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Lesson 4.7 Stem-and-Leaf Plots

A **stem-and-leaf plot** is a way to organize data to examine the shape. Stem-and-leaf plots display the data in two columns, using place values. The right column shows the **leaves**—the "ones" digit of each number. The other digits are the **stems**, which appear in the left column. The key explains how to read the plot.

Use the following data to create a stem-and-leaf plot:

82, 95, 115, 84, 91, 87, 90, 104, 86, 91, 73, 99, 101, 73, 106

Step 1: Arrange the numbers in order, from least to greatest. 73, 73, 82, 84, 86, 87, 90, 91, 91, 95, 99, 101, 104, 106, 115

Step 2: Make a vertical list of stems, from the lowest "tens" digit to the highest digit. Use a vertical line to separate the stem and leaves.

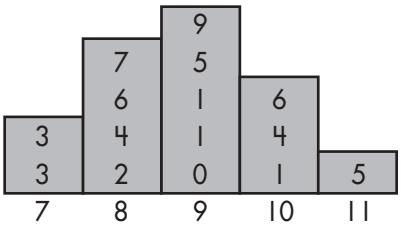
Step 3: List each "ones" digit next to its stem.

Step 4: Add a key that tells how to read the plot.

Stem	Leaves
7	3 3
8	2 4 6 7
9	0 1 1 5 9
10	1 4 6
11	5

Key: 7 | 3 = 73

The lengths of the leaves give you a sense of the shape and spread of the data. To see these characteristics, visualize the plot turned sideways, as shown at right. The data have been enclosed in bars to help you visualize. The height of each leaf column shows the shape of the data.



Use the stem-and-leaf plot above to answer these questions.

1. What is the mode of this data? 73, 91

2. What is the highest number in this data set? 115

3. What is the lowest number in this data set? 73

4. What is the range? 42