Lesson 2-7

Example 1

SPORTS In preparing a sports report for the newspaper, Juan recorded the batting averages of 2 baseball players systematically sampled from each of the twelve teams in the league. Construct a frequency table for this data.

.253	.291	.248	.282	.253	.255
.277	.268	.255	.264	.256	.248
.238	.295	.230	.243	.286	.261
.250	.236	.284	.241	.246	.284

Solution

The lowest batting average is .236 and the highest is .305. Group the data into intervals. Then mark a tally for each data piece in the appropriate interval, and total the frequencies.

Batting Average	Tally	Frequency
.230-.239	|||	3
.240-.249	卌	5
.250-.259	卌 |	6
.260-.269	|||	3
.270-.279	|	1
.280-.289	||||	4
.290-.299	||	2

Example 2

TEST TAKING The mathematics scores from a standardized test for 8 high school students are listed below.

    544   538   574   504   578   566   558   578

a. Find the mean of the data.

b. Find the median of the data.

c. Find the mode of the data.

d. Which measure of central tendency is the best indicator of the typical mathematics score for these students?

Solution

a. To find the mean add the data and divide by the number of data.
$$\frac{544 + 538 + 574 + 504 + 578 + 566 + 558 + 578}{8} = \frac{4440}{8} = 555$$

The mean is 555.

b. To find the median, rewrite the data in numerical order.

    504   538   544   558   566   574   578   578

Because there is an even umber of data, the median is the average of the two middle numbers.

$$\frac{558 + 566}{2} = \frac{1124}{2} = 562$$

The median is 562.

c. The mode is the number that occurs the most. So the mode is 578.

d. The best indicator of the typical mathematics score for the students is the median, 562, which is not affected by the extreme value (504).
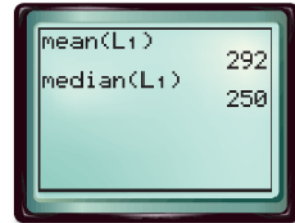
Example 3

CALCULATOR A photographer sold photos to a magazine for the following: $220, $172, $325, $625, $130 and $280. Find the mean and median of the amounts.

Solution

Use the list feature to create and store a new list (**L1**). After entering the data, choose **MATH** from the **LIST** menu to find the mean and median of the new list.

The mean of the list is $292 and the median is $250.