

1. A goat farmer raises two breeds of goats, Breed H and Breed J. He wants to compare the weights of the two breeds and takes independent random samples of 14 goats from each breed. The weight, in pounds, of each goat is measured. The weights of the 14 Breed H goats are recorded.

Weights of Breed H Goats (pounds)

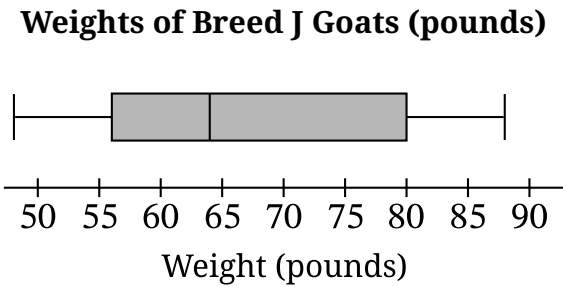
48
48
55
56
56
57
62
66
72
72
72
73
80
80

Part A

Use the data in the list to determine the five-number summary for the sample of Breed H goats.

Part B

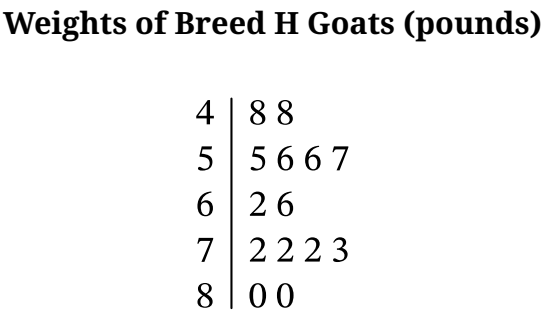
The distribution of weight for Breed J goats is displayed in the boxplot.



Use the five-number summary from part A and the boxplot of Breed J to compare the center and variability for the distribution of weight for the Breed H goats and the distribution of weight for the Breed J goats, in context.

Part C

A stem-and-leaf plot is another way to display the weights of goats. The distribution of weight for the Breed H goats is displayed in the given stem-and-leaf plot.



Key: 4|8 = 48 pounds

Consider the five-number summary from part A and the stem-and-leaf plot.

- i. If a boxplot were created from the five-number summary found in part A, what characteristic of the shape of the distribution of weight for the Breed H goats would be apparent from the stem-and-leaf plot but not from the boxplot?
- ii. Explain why a boxplot would not display the characteristic of the shape of the distribution identified in part C (i).