

Stem-and-Leaf Graphs

A stem-and-leaf graph is a quick and easy way to plot data. Plotting the data is done in a numerical fashion.

Let's learn how to make our own stem-and-leaf graph.

A class of 26 students just got their test scores back. The scores are as follows: 82, 66, 70, 77, 94, 67, 73, 78, 82, 74, 90, 45, 62, 85, 57, 72, 94, 83, 85, 70, 95, 71, 89, 87, 75, and 74.

The scores range from the 40's to the 90's. So the stem of our graph will have the digits 4, 5, 6, 7, 8, and 9. The tens digit represents the stem and the units digit represents the leaves.

The first step in creating a stem-and-leaf plot is to list the stem (tens digit) values in increasing order. Put the stem digits in a column.

Next, the leaves (unit digits) need to be written in the row corresponding to the number's stem. Below is an example of a stem-and-leaf graph.

Stem	Leaf
4	
5	
6	
7	
8	
9	

Stem	Leaf
4	5
5	7
6	6 7 2
7	0 7 3 8 4 2 0 1 5 4
8	2 2 5 3 5 9 7
9	4 0 4 5

Why stem-and-leaf graphs are used.

Stem-and-leaf graphs are great graphs to show where the data is concentrated. It also shows the extreme values that a person can miss on other graphs.

If you turn the stem-and-leaf graph on its side, you may notice that it resembles a bar graph. The bar graph may be a more attractive graph that is easier to understand, but the stem-and-leaf graph shows all the original data that cannot always be shown on a bar graph. The stem-and-leaf graph also has the advantage of showing gaps, clusters, or outliers in the data.