APPLY YOUR KNOWLEDGE

1.3 The color of your car. News from the auto color front: fewer luxury car buyers are choosing "neutral" colors (silver, white, black). Here is the distribution of the most popular colors for 2005 model luxury cars made in North America:[3]

Color	Percent
Silver	20
White, pearl	18
Black	16
Blue	13
Light brown	10
Red	7
Yellow, gold	6

(a) What percent of vehicles are some other color?

(b) Make a bar graph of the color data. Would it be correct to make a pie chart if you added an "Other" category?

1.24 Baseball players. Here is a small part of a data set that describes Major League Baseball players as of opening day of the 2005 season:

Player	Team	Position	Age	Height	Weight	Salary
Ortiz, David	Red Sox	Outfielder	29	6-4	230	5,250,000
Nix, Laynce	Rangers	Outfielder	24	6-0	200	316,000
Perez, Antonio	Dodgers	Infielder	25	5-11	175	320,500
Piazza, Mike	Mets	Catcher	36	6-3	215	16,071,429
Rolen, Scott	Cardinals	Infielder	30	6-4	240	10,715,509

(a) What individuals does this data set describe?

(b) In addition to the player's name, how many variables does the data set contain? which of these variables are categorical and which are quantitative?

(c) Based on the data in the table, what do you think are the units of measurement for each of the quantitative variables?

1.29 Spam. Email spam is the curse of the Internet. Here is a compilation of the most common types of spam:[17]

Type of spam	Percent
Adult	14.5
Financial	16.2
Health	7.3
Leisure	7.8
Products	21.0
Scams	14.2

Make two bar graphs of these percents, one with bars ordered as in the table (alphabetically) and the other with bars in order from tallest to shortest. Comparisons are easier if you order the bars by height. A bar graph ordered from tallest to shortest bar is sometimes called a **Pareto chart,** after the Italian economist who recommended this procedure.

1.30 Do adolescent girls eat fruit? We all know that fruit is good for us. Many of us don't eat enough. Figure 1.13 is a histogram of the number of servings of fruit per day claimed by 74 seventeen-year-old girls in a study in Pennsylvania.[18] Describe the shape, center, and spread of this distribution. What percent of these girls ate fewer than two servings per day?

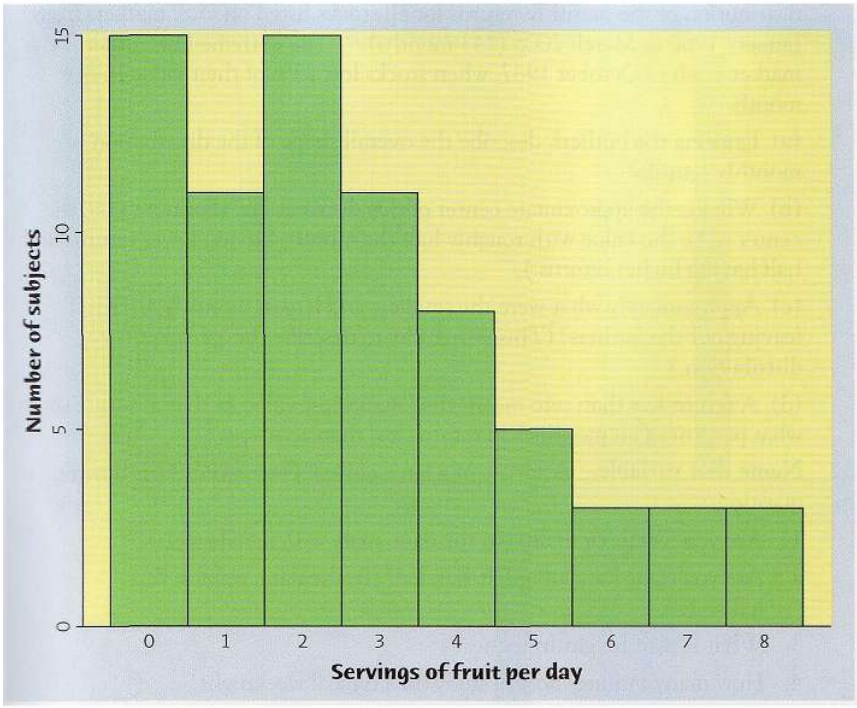

FIGURE 1.13 The distribution of fruit consumption in a sample of 74 seventeen-year-old girls, for Exercise 1.30.

1.32 Name that variable. A survey of a large college class asked the following questions:

1. Are you female or male? (In the data, male = 0, female = 1.)
2. Are you right-handed or left-handed? (In the data, right = 0, left = 1.)
3. What is your height in inches?
4. How many minutes do you study on a typical weeknight?

Figure 1.15 shows histograms of the student responses, in scrambled order and without scale markings. Which histogram goes with each variable? Explain your reasoning.