

**Chapter
10****Performance Task** (continued)**Classifying Dog Breeds by Size**

Have you ever volunteered at an animal shelter or adopted a dog from an animal shelter? What sizes of dogs do animal shelters commonly have? How can you use a stem-and-leaf plot to draw conclusions about the sizes of dogs at a shelter?

A volunteer at an animal shelter records the breed and weight of each full-grown dog at the shelter. The results are shown in the table.

Name	Breed	Weight (pounds)
Belle	Labrador Retriever	58
Zeus	Pit Bull Terrier	60
Rex	Beagle	21
Jordan	German Shepherd	77
Ben	Chihuahua	6
Coco	Border Collie	34
Penny	Feist	20
Goldie	Golden Retriever	60
Max	Boxer	64
Lacy	Pit Bull Terrier	57
Nate	Labrador Retriever	73
Koda	Border Collie	42
Zipper	Basset Hound	50
Jack	Pit Bull Terrier	45

1. Display the data in a stem-and-leaf plot. Describe the shape of the distribution.

**Chapter
10****Performance Task** (continued)**Classifying Dog Breeds by Size**

- Find the mean, median, mode, and range of the data. Round your answers to the nearest tenth, if necessary.
- Which data value is an outlier? Describe how this outlier affects the mean of the data.
- The shelter uses the size classifications shown in the table. How many dogs at the shelter are in each size classification?

Weight (pounds)	Size
<12	Toy
12–24	Small
25–49	Medium
50–100	Large
>100	Extra Large

- What is the most common size of dog at the shelter? Does your answer change when you use the mean of the data? Explain.
- An English Mastiff named Darby was just brought to the shelter. Darby weighs 150 pounds. How does the addition of Darby affect the data? Use the words mean, median, mode, range, and outlier in your explanation.