Lesson 8-2

Example 1 Find the Mean
TELEVISION The table shows the number of hours middle school students spend watching television each day. Find the mean.

Hours of Television
2 4 3 0 5 2 1
2 3 1 4 0 2 1

$$\text{mean} = \frac{2+4+3+...+1}{14} \quad \leftarrow \text{Sum of data divided by number of data items.}$$

$$= \frac{30}{14} \text{ or } 2.14$$

The mean number of hours spent watching television each day is about 2.14 hours.

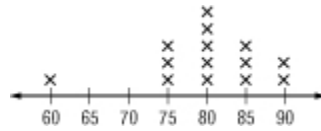**Example 2 Find the Mean, Median, and Mode**
COMPUTER GAMES The table shows the number of computer games owned by a group of middle school students. Find the mean, median, and mode of the data.

Number of Computer Games
12   7 23 18 11 14 32 15
10 36 19 15 22 31   9 25

mean: sum of data divided by 16, or 18.7
median: the average of the 8$^{\text{th}}$ and 9$^{\text{th}}$ items of the ordered data, or 16.5
mode: number appearing most often, or 15

Example 3 Standardized Test Practice
TEMPERATURE The line plot shows the daily high temperatures in Miami, Florida for a two week period in January.

Which measure of data represents the most common daily high temperature?

A Mean   **B** Median   **C** Mode   **D** Mean, Median, or Mode

Read the Test Item
You are asked to identify the measure of central tendency that represents the *most common* daily high temperature.

Solve the Test Item

mean: $\dfrac{60+75+75+...+90}{14}$ or 80

median: $\dfrac{\text{7th term + 8th term}}{2} = \dfrac{80+80}{2}$ or 80

mode: 80

The value of the mean, median, and mode are all the same, 80. So, any of them can be used to represent the temperatures.

The answer is D.

Example 4 Choose Mean, Median, or Mode
SALARY The table below shows the annual salaries for a random selection of full-time employees of a large corporation. Would the mean, median, mode, or range best represent the annual salaries?

Annual Salaries ($1,000's)
23 18 32 33 29 24 34 41 92 38 32

mean: $\dfrac{23+18+32+33+29+24+34+41+92+38+32}{11}$ or 36

median: 6th term $= 32$

mode: 32

range: 92 – 18 or 74

The mode of 74 misrepresents the salaries. The median is slightly higher because of the one larger salary (92). The median or the mode would best represent the salaries.