

Statistical Reasoning in Sports – Chapter 9 Assessment

- This Assessment is about an Experiment and a Test for a Difference in Two Standard Deviations.
- Your goal is to complete this before the end of class.
- You are encouraged to use the work you have done this chapter to complete this assessment.
- Work will be done and submitted on our Google Classroom with a Google Doc (or MSWord if you are more comfortable with that). It will include an originality report.

The Report [Each of these sections is graded]

- Header in upper-right corner: First and Last name, “5^o Statistical Reasoning in Sports” and “Chapter 9 Assessment.” [5 pts]
 - Title written in the form of a question. [5 pts]
 - Explain your question of interest and why you choose this topic. [5 pts]
 - Explain your population~~s~~ of interest. [5 pts]
 - Explain who/what you will use for your experimental subjects and how you will select them. [5 pts]
 - Explain if you will be able to generalize your results to your population~~s~~ of interest. [5 pts]
 - Define your explanatory and response variables. [5 pts]
 - State your null and alternative hypothesis. [10 pts]
 - Explain how you will randomly assign treatments or why you can't. [5 pts]
 - Explain why you need to (or why you should, if you can't) randomize the order of treatments. [5 pts]
 - Explain how you will make the experiment blind (or why you can't). [5 pts]
 - Data [make up your own or ask me to give you some]. [5 pts]
 - Include dot plots of data and summary statistics [include a screen-shot]. [5 pts]
 - Use the applet to simulate the experiment 10000 times and estimate the p-value [include a screen-shot]. [5 pts]
 - Based on your p-value, what is your conclusion? [10 pts]
 - If you made an Error [Type I or Type II] which one would it be and what would the consequences be? [5 pts]
 - Write an overall conclusion. [10 pts]
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Ask me for help! This project is to assess what you have learned this chapter, but I want you to be successful so please ask me for advice, to check your work – but it needs to be during class time and office hours.