Measures of Central Tendency   (Chapter 14.2)

The objectives for this section include:
1. Compute the mean, median, mode, and midrange of distributions.
2. Find the five number summary of a distribution.
3. Apply measures of central tendency to compare data.
4. Use box-and-whisker plots to summarize data.

Fill in the appropriate term

$$\underline{\hspace{3cm}} \text{ is } \bar{x} = \frac{\Sigma x}{n} = \frac{\text{sum of the data values}}{\text{number of data values (Total of frequency)}}$$

Complete **Quiz Yourself** ④ on p. 795

Class Practice 1 - To determine the mean of data in a frequency table <u>you should find</u> the total of each row and column.

Number of M & M's in a bag x	Number of bags with those M & M's (*f*requency)	*Total number of M & M's*
27	2	
31	5	
32	2	
34	3	
37	1	

Find Totals →

Mean = —— =

Complete **Quiz Yourself** (**5**) on p. 797

Median is the _____ value of a data set <u>arranged</u> in ascending or descending order. If there is an odd number of terms find the middle number.

Ex. The median of: 8 oz, 12 oz, 16 oz, 24 oz, 24 oz is <u>16 oz</u>, as it is the 3rd term of the five

If there is an even number of terms find the average of the two middle terms.

Ex. The median of: 60 min, 100 min, 110 min, 110 min is <u>105 min</u> as it is the average of the 2nd and 3rd terms among the four terms.
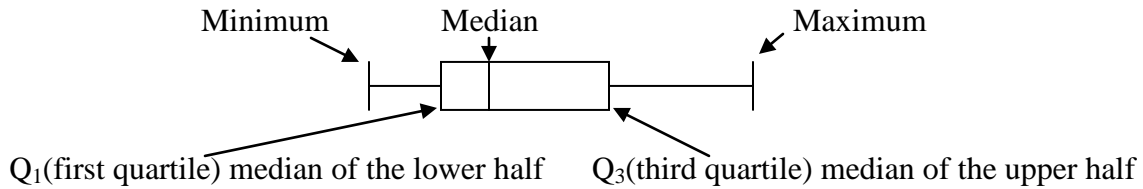

Class Practice 2

Find the median # of M & M's /bag.

Number of M & M's in a bag	Number of bags with those M & M's (frequency)
27	2
31	5
32	2
34	3
37	1

← *Find frequency Total*

Complete **Quiz Yourself** (**6**) on p. 799

Class Practice 3 using the same M & M data find the midrange of the number of M & Ms?

A box-and-whisker plot is a graph that has five numbers that it is made up of:

Minimum   Median   Maximum

Q_1(first quartile) median of the lower half Q_3(third quartile) median of the upper half

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Class Practice 4
Find the five-number summary of the low temperatures in the region 37°, 36°, 35°, 40°, 33°, 31°

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If there are an odd number of terms, then the median will <u>not</u> be used in the lower nor upper half to find the quartiles.

Complete **Quiz Yourself** (7) on p. 800

Be sure to include a scale under your plot and title above your plot.

<u>**Mode**</u> is the most frequent value. If there is more than one number that occurs the most frequent then each of those numbers is the mode, and if there is no number that occurs more often than the others than there is no mode.

Ex. The mode of: 8, 9, 11, 12, 12, 16, 16 is _____ which makes this set _____.

Class Practice 5

List which "average" measure of central tendency is being used in each statement:

a) The average shoe size for women is 8.

b) The average new home price in the Midwest is $147,600.

c) The average teacher salary is $50,227.

d) The average score on the test was 71%.

Use the box-and-whisker plot on the top of p. 806
Complete # 45-46, 49-50 on p. 806

Assignment for Monday 4/12
Read pp. 794-803, Finish 14.2 Guided Notes,
Complete # 2, 4, 5, 7, 11, 17, 19, 25, 35 on pp. 803-805
Test 3 Corrections for the In-class part are due on a separate sheet of paper with your exam