

Lesson 11-7

Example 1 Draw a Stem-and-Leaf Plot

EARTHQUAKES The table shows the magnitudes of major earthquakes that have taken place around the world. Display the data in a stem-and-leaf plot.

Magnitudes of Major Earthquakes				
8.7	6.8	7.7	8.3	8.3
6.5	6.9	7.1	7.8	8.6
6.1	6.9	7.0	9.5	8.6
7.9	7.4	8.0	8.3	8.3

Source: *The World Almanac*

Step 1 Find the least and the greatest number. Then identify the greatest place value digit in each number.

- The least number, 6.1, has 6 in the ones place.
- The greatest number, 9.5, has 9 in the ones place.

Step 2 Draw a vertical line and write the stems from 6 to 9 to the left of the line.

Stem	Leaf
6	
7	
8	
9	

Step 3 Write the leaves to the right of the corresponding stem on the other side of the line. For example, for 6.1, write 1 to the right of 6.

Stem	Leaf
6	5 1 8 9 9
7	9 4 7 1 0 8
8	7 0 3 3 3 6 6 3
9	5

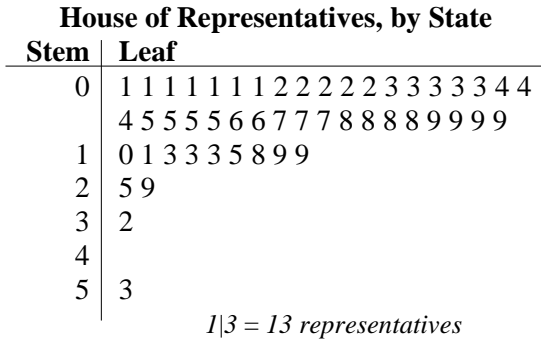
Step 4 Rearrange the leaves so they are ordered from least to greatest. Repeat a leaf as often as it occurs. Then include a key to explain how to interpret the data.

Magnitudes of Earthquakes	
Stem	Leaf
6	1 5 8 9 9
7	0 1 4 7 8 9
8	0 3 3 3 3 6 6 7
9	5

6|5 = 6.5

Example 2 Interpret Data

GOVERNMENT The stem-and-leaf plot shows the number of representatives for each U.S. state for a recent year.



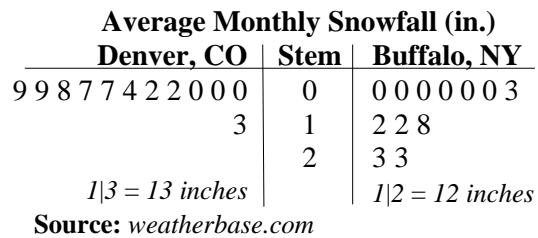
Source: *The World Almanac*

Based on the data, what inferences can be made about the number of representatives per state in the U.S. House of Representatives?

- Most states have fewer than 10 representatives.
- The fewest number of representatives for a state is 1. The greatest number of representatives for a state is 53.
- The range is 52, and the median number of representatives is 6.

Example 3 Compare Data

SNOWFALL The average monthly snowfall, to the nearest inch, for Denver, Colorado, and Buffalo, New York, are shown. Which city is less likely to receive more than 10 inches of snowfall per month?



Denver only has one value with a stem greater than zero, while Buffalo has five values with a stem greater than zero. Therefore, Denver is less likely to receive more than 10 inches of snowfall per month.