

1. Students as customers A high school's student newspaper plans to survey local businesses about the importance of students as customers. From telephone book listings, the newspaper staff chooses 150 businesses at random. Of these, 73 return the questionnaire mailed by the staff. Identify the population and the sample.

3. Sampling stuffed envelopes A large retailer prepares its customers' monthly credit card bills using an automatic machine that folds the bills, stuffs them into envelopes, and seals the envelopes for mailing. Are the envelopes completely sealed? Inspectors choose 40 envelopes from the 1000 stuffed each hour for visual inspection. Identify the population and the sample.

5. Call the shots A newspaper advertisement for an upcoming TV show said: "Should handgun control be tougher? You call the shots in a special call-in poll tonight. If yes, call 1-900-720-6181. If no, call 1-900-720-6182. Charge is 50 cents for the first minute." Explain why this opinion poll is almost certainly biased.

7. Instant opinion A recent online poll posed the question "Should female athletes be paid the same as men for the work they do?" In all, 13,147 (44%) said "Yes," 15,182 (50%) said "No," and the remaining 1448 said "Don't know." In spite of the large sample size for this survey, we can't trust the result. Why not?

9. Sleepless nights How much sleep do high school students get on a typical school night? An interested student designed a survey to find out. To make data collection easier, the student surveyed the first 100 students to arrive at school on a particular morning. These students reported an average of 7.2 hours of sleep on the previous night.
 - (a) What type of sample did the student obtain?
 - (b) Explain why this sampling method is biased. Is 7.2 hours probably higher or lower than the true average amount of sleep last night for all students at the school? Why?

11. Do you trust the Internet? You want to ask a sample of high school students the question “How much do you trust information about health that you find on the Internet—a great deal, somewhat, not much, or not at all?” You try out this and other questions on a pilot group of 5 students chosen from your class. The class members are listed at top right.

- (a) Explain how you would use a line of Table D to choose an SRS of 5 students from the following list. Explain your method clearly enough for a classmate to obtain your results.
- (b) Use line 107 to select the sample. Show how you use each of the digits.

Anderson	Deng	Glaus	Nguyen	Samuels
Arroyo	De Ramos	Helling	Palmiero	Shen
Batista	Drasin	Husain	Percival	Tse
Bell	Eckstein	Johnson	Prince	Velasco
Burke	Fernandez	Kim	Puri	Wallace
Cabrera	Fullmer	Molina	Richards	Washburn
Calloway	Gandhi	Morgan	Rider	Zabidi
Delluci	Garcia	Murphy	Rodriguez	Zhao