Homework #5

Due Date: Thursday, February 29th at 11:59 PM Pacific

Total Points: 40

Submission Instructions

You must submit this assignment to Gradescope by the on-time deadline, **Thursday, February 29th at 11:59 PM Pacific**. Please read the syllabus for **the grace period policy**. No late submissions beyond the grace period will be accepted. While course staff is happy to help you if you encounter difficulties with submission, we may not be able to respond to last-minute requests for assistance (TAs need to sleep, after all!). **We strongly encourage you to plan to submit your work to Gradescope several hours before the stated deadline.** This way, you will have ample time to reach out to staff for submission support.

This assignment is entirely on paper. Your submission (a single PDF) can be generated as follows:

1. Type your answers. We recommend LaTeX, the math typesetting language. Overleaf is a great tool to type in LaTeX.

2. Download this PDF, print it out, and write directly on these pages. If you have a tablet, you may save this PDF and write directly on it.

3. Write your answers on a blank sheet of physical or digital paper. Note: If you write your answers on physical paper, use a scanning application (e.g., CamScanner, Apple Notes) to generate a PDF.

> **Important**: When submitting on Gradescope, you **must tag pages to each question correctly** (it prompts you to do this after submitting your work). This significantly streamlines the grading process and allows us to release grades more quickly.
>
> **Your work will NOT be graded if you do not select pages on Gradescope**. We will not be granting regrade requests nor extensions to submissions that don't follow instructions.

If you encounter any difficulties with submission, please don't hesitate to reach out to staff prior to the deadline.

Collaborators

Data science is a collaborative activity. While you may talk with others about the homework, we ask that you write your solutions individually. If you do discuss the assignments with others, please include their names below.

○ D. All students enrolled in Shiny's discussion section

○ E. All students who fill out Shiny's pre-contest survey

ii. (1 point) In this sampling scheme, which of the following is the sampling frame?

○ A. UC Berkeley students

○ B. All students enrolled in Data 100 across all semesters (Spring 2024 and previous)

○ C. All students enrolled in Data 100 for this semester (Spring 2024)

✓ D. All students enrolled in Shiny's discussion section

○ E. All students who fill out Shiny's pre-contest survey

iii. (1 point) Which of the following is the sample?

○ A. UC Berkeley students

○ B. All students enrolled in Data 100 across all semesters (Spring 2024 and previous)

○ C. All students enrolled in Data 100 for this semester (Spring 2024)

○ D. All students enrolled in Shiny's discussion section

✓ E. All students who fill out Shiny's pre-contest survey

iv. (1 point) Which of the following best characterizes the sample?

○ A. Simple Random Sample

✓ B. Convenience Sample

○ C. Probability Sample