

## 1.4 Problems

(last update 27 August 2019)

1. Give one possible sample of size 3 from each of the following populations. In other words, list 3 of the units that constitute the population described.

- a) All the large cities in the United States;
- b) All the cities in Louisiana;
- c) All TV or movie streaming services;
- d) All companies listed on the New York Stock Exchange.

2. Identify the unit on which each of the following variables is measured and classify the variable as qualitative or quantitative. For example, for the variable “the age of a person”, a person is a unit and the possible values of the variable are positive numbers representing possible ages. Since these ages are numbers on the number line this is a quantitative variable.

- a) The number of people in a household;
- b) The size of the screen of a laptop computer (measured in inches);
- c) The number of credit hours a student is registered for;
- d) The manufacturer of an automobile;
- e) The color of the front entrance door of a house;
- f) The classification (grade level) of a student in a high school.

For question 3 classify each bold faced number (there are two such numbers) as a parameter or statistic. Carefully explain your reasoning.

3. A telephone sales outfit in Los Angeles uses a device that dials residential phone numbers in the city at random. Of the first 200 numbers dialed, **47%** are unlisted numbers. This is not surprising since **52%** of all Los Angeles residential phone numbers are unlisted.

For question 4 classify each bold faced description of a number (there are two such descriptions) as a parameter or statistic. Carefully explain your reasoning.

4. It might be of interest to determine **the percentage of all personal vehicles registered in Louisiana that are more than 10 years old**. It would probably be easier to determine **the percentage of all personal vehicles registered in Lafayette Parish that are more than 10 years old**