

Homework 3

Name _____

1. In the last example, suppose the NORC took a sample of 10,000 people from the American Public. Because of ethical concerns, they excluded children under the age of 15 from their sample. For this example, name the following components of the study.

a.) unit-

b.) population-

c.) sample-

d.) sampling frame-

e.) margin of error-

2. A 1997 study printed in the *Sacramento Bee* (Jan. 12, 1998, p. A4), titled "College freshman show conservative side," used "a representative sample of 252,082 full-time freshmen at 464 two- and four-year colleges and universities nationwide." It was not explained how the sample was collected.

a.) Assume a random sample was collected at each of the 464 schools. What type of sampling scheme is this?

b.) Now assume that the 464 schools were selected from a list of all two- and four-year colleges and universities. All freshmen at these schools were surveyed. What type of sampling scheme is this?

c.) Which of the two schemes above would have been easier and cheaper to accomplish?

d.) Is it possible that this study could have been done using a systematic sampling scheme? Explain how, or explain why not.

3. Explain the difference between a volunteer response and a volunteer sample. Give an example of both.

4. Suppose a random sample of 400 students was conducted to determine the proportion of people who drove to school that morning.

a.) What is the margin of error for this study?

b.) Given your answer in a.), what proportion of students in your sample would you need to have driven to school to conclude that a significant majority of the population drove to school?