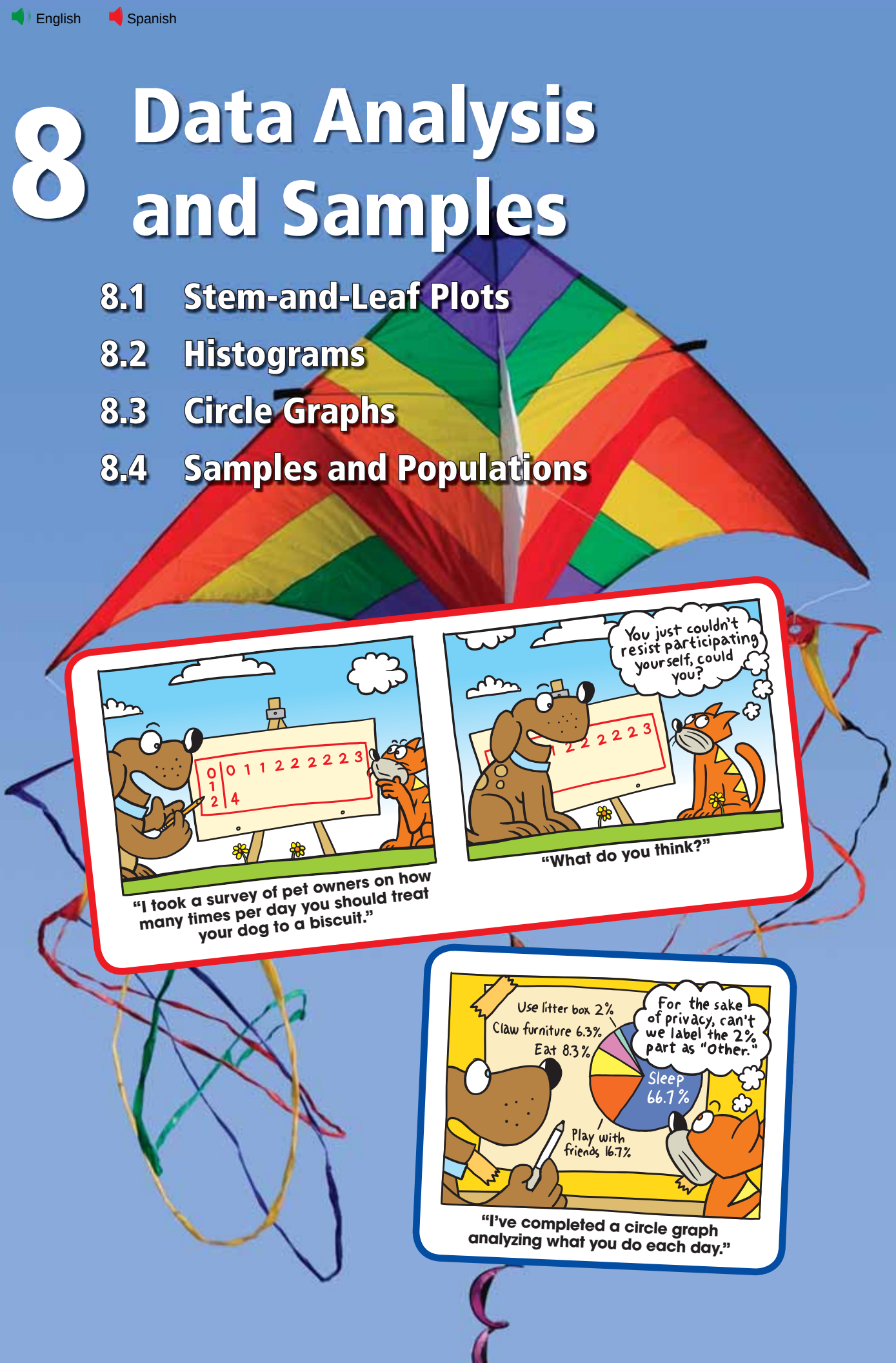
English Spanish

8 Data Analysis and Samples



English Spanish

What You Learned Before

Finding Mean, Median, Mode, and Range

The table shows the top ten Olympic pole vault heights for men and women.

Olympic Pole Vault Heights (meters)	
Men	**Women**
5.45	4.55
5.60	5.05
5.96	4.75
5.70	4.65
5.45	4.65
5.70	4.55
5.60	4.70
5.70	4.75
5.85	4.80
5.70	4.45

Example 1 **What is the mean of the men's data?**

$$\text{mean} = \frac{\text{sum of data}}{\text{number of data values}}$$

$$= \frac{56.71}{10} \approx 5.67$$

∴ So, the mean height is about 5.67 meters.

Example 2 **What is the median of the women's data?**

$$4.45, 4.55, 4.55, 4.65, \underbrace{4.65, 4.70}, 4.75, 4.75, 4.80, 5.05$$

$$\frac{4.65 + 4.70}{2} \approx 4.68$$

∴ So, the median is about 4.68 meters.

Example 3 **What is the mode of the men's data?**

∴ Because it occurs most often, the mode is 5.70 meters.

Example 4 **What is the range of the men's data?**

$$\text{range} = \text{greatest data value} - \text{least data value}$$

$$= 5.96 - 5.45 = 0.51$$

∴ So, the range is 0.51 meter.

Try It Yourself

Use the table to answer the question. Round your answer to the nearest hundredth.

1. What is the mean of the women's data?
2. What is the median of the men's data?
3. What is the mode(s) of the women's data?
4. What is the range of the women's data?