Dotplots

A **dotplot** consists of a graph in which each data value is plotted as a point (or dot) along a horizontal scale of values. Dots representing equal values are stacked.

Example 5 **Dotplot: IQ Scores of Low Lead Group**

Figure 2-10 shows a dotplot of the IQ scores of the low lead group from Table 2-1 included with the Chapter Problem at the beginning of this chapter. The five stacked dots above the position at 76 indicate that five of the IQ scores are 76. There are three dots stacked above 80, so three of the IQ scores are 80. This dotplot reveals the distribution of the IQ scores. It is possible to recreate the original list of data values, because each data value is represented by a single point.

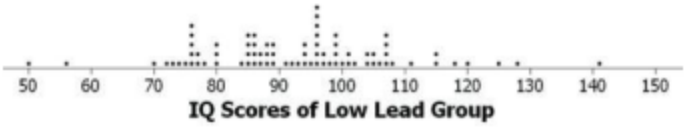

Figure 2-10 **Dotplot: IQ Scores of Low Lead Group**

Stemplots

A **stemplot** (or **stem-and-leaf plot**) represents quantitative data by separating each value into two parts: the stem (such as the leftmost digit) and the leaf (such as the rightmost digit). Better stemplots are often obtained by first rounding the original data values. Also, stemplots can be *expanded* to include more rows and can be *condensed* to include fewer rows, as in Exercise 26.

One advantage of the stemplot is that we can see the distribution of data while keeping the original data values. Another advantage is that constructing a stemplot is a quick way to *sort* data (arrange them in order), which is required for some statistical procedures (such as finding a median, or finding percentiles as described later in this book).

Example 6 **Stemplot: IQ Scores of Low Lead Group**

The following stemplot displays the IQ scores of the low lead group in Table 2-1 given with the Chapter Problem. The lowest IQ score of 50 is separated into its stem of 5 and its leaf of 0, and each of the remaining values is separated in a similar way. The stems and leaves are arranged in increasing order, not the order in which they occur in the original list. Note that if you turn the stemplot on its side, you can see distribution of the IQ scores in the same way you would see it in a histogram.

```
 5 | 06   <-- Lowest IQ scores are 50 and 56.
 6 |
 7 | 0234566666778
 8 | 00045555666677888999
 9 | 123444566666667789999
10 | 01124455677778
11 | 1558   <-- These IQ scores are 111, 115, 115, and 118.
12 | 058
13 |
14 | 1
```

Go Figure

Among U. S. men between 20 and 40 years of age and taller than 7 feet, 17% of them play basketball in the NBA.