

## Math 156: Sampling Plans Exercises

1. What survey design is used in the following situations?
  - a) A few electoral districts are chosen at random, and every voter in that district is contacted. \_\_\_\_\_
  - b) The 17<sup>th</sup> person and then every 100<sup>th</sup> person thereafter on the list of registered voters in BC is contacted and asked a question. \_\_\_\_\_
  - c) Every registered voter's name is written on paper and put into a really, really big hat. The hat is shaken and 1000 papers are selected. \_\_\_\_\_
  - d) The voters' list is divided up into electoral districts, and 100 names are chosen randomly from each district. \_\_\_\_\_
  
2. A manager at the Ford Motor Company wants to do some testing for quality control. In the factory, a number of different assembly lines all produce the same car, the Ford Fiesta. For the following situations, identify the survey method used to pick the samples.
  - a) The serial numbers of all cars manufactured on all assembly lines are recorded and twenty of them are randomly selected for testing. \_\_\_\_\_
  - b) For each assembly line, a certain number of cars are chosen at random from the ones manufactured that day. \_\_\_\_\_
  - c) A certain number of assembly lines are chosen at random and then all cars manufactured that day from those lines are tested. \_\_\_\_\_

### Answers

1. a) cluster    b) 1-in-100 systematic    c) simple random    d) stratified random
2. a) simple random    b) stratified    c) cluster