Name: _____ Date: _____

Please fill in the definitions of each term using the glossary on pg. 522 of your textbook

Line Plot: A line that list the frequency of each value.

measures of central tendancy

Mean: (Average): Add all the values together, then divide by the number of values there are.

Median: Middle of an ordered list - odd # - the middle
- even # - the average of the middle 2

Mode: The most frequent value.

Outlier: Values that don't fit in your data set well.

Range: Lists the lowest and the highest value.
16 - 18

Example For the following data set. Create a line graph, calculate the range, mean, median and mode. Identify any outliers (if there are any.)

6 7 12 5 6 4 6 8 4

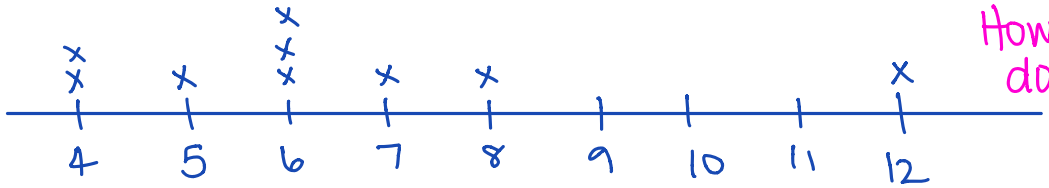
mean: $\frac{6+7+12+5+6+4+6+8+4}{9} = \frac{58}{9} \approx 6.4$

median 4 4 5 6 6 6 7 8 12

Range: 4 - 12

mode 6 (not necessarily unique)

Line Plot :



How many times do you see each value?

Assignment p. 211 #1-3 # of snap peas in my lunch Quiz Next Day!

Example Comparing Salaries (textbook, pg. 209)

The payrolls for three small companies are shown in the table. Figures include year-end bonuses. Each company has 15 employees. Ming wonders if the companies have similar "average" salaries.

Employee Payroll ($)		
Media Focus Advertising	Computer Rescue	Auto Value Sales
245,000	362,000	97,500
162,000	112,000	66,900
86,000	96,500	64,400
71,000	96,500	63,800
65,000	63,000	62,800
61,000	62,500	63,300
61,000	59,200	61,500
57,500	59,000	58,900
47,400	56,500	58,300
42,500	55,900	58,200
39,500	55,200	57,900
36,200	53,800	57,300
33,400	53,100	56,900
28,500	52,700	55,250
27,300	52,300	55,250

mode

median →

1. What is the best indicator of an "average" salary for each company?

$$\bar{x} = \begin{pmatrix} \$\ 70886.67 \\ 70903.00 \end{pmatrix} \$\ 86013.33 \quad (62546.67)$$

2. What is the range of salaries for each company?

MF 27300 - 245000
CR 52300 - 362000
AV 55250 - 97500

3. Examine the data. Which companies have data that would be considered *outliers*?

MF 24500, 162000
CR 362000, 112000, 96500
AV $97500

4. Determine the measures of central tendency:

	Media Focus Advertising	Computer Rescue	Auto Value Sales
Mean	70886.67	86013.33	62 546.67
Median	57,500	59,000	58,900
Mode	61,000	none	55 250

5. Which measure of central tendency is most affected by the outliers?

$\bar{x}$ mode. mean

The mean is the most commonly affected

6. Create a line plot for each of the three companies. Look for outliers, measures of central tendency, and the range on your line plots. Which of these features is most easily visible?

LW.

7. Which measure of central tendency best illustrates the "average" salary for each company? Why?

The mean is the average!!