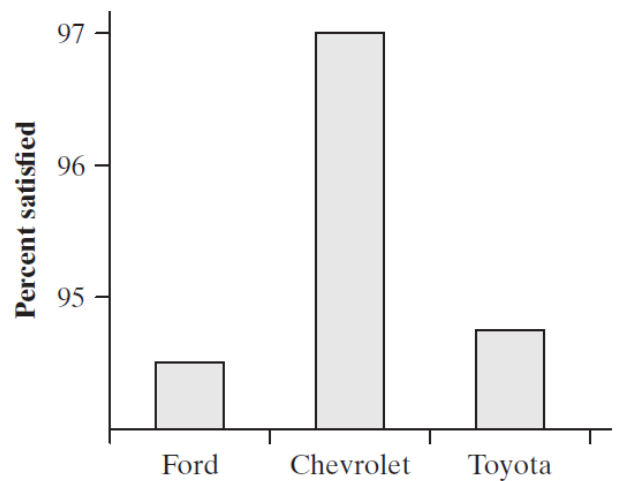


1. Mr. Molesky observes a group of monkeys for 24 hours to learn about their behavior. He records how long they slept, how many bananas they ate, gender, age, and the specific breed of monkey.

(a) What are the individuals in this data set?

(b) Identify the variables that were recorded, and indicate whether each one is categorical, quantitative (discrete), or quantitative (continuous).

2. The following bar graph gives the percent of owners of three brands of trucks who are satisfied with their truck. What is wrong with the way information is presented in this graph?

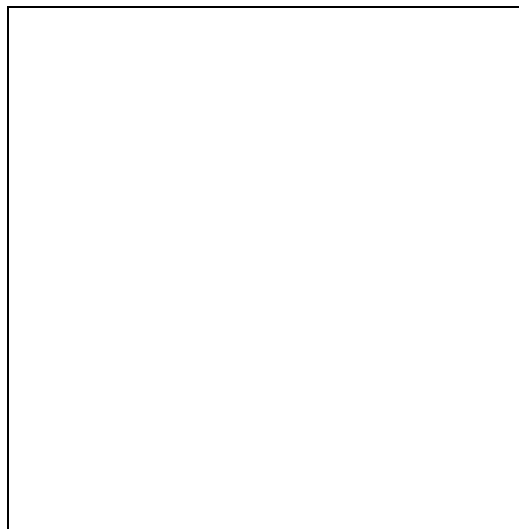


3. A research study asked children which of four different emotions they associated with the color red. The response and gender of each child are given in the following table.

	Male	Female
Joy	28	61
Happiness	20	25
Love	40	80
Anger	18	60

- (a) Find the distribution of emotion for each gender using relative frequencies.

- (b) Make a segmented bar graph to compare the distributions in part (a).



- (c) Describe what the graph in (b) reveals about the association between gender and emotion for the students in the sample.

1. A random sample of 20 employees at a large company was selected. Here are the salaries (in thousands of dollars) for these employees during one year.

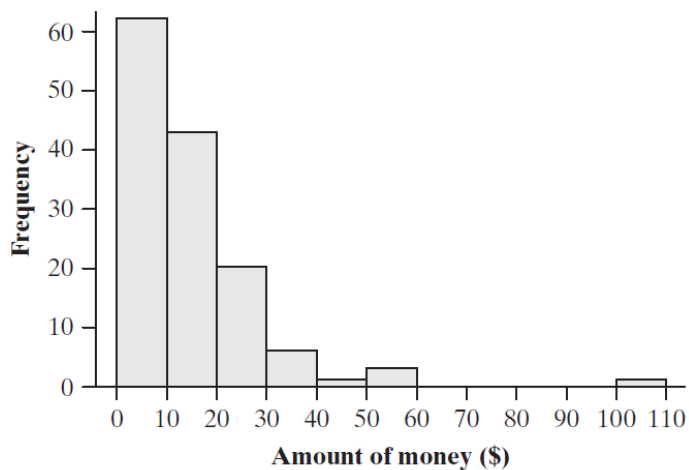
28	31	34	35	37	41	42	42	42	47
49	51	52	52	60	61	67	72	75	77

- (a) Make a dotplot of these data.

\_\_\_\_\_

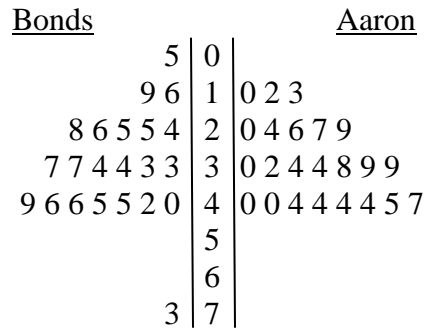
- (b) What percentage of the sample of employees have a salary of at least \$60,000?

2. Professor Windley teaches a statistics class with 136 students. On the first day of class he records how much money each student has in his or her possession (in dollars) during the first class of the semester. The histogram displays the data. Describe the distribution.



3. On August 7, 2007 Barry Bonds hit his 756<sup>th</sup> home run, breaking the all-time career home run record, formerly held by Hank Aaron. Does that make Bonds a better home run hitter than Aaron? Let's compare their annual home run production over their entire careers. A side-by-side stemplot is shown below.

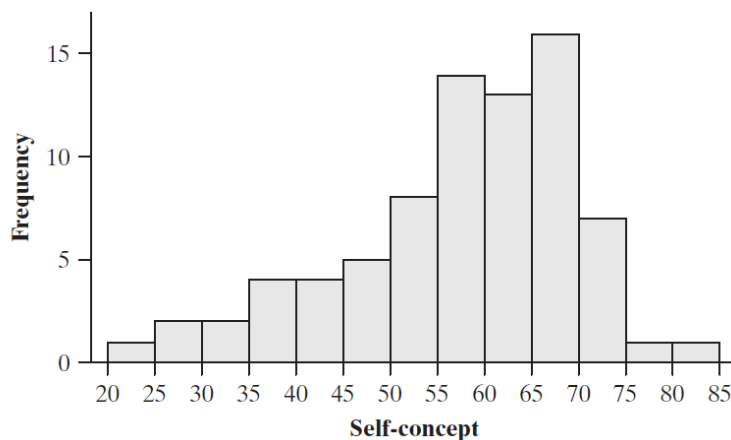
Number of Home Runs Per Year



Key: 1|4 = 14 home runs

Use the plot to write a few sentences discussing the similarities and differences in the distributions of home runs per year for Bonds and Aaron.

1. A group of 78 third-grade students in a Midwestern elementary school took a “self-concept” test that measured how well they felt about themselves. Higher scores indicate more positive self-concepts. The lowest self-concept scores were 20, 26, 27, 31, and 32. A histogram and some summary statistics from Minitab for these students’ self-concept scores are given below.



Variable	$n$	Mean	StDev	Minimum	$Q_1$	Median	$Q_3$	Maximum
SelfConc	78	56.85	12.35	20	50	59	65	84

- (a) Are there any outliers? Justify your answer.

- (b) Draw a boxplot of this distribution.

- (c) One of the students had a self-concept score of 32. If this score had been accidentally recorded as 22, what effect would this have had on the value of the mean and the median? Justify your answer.

2. Five students reported the amount of time (in minutes) they spent studying for an AP Statistics test the night before the test. The mean of the reported times is 45 minutes and the standard deviation is 10 minutes.

(a) Interpret the standard deviation in context.

(b) A 6<sup>th</sup> student reported that they studied for 50 minutes. How would the addition of this student to the data set affect the value of the mean and the standard deviation? Explain your answers.