

1. An auto analyst is conducting a satisfaction survey, sampling from a list of 10,000 new car buyers. The list includes 2,500 Ford buyers, 2,500 GM buyers, 2,500 Honda buyers, and 2,500 Toyota buyers. The analyst selects a sample of 400 car buyers, by randomly sampling 100 buyers of each brand.

Is this an example of a simple random sample?

- a) Yes, because each buyer in the sample was randomly sampled.
- b) Yes, because each buyer in the sample had an equal chance of being sampled.
- c) Yes, because car buyers of every brand were equally represented in the sample.
- d) No, because every possible 400-buyer sample did not have an equal chance of being chosen.
- e) No, because the population consisted of purchasers of four different brands of car.

2. Identify the sampling technique used:

- a) Every fifth person boarding a plane is searched thoroughly.
- b) At a local community College, five math classes are randomly selected out of 20 and all of the students from each class are interviewed.
- c) A researcher randomly selects and interviews fifty male and fifty female teachers.
- d) A researcher for an airline interviews all of the passengers on five randomly selected flights.
- e) Based on 12,500 responses from 42,000 surveys sent to its alumni, a major university estimated that the annual salary of its alumni was 92,500.
- f) A community college student interviews everyone in a biology class to determine the percentage of students that own a car.
- g) A market researcher randomly selects 100 drivers under 35 years of age and 100 drivers over 35 years of age.
- h) All of the teachers from 85 randomly selected nation's middle schools were interviewed.
- i) To avoid working late, the quality control manager inspects the last 10 items produced that day.
- j) The names of 70 contestants are written on 70 cards, the cards are placed in a bag, and three names are picked from the bag.

