

# PROB STAT HONORS

Name \_\_\_\_\_

## 5.1 – COLLECTING DATA

Classify each of the following scenarios as either an *observational study* or an *experiment*.

1. Subjects experiencing chronic cough were randomly assigned to one of two groups. One group was given a daily herbal supplement and the other group a sugary cough drop. After 6 months, the numbers of respiratory tract infections each group experienced were compared.
2. A researcher mounted a video camera at a busy intersection. She recorded video for several days, then noted the color of each car and whether or not it ran the red light.
3. A behavioral researcher measured the level of hostility and total cholesterol level among a group of patients receiving psychological therapy.
4. Participants in a dietary study were randomly assigned to four groups. Each group was placed on one of four special diets—a low-fat diet, a high-fish diet, a combination of low-fat diet and high-fish diet, and a regular diet. After 6 months, the average blood pressures of the groups were compared to determine if diet had any effect on blood pressure.

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In each of the following scenarios, determine [a] if the results of the study can be generalized to some larger population, and [b] if so, what is this larger population?

5. A researcher interviews a group of twenty college freshmen as they come out of a sporting event. He asks each one their name and then if they have used any illegal drugs in the last month.
6. A doctor randomly selected a group of men over the age of fifty. Each man was weighed and then measurements were taken to determine the amount of arterial plaque he had.
7. A survey about food satisfaction in the cafeteria was conducted by having forms available for customers to pick up at the cash register. A drop box for completed forms was available outside the cafeteria.
8. A random sample of patient records in New York hospitals suggested that poor elderly patients sued for malpractice at one-fifth the rate of wealthier patients.