

Exploring The Web

Chapter 23

23.37 Hearing loss in adolescents. Go to the *Journal of the American Medical Association* website, jama.ama-assn.org/content/by/year, and find the article “Change in Prevalence of Hearing Loss in US Adolescents” by Shargorodsky et al. in the August 18, 2010, issue. If you cannot get the full text of the article, use the information in the abstract plus the information given here to answer the questions. NHANES III is the earlier sample, and NHANES 2005–2006 is the more recent sample.

- (a) Is this an observational study or an experiment?
- (b) How many people were in the earlier sample, and how many were in the later sample?
- (c) If you do not have access to Table 2 of the full article, here are the facts that you will need: in the earlier study, 480 people experienced some hearing loss, whereas in the later study, 333 people experienced some hearing loss. Is there evidence of an increase in hearing loss for children aged 12 to 19 in the later study? State hypotheses, find the test statistic, and use either software or Table A to compute the *P*-value. Although the article used a more sophisticated analysis, your *P*-value should be quite close to the *P*-value of 0.02 reported in the abstract.

23.38 Compare two surveys. Go to the website www.pollingreport.com, which contains the results of surveys conducted by several survey organizations. Choose a topic of interest to you, and then, to see if attitudes have changed over time, find two surveys that were conducted at two different times but that ask the same question. For example, you might choose the topic of abortion and compare the percents of people who feel abortion should always be legal at points in time separated by several years. State hypotheses to check for a difference over time, find the test statistic, and use either software or Table A to compute the *P*-value. What is your conclusion in context?