Mean, Median, Mode, and Range **TEKS** *8.12.A*

Mean, median, and mode are measures of central tendency; they measure the center of data. Range is a measure of dispersion; it measures the spread of data.

The **mean** of a data set is the sum of the values divided by the number of values. The mean is also called the *average*.	The **median** of a data set is the middle value when the values are written in numerical order. If a data set has an even number of values, the median is the mean of the two middle values.	The **mode** of a data set is the value that occurs most often. A data set can have no mode, one mode, or more than one mode.	The **range** of a data set is the difference between the greatest value and the least value.

EXAMPLE   Find the mean, median, mode(s), and range of the data.

Daily High Temperatures, Week of June 21–27							
Day	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Temperature (°F)	76	74	70	69	70	75	78

Mean   Add the values. Then divide by the number of values.

$76 + 74 + 70 + 69 + 70 + 75 + 78 = 512$

$\text{mean} = 512 \div 7 \approx 73$ The **mean** of the data is about 73°F.

Median Write the values in order from least to greatest. Find the middle value(s).

69, 70, 70, <u>74</u>, 75, 76, 78

$\text{median} = 74$ The **median** of the data is 74°F.

Mode   Find the value that occurs most often.

$\text{mode} = 70$ The **mode** of the data is 70°F.

Range   Subtract the least value from the greatest value.

$\text{range} = 78 - 69 = 9$ The **range** of the data is 9°F.

PRACTICE

Find the mean, median, mode(s), and range of the data.

1. Apartment rents: $650, $800, $700, $525, $675, $750, $500, $650, $725

2. Ages of new drivers: 15, 15, 15, 15, 16, 16, 16, 16, 16, 17, 17, 17, 18, 18

3. Monthly cell-phone minutes: 581, 713, 423, 852, 948, 337, 810, 604, 897

4. Prices of a CD: $12.98, $14.99, $13.49, $12.98, $13.89, $16.98, $11.98

5. Cookies in a batch: 36, 60, 52, 44, 48, 45, 48, 41, 60, 45, 38, 55, 60, 48, 40

6. Ages of family members: 41, 45, 8, 10, 40, 44, 3, 5, 42, 42, 13, 14, 67, 70

7. Hourly rates of pay: $8.80, $6.50, $10.85, $7.90, $9.50, $9, $8.70, $12.35

8. Weekly quiz scores: 8, 9, 8, 10, 10, 7, 9, 8, 9, 9, 10, 7, 8, 6, 10, 9, 9, 8, 8, 10

9. People on a bus: 9, 14, 5, 22, 18, 30, 6, 25, 18, 12, 15, 10, 8, 22, 10, 11, 20