1. For each of the following scenarios, list what information you would report in a data section for a scientific paper. *Hint*: What additional information would you want to know?
   a. A three-year study of a six-month drug rehabilitation program that recruited 200 subjects to examine cure and relapse rates.
   b. A study of calcium intake among 50 pregnant women, based on their recall over a two-week period.

2. Dr. Dollar is conducting a study of 2009 poverty patterns in the United States based on annual income data from the 2010 census. She defines a categorical measure of income group comparing family income (calculated from income of individual family members, alimony, and four types of social benefits) against the federal poverty thresholds. Classifications are defined in terms of multiples of the threshold: <.50, .50–.99, 1.00–1.84, 1.85–2.99, and 3.00 or greater. Search for "poverty" on the US Census website (www.census.gov) for more detail. State how you would describe the poverty measure in
   a. a one-page summary of the study for a local newspaper;
   b. documentation of a new data set that has collected data on each of the income components as part of a written questionnaire;
   c. a journal article on poverty patterns, written for people who are familiar with poverty thresholds.

3. Making use of newly available data from a three-year panel study of a sample of 10,000 people drawn from the 2010 census, Dr. Dollar describes movement in and out of poverty and duration of poverty (in months) over the study period. Poverty was defined as family income below the threshold (<1.0). Data were collected annually, with retrospective recall of income in each of the previous 12 months. What information would you want to add to item 2.c to describe these data for this research question?

4. A researcher in a meteorology lab accidentally erased a file containing information from two years' worth of climatic data. Embarrassed, he went ahead and analyzed data for the other 28 years in the study. What assumptions did he implicitly make about the missing data?

10

WRITING ABOUT DATA AND METHODS

Table 10A. Coding of items about abortion attitudes, 2000 US General Social Survey

"Please tell me whether or not you think it should be possible for a pregnant woman to obtain a legal abortion . . ."	Yes	No	Don't know
If there is a strong chance of serious defect in the baby?	1	2	8
If she is married and does not want any more children?	1	2	8
If the woman's own health is seriously endangered by the pregnancy?	1	2	8
If she is not married and does not want to marry the man?	1	2	8
If she became pregnant as a result of rape?	1	2	8
If the woman wants it for any reason?	1	2	8

Source: National Opinion Research Center, 2000.

5. Write a paragraph for a methods section describing how the abortion attitudes scale would be constructed by tallying the number of items listed in table 10A with which each respondent agreed. Be sure to cover the following elements:
   a. The number and coding of the original items;
   b. The computational method used to construct the scale;
   c. How missing values were handled in the construction of the scale;
   d. The valid range of values for the scale.

6. A study seeks to analyze factors affecting citizens' decisions about whether to take early retirement (at age 62) as part of a survey of the noninstitutionalized US adult population.
   a. What subset(s) of respondents should be included in an analysis of this research question?
   b. Design filter question(s) to identify which respondents should be asked a hypothetical series of contingent questions about reasons for early retirement.
   c. Working from your answers to parts a and b, write a short description for the methods section about who will be included in the analysis of this topic, and how they were identified in the hypothetical survey.
   d. Suppose that some respondents who are eligible to answer the contingent questions do not respond. What additional issues pertaining to the final analytic sample should be discussed in the methods section of a paper about that topic and data?

7. For each of the following data, methods, and objectives, write a short discussion of strengths and limitations for the concluding section of a general interest newspaper article.
   a. Study: twenty subjects were interviewed at the Snooty Golf Club at noon on a Friday in early April regarding their preferred color and fit of jeans. Objective: a marketing study by the Abercrombie and Fitch clothing store.

b. Study: two classes of second graders in different schools from the same town were given a math test in September. One class was then taught with a new math curriculum, the other with the standard curriculum. The classes were tested again in June. Objective: an evaluation of the new math curriculum.

c. Study: data on hair color and age were collected for everyone aged 25–85 in a city of 200,000 people. Deaths over a two-year period were ascertained from death certificates. Two models were estimated: one with hair color as predictor and mortality as the outcome; the second with age as another predictor. Objective: understand the potential benefit of hair dye in improving survival.