Lesson 6: Stem-Plots & Histograms

Daily Data Collection

Each student will record the following information on the board:

Number of shoes you own & the number of letters in your last name

Terms:

The Stemplot

American League Home Runs

3	5
4	0 3 9
5	1 4 7 8 8
6	4 8 8
7	5 7

Key 3 | 5 represents 35 home runs hit

Things to remember

- ✓ Separate each piece of data into a stem (all but the rightmost digit) and a leaf (the final digit) For example, if there are 24 students in the class, the 2 is the stem and the 4 is the leaf. If the temperature of a pizza oven was 539 degrees, the stem would be 53 and the leaf would be 9.
- ✓ Write the stems vertically in increasing order from top to bottom.
- ✓ Be very neat and make sure you leave the same amount of space in between leaves.
- ✓ Title your graph
- ✓ Include a key identifying what the stem and leaves represent.
- ✓ Works well with a small data set

Class Data:

Create a stem-plot for the number of shoes students own & describe the distribution.

Terms:

The Histogram

Things to remember

- ✓ It is the most common graph of a quantitative variable.
- ✓ The x-axis is continuous, so there should be no gaps between the bars
  - (unless a class has zero observations)
- ✓ The graphing calculator can do a histogram for you
- ✓ Title your graph

Class Data:

Create a histogram for the number of letters in last names & describe the distribution.

Guided Practice:

Pairs of shoes

Males only

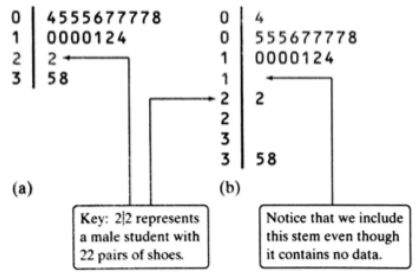

FIGURE 1.14 Two stemplots showing the male shoe data. Figure 1.14(b) improves on the stemplot of Figure 1.14(a) by splitting stems.

Females and Males

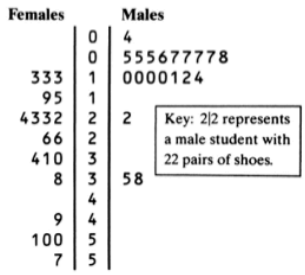

FIGURE 1.15 Back-to-back stemplot comparing numbers of pairs of shoes for male and female students at a school.

Percent of residents aged 65+

6	8
7	
8	8
9	79
10	08
11	15566
12	012223444457888999
13	01233333444899
14	02666
15	23
16	8

CHECK YOUR UNDERSTANDING

1. Use the back-to-back stemplot in Figure 1.15 to write a few sentences comparing the number of pairs of shoes owned by males and females. Be sure to address shape, center, spread, and outliers.

Multiple choice: Select the best answer for Questions 2 through 4.
Here is a stemplot of the percents of residents aged 65 and older in the 50 states and the District of Columbia. The stems are whole percents and the leaves are tenths of a percent.

2. The low outlier is Alaska. What percent of Alaska residents are 65 or older?
(a) 0.68 (b) 6.8 (c) 8.8 (d) 16.8 (e) 68
3. Ignoring the outlier, the shape of the distribution is
(a) skewed to the right (c) skewed to the left. (e) skewed to the middle.
(b) roughly symmetric (d) bimodal.
4. The center of the distribution is close to
(a) 13.3%. (b) 12.8%. (c) 12.0%. (d) 11.6%. (e) 6.8% to 16.8%.

HW 6 Section 1-2: 53, 55, 57, 59, 60, 69-74