

# Statistical Reasoning in Sports – Chapter 8 Assessment

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- 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]

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- Header in upper-right corner: First and Last name, “5° Statistical Reasoning in Sports” and “Chapter 8 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 of interest. [5 pts]
  - Explain who 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 of interest. [5 pts]
  - Define your explanatory and response variables. [5 pts]
  - Explain what makes this an experiment. [5 pts]
  - State your null and alternative hypothesis. [10 pts]
  - Explain how you will randomly assign treatments. [5 pts]
  - Explain why you need to 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 a dot plot of differences [include a screen-shot]. [5 pts]
  - Use the applet to simulate the experiment 1000 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. [5 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.