

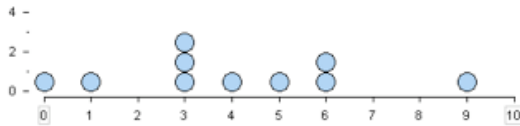
Math 190

Module 8

Summarizing Data Graphically and Numerically

Mean and Median

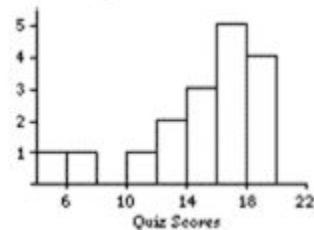
1. The **mean** is often described as a *fair share* measure of center. What does this mean?
2. The **mean** is also called the *balancing point*. Why?
3. The school committee of a small town wants to determine the average number of children per household in their town. There are 50 households in the town. They divide the total number of children in the town by 50 and determine that the average number of children per household is 2.2. Which of the following must be true?
 - a. Half of the households in the town have more than 2 children.
 - b. There are a total of 110 children in the town.
 - c. The most common number of children in a household is 2.2
 - d. None of the above.
4. What is the mean of the dotplot pictured?



- a. 3
 - b. 4
 - c. 4.44
 - d. 5
5. Demonstrate with the data set in the dotplot that the mean is the “balancing point” for the distribution

Median

6. Give an example of a data set (with at least four elements) that has a median that is not one of the data points.
7. For the 17 quiz scores graphed in the histogram, estimate the median.



8. Which of the following distributions will have a mean and a median that are equal? Check all that apply. Use the applet to create the distributions if you need to.
- {1, 1, 1, 1, 1, 9, 9, 9, 9, 9}
 - {3, 4, 4, 5, 5, 5, 5, 6, 6, 7}
 - {1, 2, 3, 4, 5, 6, 7, 8, 9, 10}
 - {1, 9, 9, 9, 9, 9, 10, 10, 10, 10}
 - {1, 1, 1, 1, 2, 2, 2, 2, 10}

9. A college statistics class conducted a survey of how students spend their money. They asked 25 students to estimate how much money they typically spend each week on fast food. They determined that the mean amount spent on fast food each week is \$31.52 and the median is \$32. Later they realized that a value entered as \$2 should have been \$20. They recalculate the mean and the median. Which of the following is true?
- The mean and median will increase.
 - The mean will increase, but the median will remain the same.
 - The mean will stay the same, but the median will increase.
 - Both the mean and median will remain the same

10. Which measure of center is the best measure of a typical value for the data set in the histogram below?

- Median
- Mean
- Both

