

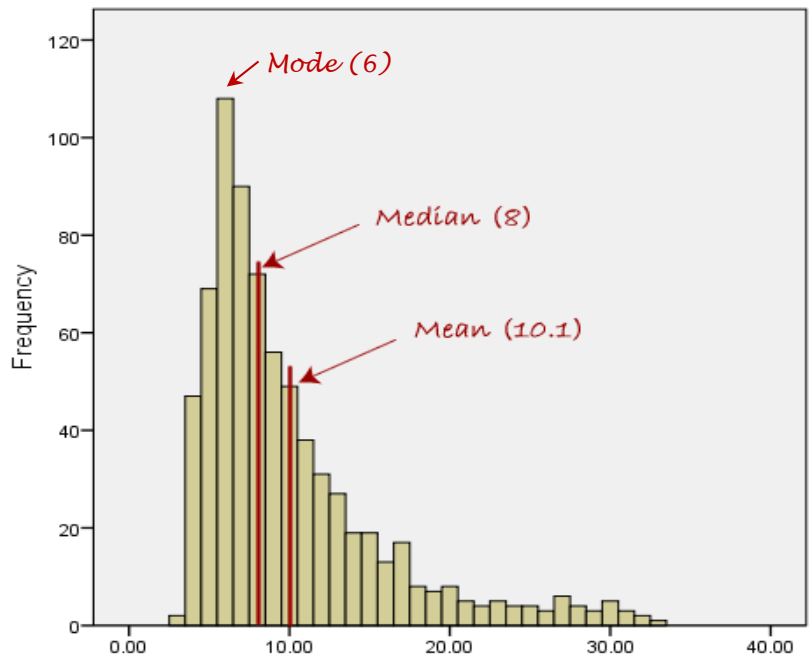
Measures of Central Tendency

Mean – The most common value. Only use if the data is normally distributed. Do not use if the data is skewed.

Median – The middle value. Half of the values are above this number; half are below.

Mode – The number that occurs most frequently. It is the tallest bar on a histogram.

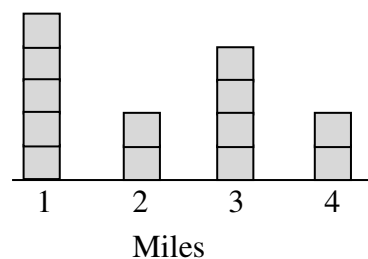
Range – Shows how far apart the lowest and highest numbers are



1. There are 10 juniors and 20 seniors in English class. The test average for the juniors is 81 and the test average for the seniors is 92. What is the test average for the entire class?
2. In Ms. Take's 6th grade class, there are 14 boys and 6 girls. On a history quiz, the boys' mean score was 80 and the girls' mean score was 90. What was the mean score for the entire class?
3. Your test average is 85. If you scored an 82, 92, and 76 on your first three tests, what did you score on the fourth test?
4. The list of numbers below is ordered from smallest to greatest. The range of the numbers is 55, their median is 28, and c equals 30 more than b . What are a , b , and c ?

Which measures (mean, median, mode, and/or range) will not change if you perform the indicated operation on the list of numbers?

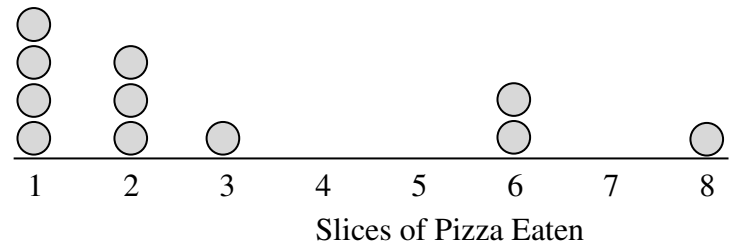
5. 11, 11, 12, 15, 18; if an 18 is changed to 16
6. 4, 4, 5, 7, 11, 12; if one 4 is changed to 3
7. 62, 71, 71, 94; if 3 is added to each number
8. The histogram shows the number of times Jacob ran each distance in a month. Use the histogram to answer the questions:



- a. How many times did Jacob run?
- b. What is the mode?
- c. What is the median distance he ran?
- d. What is the average distance?
- e. What is the range?

9. The histogram shows the slices of pizza each person ate at youth group. Use the histogram to answer the questions:

- How many people ate pizza?
- What is the mode?
- What is the median number of slices eaten?
- What is the average number of slices eaten?
- What is the range?



10. The New Braunfels Police did a traffic study on a portion of Loop 337 that has a 55 mile per hour speed limit. Between 4:30 pm and 5:30 pm on one day, they clocked cars going the following speeds:

Speeds of cars on Loop 337(mph): 30, 43, 50, 58, 58, 60, 61, 62, 63, 65, 68, 72

- Find the median.
- Find the mean.
- Find the mode.
- Find the range.

11. Salaries for the ten employees of MegaCorp are shown in the table below.

- Find the mean, median, mode, and range of the data.
- Is the data normally distributed, positively skewed or negatively skewed?
- Which measures of central tendency best represent the “average” employee salary?

CEO	\$500,000
Vice-President	\$200,000
Production workers (6 of them)	\$40,000
Administrative assistants	\$38,000
Maintenance worker	\$28,000