Assignment 1

Due date: Week 1.

1. Explain the purpose of the assignment and any key points to consider.

2. What is the difference between a parameter and a statistic? Provide an example.

3. What is the role of a hypothesis in statistical analysis? Explain with an example.

4. Discuss the importance of sample size in data analysis. How does it affect the reliability of the results?

5. Explain the concept of significance level (alpha). What is the significance of using a 5% significance level?

6. Describe the concept of statistical significance. How does it differ from clinical significance?

7. Explain the role of randomization in experimental design. Why is it important to avoid bias?

8. Discuss the concept of confounding variables in research. How can they be controlled to ensure valid results?

9. Explain the difference between correlation and causation. Provide an example of each.

10. Discuss the importance of data collection methods in research. Which method is most appropriate for different types of studies?