

Homework 1 - MATH 141

Due Date: Monday 09/06/2021, 11:59 PM

Instructions:

- Please provide complete answers/solutions for each question/problem.
- If it involves mathematical computations, please provide your reasoning and/or detailed solutions.
- There are two ways you can write your answers, a: by handwriting (either physically or digitally), or b: by typing on a template document with file type options, Word or RMarkdown, which can be downloaded from the [course website](#).
- If you had handwritten your answers/solutions on a physical paper, make sure to label it properly and please scan your document using a scanner app for convenience. Suggestions: (1) “[Tiny Scanner](#)” for [Android](#) or (2) “[Scanner App](#)” for [iOS](#).
- If you have questions or concerns, please feel free to ask the instructor.
- **Please save your work as pdf file(s), don't put your name in any part of the document, and submit it to the Gradescope page for this course. Your document upload will correspond to your name automatically in Gradescope.**

I. Class Introductions

Purpose: This section is for you to reflect on your views about probability and statistics. This will help the instructor to gauge on your research interests and to establish an inclusive atmosphere and making sure every student is heard and valued.

- 1 To what extent is your experience in probability and statistics?
- 2 What do you hope to learn in this class?
- 3 What are you excited about in this class?
- 4 What are your anxieties and concerns about the class?

II. Syllabus Review

Purpose: This section is for you to review the course syllabus.

- 1 [Multiple Choice] What are the things you need to do for this class this week?
 - a. Visit the course website, reed-statistics.github.io/math141-fall2021.
 - b. Sign-up using your Reed email for the class Slack Workspace, math141-quijano.slack.com.
 - c. Sign-up for [Gradescope](#) as a student with your reed email using this Gradescope entry code: 2R8X6V.
 - d. All of the above.
- 2 [Multiple Choice] Where can you seek help if you are having concerns about the course, having difficulty regarding a topic, have questions, or just want to learn more in general?
 - a. Instructor's office hours
 - b. Lab assistants' office hours
 - c. Set up an appointment with the instructor
 - d. All of the above. Note that you are encouraged to come to office hours whether you are behind or ahead in the course.
- 3 [True or False] It is encouraged that students participate in discussions regarding homework and lab assignments. However, each student must take responsibility and ownership of their work and submit their work individually.
 - a. True
 - b. False
- 4 [True or False] It is strongly recommended that you attend classes and labs promptly. Participation is an important part of learning statistics. Be prepared to participate in the discussion by doing the assigned readings and homework every week.
 - a. True
 - b. False

III. Textbook Exercises

Note: To view the selected exercises below, please refer to the textbook, *OpenIntro: Introduction to Modern Statistics (2021)* by Mine Çetinkaya-Rundel and Johanna Hardin, First Edition.

Section 1.4: Choose any 6 exercise problems below to answer.

- 2 Cherry Blossom Run.
- 4 Cheaters, study components.
- 6 Stealers, study components.
- 8 Sinusitis and antibiotics.
- 10 Efficacy of COVID-19 vaccine on adolescents, study components.
- 12 Smoking habits of UK residents.
- 14 UN Votes.
- 16 Shows on Netflix.
- 18 Space launches.
- 20 Stressed out in an elevator.

Section 2.5: Choose any 6 exercise problems below to answer.

- 4 Cheaters, scope of inference.
- 6 Stealers, scope of inference.
- 8 Cats on YouTube.
- 12 Stressed out.
- 16 Family size.
- 20 Vitamin supplements.
- 22 Music and learning.
- 24 Exercise and mental health.
- 28 Income and education in US counties.
- 30 Screens, teens, and psychological well-being.