Chapter 3

Statistics

Section 3.1

Mean, Median, and Mode

Lesson 1:

Stem and Leaf Plots

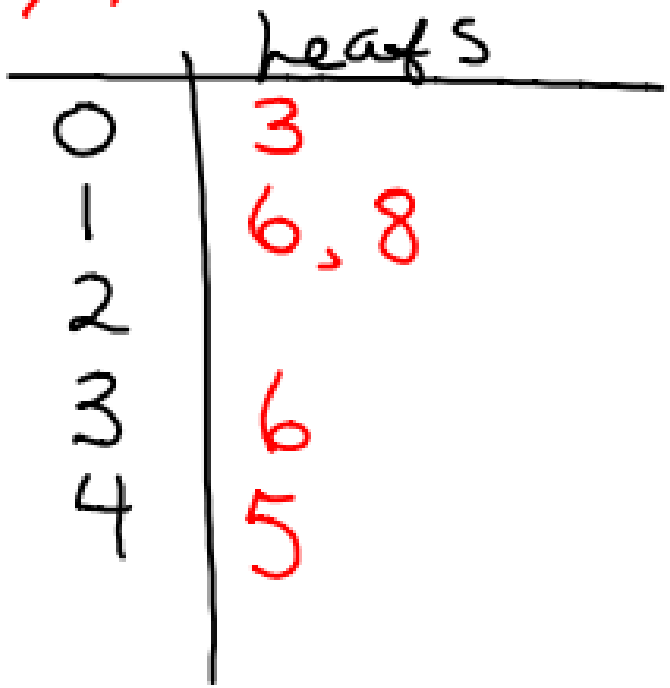
In this section, you will often have to organize data in ascending (going up) or descending (going down) order. Using a stem and leaf plot is a quick way to organize the data. In a stem and leaf plot, you organize the numbers by tens and arrange them in a table.

Example 1

Write the following numbers in ascending order in a stem and leaf plot.

16, 45, 36, 18, 23, 43, 48, 45, 33, 26, 32, 28, 25, 19, 34, 24, 35, 40, 12, 20, 105, 3

Stem=10 Stem=0



SOLUTION

The "stem" is the tens digit and the "leaves" are the units digits. This list has numbers below 10, in the teens, the 20s, the 30s, the 40s, and 100s. Put the tens in ascending order in the stem column, then go through each number and put the "leaf" in the appropriate column as in Table 1. Next, rearrange the leaves in ascending order as in Table 2.

TABLE 1

Stem	*Leaf*
0	3
1	6, 8, 9, 2
2	3, 6, 8, 5, 4, 0
3	6, 3, 2, 4, 5
4	5, 3, 8, 5, 0
10	5

TABLE 2

Stem	*Leaf*
0	3
1	2, 6, 8, 9
2	0, 3, 4, 5, 6, 8
3	2, 3, 4, 5, 6
4	0, 3, 5, 5, 8
10	5

TABLE 1	
Stem	*Leaf*
0	3
1	6, 8, 9, 2
2	3, 6, 8, 5, 4, 0
3	6, 3, 2, 4, 5
4	5, 3, 8, 5, 0
10	5

TABLE 2	
Stem	*Leaf*
0	3
1	2, 6, 8, 9
2	0, 3, 4, 5, 6, 8
3	2, 3, 4, 5, 6
4	0, 3, 5, 5, 8
10	5

Note: There are two 45s in the list, and they must both be listed because they are both part of the data.

Once you have completed the second table, write the numbers in ascending order.

3, 12, 16, 18, 19, 20, 23, 24, 25, 26, 28, 32, 33, 34, 35, 36, 40, 43, 45, 45, 48, 105