REVIEW EXERCISES

1.19 A newspaper headline reads,

U.S. TEENS TRUST, FEAR THEIR PEERS

and the article explains that a telephone poll was conducted of 1055 persons 13 to 17 years old. Identify a statistical population and the sample.

1.20 Consider the population of all students at your college. You want to learn about total monthly entertainment expenses for a student.

(a) Specify the population unit.

(b) Specify the variable of interest.

(c) Specify the statistical population.

1.21 Consider the population of persons living in Chicago. You want to learn about the proportion of eligible voters who are registered to vote.

(a) Specify the population unit.

(b) Specify the variable of interest.

(c) Specify the statistical population.

1.22 A student is asked to estimate the mean height of all male students on campus. She decides to use the heights of members of the basketball team because they are conveniently printed in the game program.

(a) Identify the statistical population and the sample.

(b) Comment on the selection of the sample.

(c) How should a sample of males be selected?

1.23 Psychologists[6] asked 46 golfers, after they played a round, to estimate the diameter of the hole on the green by visually selecting one of nine holes cut in a board.

(a) Specify the population unit.

(b) Specify the statistical population and sample.

1.24 A phone survey in 2008[7] of 1010 adults included a response to the number of leisure hours per week.

Identify the population unit, statistical population, and sample.

1.25 It is often easy to put off doing an unpleasant task. At a Web site,[8] persons can take a test and receive a score that determines if they have a serious problem with procrastination. Should the scores from people who take this test online be considered a random sample from the general population? Explain your reasoning.

1.26 A magazine that features the latest electronics and computer software for homes enclosed a short questionnaire on a postcard. Readers were asked to answer questions concerning their use and ownership of various software and hardware products, and to then send the card to the publisher. A summary of the results appeared in a later issue of the magazine that used the data to make statements such as 40% of readers have purchased program X. Identify a population and sample and comment on the representativeness of the sample. Are readers who have not purchased any new products mentioned in the questionnaire as likely to respond as those who have purchased?

1.27 Each year a local weekly newspaper gives out "Best of the City" awards in categories such as restaurant, deli, pastry shop, and so on. Readers are asked to fill in their favorites on a form at the web site of the weekly paper. The establishment receiving the most votes is declared the winner in its category. Identify the population and sample and comment on the representativeness of the sample.

1.28 Which of the following are anecdotal and which are based on sample?

(a) Out of 200 students questioned, 40 admitted they lied regularly.

(b) Bobbie says the produce at Market W is the freshest in the city.

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[6]J. Witt et al., "Putting to a bigger hole: Golf performance relates to perceived size," *Psychonomic Bulletin and Review* **15**(3) (2008), pp. 581–586.
[7]Harris Interactive telephone survey (October 16–19, 2008).
[8]www.mindtools.com (2012) Are you a procrastinator? (online). [Accessed November 9, 2012].