

1. The number of goals scored by each team in the first round of the California high school soccer playoffs is shown below.

5 0 1 0 7 2 1 0 4 0 3 0 2 0
 3 1 5 0 3 0 1 0 1 0 2 0 3 1

- a. Make a dotplot of the data.
- b. Describe the distribution of the variable “number of goals scored”. Be sure to discuss shape, center, spread and outliers.

2. The table below shows the percent of people living below the poverty line in the 26 states east of the Mississippi.

State	Percent	State	Percent	State	Percent	State	Percent
Alabama	16.9	Kentucky	17.3	New Jersey	8.6	Tennessee	15.9
Connecticut	7.9	Maine	12.0	New York	13.7	Vermont	10.1
Delaware	10.5	Maryland	8.3	North Carolina	14.3	Virginia	9.9
Florida	12.1	Massachusetts	9.9	Ohio	13.1	West Virginia	16.9
Georgia	14.3	Michigan	14.0	Pennsylvania	11.6	Wisconsin	10.8
Illinois	11.9	Mississippi	20.6	Rhode Island	12.0		
Indiana	12.3	New Hampshire	7.1	South Carolina	15.0		

- a. Make a stemplot of these data.
- b. Describe the distribution of the variable “percent living in poverty”. Be sure to discuss shape, center, spread and outliers.

3. The table below shows the caffeine content (in milligrams) for an 8-ounce serving of popular soft drinks.

Brand	Caffeine	Brand	Caffeine
A&W Cream	20	IBC Cherry Cola	16
Barq’s Root Beer	15	Kick	38
Cherry Coke	23	KMX	36
Cherry RC Cola	29	Mello Yello	35
Coke Classic	23	Mountain Dew	37
Diet A&W Cream	15	Mr. Pibb	27
Diet Cherry Coke	23	Nehi Wild Red	33
Diet Coke	31	Pepsi One	37
Diet Dr. Pepper	28	Pepsi	25
Diet Mello Yello	35	RC Edge	47

- a. You could construct a dotplot of the caffeine data, but a stemplot might be preferable. Explain why.
- b. Construct a stem and leaf plot of the data using the first digit as the stem and the second digit as the leaf. What problem do you see with this display?
- c. Now construct a split stemplot for the caffeine data. Describe the shape, center, spread and outliers.

4. How many points do football teams score in the Super Bowl? Here are the total number of points scored by both teams in each of the 47 Super Bowl games:

45, 47, 23, 30, 29, 27, 21, 31, 22, 38, 46, 37, 66, 50, 37, 47, 44
47, 54, 56, 59, 52, 36, 65, 39, 61, 69, 43, 75, 44, 56, 55, 53, 39
41, 37, 69, 61, 45, 31, 46, 31, 50, 48, 56, 38, 65

- a. Using technology, create a histogram of the data.
- b. Describe the shape, center, spread and outliers.

5. A runner collected the times (in minutes) it took him to run 4 miles over various courses during a 5-year period. The following frequency table contains the data.

Time	Frequency
28.5	17
29	35
29.5	52
30	60
30.5	43
31	44
31.5	29
32	27
32.5	16
33	16
34	14
34.5	12
35	12

- a. Using technology, create a histogram of the data.
- b. Describe the shape, center, spread and outliers.
- c. Why was it beneficial to organize the data into a frequency table?

6. Answer the following

- a. Sketch a histogram for a distribution that is skewed left.
- b. Suppose you and your friends emptied your pockets of coins and recorded the year marked on each coin. The distribution of dates would be skewed to the right. Explain why.