**Lab 5 Lecture Notes**

You will need two excel spreadsheets in order to complete this lab.

1. Go to Modules in the course room and click on Week 3 Lesson: Measure of Central Tendency and Variation.



2. Download the excel spreadsheet template needed for the lab.

A picture containing knife

Description automatically generated

3. Go to Modules in the course room and click on Week 5 Lesson: Normal Distribution.

**A screenshot of a cell phone

Description automatically generated**

4. Download the excel spreadsheet template needed for the lab.

**A screenshot of a cell phone

Description automatically generated**

Data Set: Ten Grades on the Midterm Exam

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 50 | 68 | 74 | 77 | 80 |
| 86 | 86 | 80 | 78 | 90 |

* Create a description spreadsheet to describe the students surveyed.

1. How did you choose the participants for your study (sampling method)?

Review Different Types of Sampling Methods

1. Cluster: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. Stratified: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. Systematic: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4. Convenient: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5. Simple Random: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. What part of the country did your study take place in?
2. What are the age ranges of your participants?
3. How many of each gender did you have in your study?
4. What are other interesting factors about your group?

--Take a Screenshot of your Description Spreadsheet and provide it below.

--Take a Screenshot of your Preliminary Calculations and provide it below.

* Preliminary Calculations

|  |  |
| --- | --- |
| Mean |  |
| Sample Standard Deviation |  |
| Score on the Midterm |  |

* Let’s Compare Our Score!

How does your score compare to the mean (average) height of the group that you surveyed? Is your score more, less, or the same as the mean of your group?

**Empirical Rule**

Determine the 68%, 95%, and 99.7% values of the Empirical Rule in terms of the ten scores in your midterm study.

--Take a Screenshot of your Empirical Rule Sheet and provide it below

What do these values tell you?

**Normal Distribution**

--Take a Screenshot of your Normal Distribution Sheet and provide it below

Based on your study results, what percent of the study participants scored lower than you? What percent scored better?

Recap of Week 5 Lab