Chapter 5: Exploring Data: Distributions

For All Practical Purposes

Mathematical Literacy in Today's World, 9th ed.

Section 5.3 Displaying Distributions: Stemplots

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- • Stemplot
  - – A display of the distribution of a variable that attaches the final digits of the observation as leaves on stems made up of all but the final digit, usually for small sets of data only. Stemplots look like histograms on the side.
- • How to Make a Stemplot
  1. Separate each observation into a stem (all but the final rightmost digit) and a leaf (the final rightmost digit).
  2. Write the stems in a vertical column, smallest at top, sequentially down to the largest value. Draw a vertical line to the right of this column.
  3. Write each leaf in the row to the right of its stem, in increasing order out from the stem.

```
 1 | 0035
 2 | 12356669
 3 | 25788
 4 | 036678
 5 | 0
 6 | 789
 7 | 122395
 8 | 149
 9 | 01
10 | 2
11 | 36
12 |
13 | 4
14 |
15 |
16 | 23
17 | 5
18 |
19 |
20 |
21 | 1
22 | 3
23 |
24 |
25 | 0
26 |
27 |
28 |
29 |
30 |
31 |
32 |
33 | 16
34 |
35 |
36 |
37 |
38 |
39 |
40 |
41 |
42 | 3
```
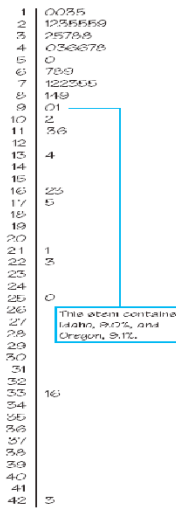
This stem contains Idaho, 9.0%, and Oregon, 9.1%.

Figure 5.5 Stemplot of the percent of Hispanics among the adult residents of the U.S. states.

Stemplot of the percent of Hispanics among the adult residents of the states

Table 5.1

Percent of Adult Population of Hispanic Origin, by State (2010 Census)

State	Percent	State	Percent	State	Percent
Alabama	3.2	Louisiana	4.0	Ohio	2.5
Alaska	4.7	Maine	1.0	Oklahoma	7.1
Arizona	25.0	Maryland	7.3	Oregon	9.1
Arkansas	5.0	Massachusetts	8.1	Pennsylvania	4.6
California	33.1	Michigan	3.5	Rhode Island	10.2
Colorado	17.5	Minnesota	3.7	South Carolina	4.3
Connecticut	11.6	Mississippi	2.5	South Dakota	2.1
Delaware	6.7	Missouri	2.9	Tennessee	3.8
Florida	21.1	Montana	2.3	Texas	33.6
Georgia	7.5	Nebraska	7.2	Utah	11.3
Hawaii	7.2	Nevada	22.3	Vermont	1.3
Idaho	9.0	New Hampshire	2.2	Virginia	6.9
Illinois	13.4	New Jersey	16.3	Washington	8.9
Indiana	4.8	New Mexico	42.3	West Virginia	1.0
Iowa	3.8	New York	16.2	Wisconsin	4.6
Kansas	8.4	North Carolina	6.8	Wyoming	7.5
Kentucky	2.5	North Dakota	1.5		

```
 1 | 0035
 2 | 1235559
 3 | 25788
 4 | 036878
 5 | 0
 6 | 789
 7 | 122355
 8 | 149
 9 | 01
10 | 2
11 | 36
12 |
13 | 4
14 |
15 |
16 | 233
17 | 5
18 |
19 |
20 |
21 | 1
22 | 3
23 |
24 |
25 | 0
26 |
27 |
28 |
29 |
30 |
31 |
32 |
33 | 16
34 |
35 |
36 |
37 |
38 |
39 |
40 |
41 |
42 | 3
```

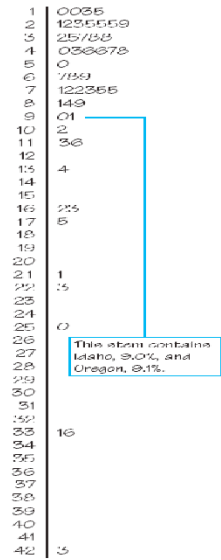This stem contains Idaho, 9.0%, and Oregon, 9.1%.

Figure 5.5 Stemplot of the percent of Hispanics among the adult residents of the U.S. states.

Stemplot needs to display information about the data. Round numbers only if this aids in illustrating the data.