

Stem-and-Leaf Plots

A **stem-and-leaf plot** uses the digits of data values to organize a data set. Each data value is broken into a **stem** (digit or digits on the left) and a **leaf** (digit or digits on the right).

A stem-and-leaf plot shows how data are distributed.

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

The key explains what the stems and leaves represent.

Key: 1|0 = 10

Example 1 Make a stem-and-leaf plot of the data.

Step 1 Order the data.

12, 14, 15, 16, 16, 18, 18, 19, 23, 24, 24, 25, 28, 29, 30, 30, 30, 31, 32, 34, 35, 36, 39, 68

Step 2 Choose the stems and the leaves. Because the data values range from 12 to 68, use the *tens* digits for the stems and the *ones* digits for the leaves. Be sure to include the key.

Step 3 Write the stems to the *left* of the vertical line.

Step 4 Write the leaves for each stem to the *right* of the vertical line.

Ages of Actors in a Play					
30	24	24	35	12	15
18	31	30	30	19	32
18	36	16	28	39	16
68	29	34	23	25	14

Ages of Actors in a Play

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

Order the stems vertically.

Include stems without leaves.

Write the leaves horizontally.

Key: 1|2 = 12

Practice

Check your answers at BigIdeasMath.com.

Make a stem-and-leaf plot of the data.

1.

Weights of Dogs (pounds)					
33	33	55	44	39	26
34	42	52	34	48	58
28	39	42	40	45	62
56	26	49	37	64	23

Weights of Dogs (pounds)

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

Key: 2|3 = 23 pounds

2.

Test Scores (%)					
85	82	100	82	93	76
84	59	71	89	79	87
91	100	89	78	90	85
75	96	99	86	84	92

Test Scores (%)

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

Key: 5|9 = 59%