 2 4 5 7 9 9
2	0 1 5 5 6 7
3	0 2 3 4 6

4. 52, 66, 61, 82, 51, 60, 62, 54, 73, 70, 89, 85, 74, 53, 61, 75, 89, 85, 77, 55

Making a Histogram:

78, 96, 72, 108, 82, 108, 99, 118, 94, 100, 86, 74



A histogram is a bar chart showing the frequency of data

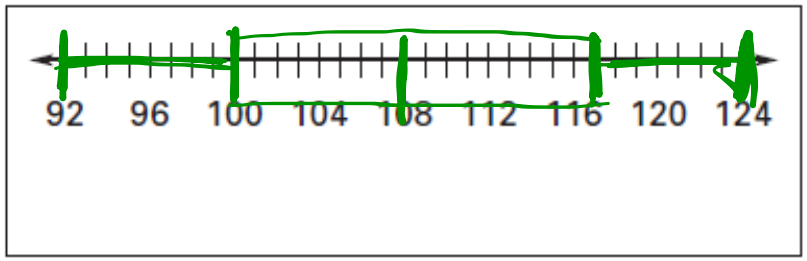
Categorize the data into intervals of equal ranges

Count the number of data points that fall into each interval

Graph in a bar graph

Using Box and Whisker Plots

108, 124, 92, 110, 117, 102, 100, 98, 120



92 98 | 100 102

108 | 110 117 | 120

124

These plots divide data into four groups (points of division are called quartiles)

- Order the data and divide evenly into four groups

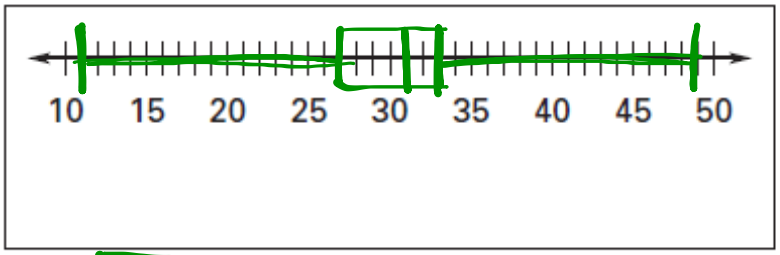
- Draw a box around 2nd and 3rd groups (lines at lower and upper quartile)

- Draw a vertical line at median

- Draw horizontal lines to maximum and minimum "whiskers"

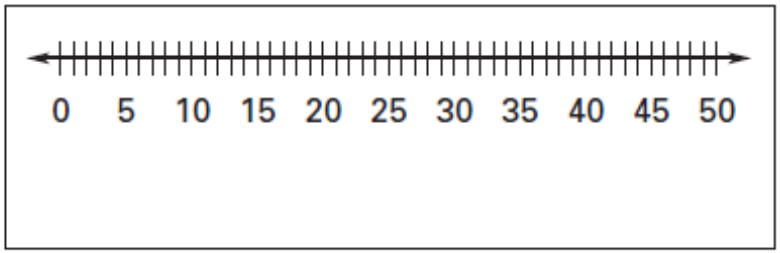
Make a box-and-whisker plot of the data.

5. 11, 33, 39, 27, 25, 31, 28, 33, 31, 49

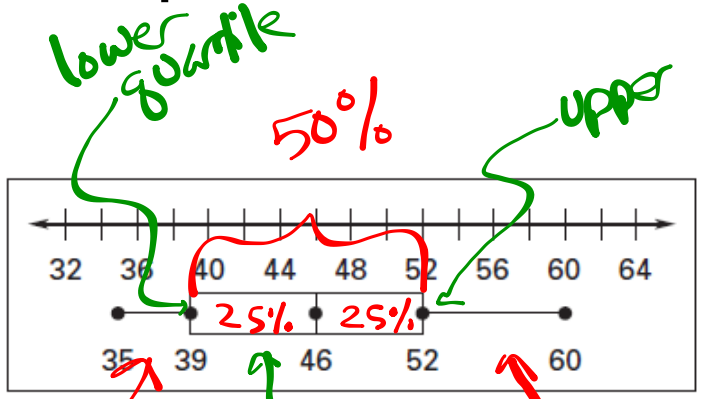


11, 25, 27, 28, 31, 31, 33, 33, 39, 49

6. 10, 16, 18, 10, 13, 7, 10, 13, 2, 48

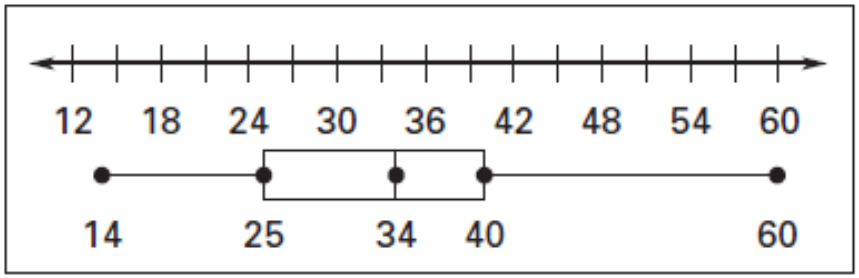


Interpret Box and Whisker Plots



Each "whisker" is 25% of the data

The box is 50% of the data (split into upper and lower 25%) - called the "interquartile" range



9. About what percent of the data are greater than 25? 75%

10. About what percent of the data are less than 34? 50%

Homework:

p. 883, 3-7 odd, 11-19 odd (not 15)

p. 889, 3-7 odd, 11-17 odd