Practice

1. **Protecting wood** How can we help wood surfaces resist weathering, especially when restoring historic wooden buildings? In a study of this question, researchers prepared wooden panels and then exposed them to the weather. Here are some of the variables recorded: type of wood (yellow poplar, pine, cedar); type of water repellent (solvent-based, water-based); paint thickness (millimeters); paint color (white, gray, light blue); weathering time (months). Identify each variable as categorical or quantitative.

3. **A class survey** Here is a small part of the data set that describes the students in an AP Statistics class. The data come from anonymous responses to a questionnaire filled out on the first day of class.

Gender	Hand	Height (in)	Homework time (min)	Favorite music	Pocket change (cents)
F	L	65	200	Hip-hop	50
M	L	72	30	Country	35
M	R	62	95	Rock	35
F	L	64	120	Alternative	0
M	R	63	220	Hip-hop	0
F	R	58	60	Alternative	76
F	R	67	150	Rock	215

(a) What individuals does this data set describe?

(b) Clearly identify each of the variables. Which are quantitative? In what units are they measured?

(c) Describe the individual in the highlighted row.

Multiple choice: Select the best answer.
Exercises 7 and 8 refer to the following setting. At the Census Bureau Web site, you can view detailed data collected by the American Community Survey. The table below includes data for 10 people chosen at random from the more than one million people in households contacted by the survey. "School" gives the highest level of education completed.

Weight (lb)	Age (yr)	Travel to work (min)	School	Gender	Income last year ($)
187	66	0	Ninth grade	1	24,000
158	66	n/a	High school grad	2	0
176	54	10	Assoc. degree	2	11,900
339	37	10	Assoc. degree	1	6,000
91	27	10	Some college	2	30,000
155	18	n/a	High school grad	2	0
213	38	15	Master's degree	2	125,000
194	40	0	High school grad	1	800
221	18	20	High school grad	1	2,500
193	11	n/a	Fifth grade	1	0

7. The individuals in this data set are
   (a) households.
   (b) people.
   (c) adults.
   (d) 120 variables.
   (e) columns.

8. This data set contains
   (a) 7 variables, 2 of which are categorical.
   (b) 7 variables, 1 of which is categorical.
   (c) 6 variables, 2 of which are categorical.
   (d) 6 variables, 1 of which is categorical.
   (e) None of these.