NAME _____ DATE _____ PERIOD _____

13-1 Practice

Sampling and Bias

Identify each sample, suggest a population from which it was selected, and state whether it is *unbiased* (random) or *biased*. If unbiased, classify the sample as *simple*, *stratified*, or *systematic*. If biased, classify as *convenience* or *voluntary response*.

1. **GOVERNMENT** At a town council meeting, the chair asks 5 citizens attending for their opinions on whether to approve rezoning for a residential area.

2. **BOTANY** To determine the extent of leaf blight in the maple trees at a nature preserve, a botanist divides the reserve into 10 sections, randomly selects a 200-foot by 200-foot square in the section, and then examines all the maple trees in the section.

3. **FINANCES** To determine the popularity of online banking in the United States, a polling company sends a mail-in survey to 5000 adults to see if they bank online, and if they do, how many times they bank online each month.

4. **SHOES** A shoe manufacturer wants to check the quality of its shoes. Every twenty minutes, 20 pairs of shoes are pulled off the assembly line for a thorough quality inspection.

5. **BUSINESS** To learn which benefits employees at a large company think are most important, the management has a computer select 50 employees at random. The employees are then interviewed by the Human Relations department.

6. **BUSINESS** An insurance company checks every hundredth claim payment to ensure that claims have been processed correctly.

7. **ENVIRONMENT** Suppose you want to know if a manufacturing plant is discharging contaminants into a local river. Describe an unbiased way in which you could check the river water for contaminants.

8. **SCHOOL** Suppose you want to know the issues most important to teachers at your school. Describe an unbiased way in which you could conduct your survey.