

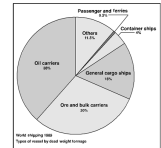
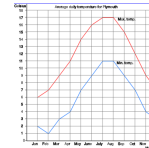
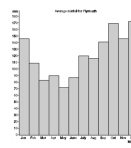
Math 7H - Unit 6

Day 1 - Measures of Center

Lesson Objectives:

- I can find the mean, median, and mode of a set of data.
- I can use measures of center to draw informal inferences about a population.

Statistics is a branch of mathematics that involves the collection, presentation, and analysis of data. In statistics, graphs are usually used to present data. These graphs help to interpret the data easily.



Statistics are used every day in business, medicine, science, media, education, and nearly every other occupational field.

When you have a list of numerical data, it is often helpful to use one or more numbers to represent the whole set. These numbers are called measures of center or measures of central tendency.

The **median** is the middle number of an ordered set of data. (If there are two numbers in the middle, the median is the mean of those two numbers.)

The **mode** is the number or numbers that occur most often in a set of data.

The **mean** is the sum of the data divided by the number of items in the data set.

The revenue of the 10 highest grossing movies as of June 2000 are given in the table. Find the mean, median, and mode of the revenues.

Top 10 Movie Revenues (millions of dollars)	
601	330
461	313
431	309
400	306
357	290

Mean = 379.8
Median = 343.5
Mode = No Mode

The quiz scores for a math class are 8, 7, 6, 10, 8, 8, 9, 8, 7, 9, 8, 0, and 10. Identify an "extreme" value and describe how it affects the mean.

$$\frac{\text{mean w/o } 0}{7.5}$$

$$\frac{\text{mean w/o } 0}{8.2}$$

An extreme value is 0. The zero changes the mean from 8.2 to 7.5.

The table shows the monthly salaries of the employees at two bookstores. Find the mean, median, and mode for each set of data. Base on the averages, which bookstore pays its employees better?

Bob's Books	The Reading Place
1290	1400
1400	1450
1400	1550
1600	1600
3650	2000

Bob's Books **The Reading Place**
Mean = 1868 Mean = 1600
Median = 1400 Median = 1550
Mode = 1400 Mode = No mode
The Reading Place pays better.

Jenny's bowling average is 146. Today she bowled 138, 140, and 145. What does she need to score on her fourth game to maintain her average?

$$4 \cdot 146 = \frac{(138 + 140 + 145 + x)}{4}$$

$$584 = 423 + x$$

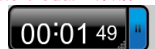
$$161 = x$$

She needs to bowl 161 to maintain her average.

Homework

Measures of Center WKS

* Individual Think Time *



What to do if you get stuck...

1. Reread the problem. Did you write it down correctly?
2. Reread your notes. Is there a problem similar that we did together in class?
3. Find a problem similar in your book. Try this one to see if it helps.
4. Skip the problem until the end of Individual Think Time. Then ask an "educated" question of a neighbor or Mrs. Call.

Today we're working by...

