

5-9 Study Guide and Intervention

Measures of Central Tendency

When working with numerical data, it is often helpful to use one or more numbers to represent the whole set. These numbers are called the measures of central tendency. You will study the mean, median, and mode.

Statistic	Definition
mean	sum of the data divided by the number of items in the data set
median	middle number of the ordered data, or the mean of the middle two numbers
mode	number or numbers that occur most often

Example Jason recorded the number of hours he spent watching television each day for a week. Find the mean, median, and mode for the number of hours.

Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Sun.
2	3.5	3	0	2.5	6	4

$$\begin{aligned} \text{mean} &= \frac{\text{sum of hours}}{\text{number of days}} \\ &= \frac{2 + 3.5 + 3 + \dots + 4}{7} \\ &= 3 \quad \text{The mean is 3 hours.} \end{aligned}$$

To find the median, order the numbers from least to greatest and locate the number in the middle.

0 2 2.5 ③ 3.5 4 6 The median is 3 hours.

There is no mode because each number occurs once in the set.

Exercises

Find the mean, median, and mode for each set of data.

1. Maria's test scores

92, 86, 90, 74, 95, 100, 90, 50

2. Rainfall last week in inches

0, 0.3, 0, 0.1, 0, 0.5, 0.2

3. Resting heart rates of 8 males

84, 59, 72, 63, 75, 68, 72, 63