

Max Goodman

## Homework 1

introduction to Statistics, chapter 1:

Exercises: 42, 44, 46, 51, 52, 54, 56, 58, 60, 66, 76, 90

42. A: Population: Clients who regularly go to the gym

B: Sample: Clients that were asked about their time in the gym

C: Parameter: The time that was spent in the gym with the clients who were also there at the time

D: Statistics: The time spent in the gym using only the Clients in the sample

E: Variable: the time a client would spend in the gym

F: Data: the time the clients spent exercising, 2 hours, 3 hours 4 hours, etc...

44.

A. Population: Patients who had heart attacks

B. Sample: The clients that she used

C. Parameter: the time of recovery for the patients

D. Statistics: The Mean recovery period using the sample patients

E. Variable: The recovery period for each patient

F. Data: the times of recovery for example; 1 month, 2 months, 7 months, etc...

46.

A. Population: Every voter in the Area

B. Sample: The voter in the area that were questioned

C. Parameter: The people who actually voted for him in the area

D. Statistics: The voters in the sample who voted for him

E. Variable: What the voter responds with

F. Data: if the voter says yes or no

51.

D. Data

52. C. Statistic

54. It is quantitative continuous Because it could be on an interval.

56. It is quantitative continuous because it is on an interval

58. It is quantitative continuous Because it could be on an interval.

60. It is quantitative discrete because it doesn't change.

66. First I would take the population of students who actually take a statistics class in my area. Then I would ask as many statistics teachers as I can how many students they have per class. After this I will take the mean of the teachers' answers and turn it into data.

76. In advance of the 1936 Presidential Election, a magazine titled Literary Digest released the results of an opinion poll predicting that the republican candidate Alf Landon would win by a large margin. The magazine sent post cards to approximately 10,000,000 prospective voters. These prospective voters were selected from the subscription list of the magazine, from automobile registration lists, from phone lists, and from club membership lists. Approximately 2,300,000 people returned the postcards.

1. Think about the state of the United States in 1936. Explain why a sample chosen from magazine subscription lists, automobile registration lists, phone books, and club membership lists was not representative of the population of the United States at that time.

**At this time in America these things were most likely not as popular yet.**

2. What effect does the low response rate have on the reliability of the sample?

**The Low response rate makes it hard to come up with an exact answer because all of the data was not recorded properly.**

3. Are these problems examples of sampling error or non sampling error?

**They are examples of sampling errors.**

4. During the same year, George Gallup conducted his own poll of 30,000 prospective voters. These researchers used a method they called "quota sampling" to obtain survey answers from specific subsets of the population. Quota sampling is an example of which sampling method described in this module?

**It is called non-probability sampling.**

90. A. What percent of the students surveyed do not have a computer at home?

**96% of students have a computer.**

B. About how many students in the survey live at least 16 miles from campus?

**13% of students live 16 miles from campus which is 100 students.**

C.If the same survey were done at Great Basin College in Elko, Nevada, do you think the percentages would be the same? Why?

**No, Because there are different circumstances and different people.**