432 Quiz 1

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Deadline: 9 PM 2022-02-21. Version: 2022-02-09 13:05:37

Links

All links for the Quiz will be made available at https://github.com/THOMASELOVE/432-2022/tree/main/quiz/quiz1 at 5 PM on 2022-02-17.

This will include links to:

- the Main Document (this document) containing the instructions and questions
- the Google Form Answer Sheet, and
- the data sets and any other information we decide to provide

Instructions

This PDF document is **XXX** pages long. There are **XXX** questions on this Quiz. It is to your advantage to answer all of the Questions. Your score is based on the number of correct responses, so there's no chance a blank response will be correct, and a guess might be, so you should definitely answer all of the questions.

The Google Form Answer Sheet

All of your answers must be submitted through the Google Form by the deadline, without exception. The form will close at that time, and no extensions will be made available, so please do not wait until Monday evening to submit. We will not accept any responses except through the Google Form.

The Google Form contains places to provide your responses to each question, and a final affirmation where you'll type in your name to tell us that you followed the rules for the Quiz. You must complete that affirmation and then submit your results. When you submit your results (in the same way you submit a Minute Paper) you will receive an email copy of your submission, with a link that will allow you to edit your results.The Answer Sheet works like a Minute Paper, in that you must be logged into Google via CWRU to access it.

If you wish to work on some of the quiz and then return later, you can do this by [1] completing the final question (the affirmation) which asks you to type in your full name, and then [2] submitting the quiz. You will then receive a link at your CWRU email which will allow you to return to the Quiz Answer Sheet as often as you like without losing your progress.

The Data Sets

I have provided **XXX** data sets (called **XXX**, **XXX**, and **XXX**) that are mentioned in the Quiz. They may be helpful to you.

Getting Help

This is an open book, open notes quiz. You are welcome to consult the materials provided on the course website and that we've been reading in the class, but you are not allowed to discuss the questions on this quiz with anyone other than Professor Love and the teaching assistants. You will be required to complete a short affirmation that you have obeyed these rules as part of submitting the Quiz.

If you need clarification on a Quiz question, you have exactly two ways of getting help:

1. You can ask your question in a **private** post on Piazza to the instructors.
2. You can ask your question via email to **431-help at case dot edu**.

During the Quiz period (2022-02-17 through 2022-02-21) we will not answer questions about the Quiz except through the two approaches listed above. We promise to respond to all questions received before 5 PM on 2022-02-21 in a timely fashion.

A few cautions:

- Specific questions are more likely to get helpful answers.
- We will not review your code or your English for you.
- We will not tell you if your answer is correct, or if it is complete.
- We will post to Piazza in the `quiz1` folder if we find an error in the Quiz that needs fixing.

When Should I ask for help?

We recommend the following process.

- If you encounter a tough question, skip it, and build up your confidence by tackling other questions.
- When you return to the tough question, spend no more than 10-15 minutes on it. If you still don't have it, take a break (not just to do other questions) but an actual break.
- When you return to the question, it may be much clearer to you. If so, great. If not, spend 5-10 minutes on it, at most, and if you are still stuck, ask us for help.
- This is not to say that you cannot ask us sooner than this, but you should **never, ever** spend more than 20 minutes on any question without asking for help.

Scoring and Timing

All questions are worth 3, 4 or 5 points, as indicated, adding to a total of 100 points. The questions are not in any particular order, and range in difficulty from "things Dr. Love expects everyone to get right" to "things that are deliberately tricky". Some questions will take more time than others to answer.

The Quiz is meant to take 4-5 hours to complete. I expect most students will take 3-6 hours, and some will take as little as 2 or as many as 8. Again, it is **not** a good idea to spend a long time on any one question.

Dr. Love will grade the Quiz, and results (including an answer sketch) will be available by class time on Tuesday 2022-03-01.

What does the Quiz cover?

Quiz A includes material from the first 12 classes in 432, including:

- Chapters 1-14 of the 432 course notes,
- Dr. Love's note on interpreting effect sizes from Class 09,
- all of Jeff Leek's *How to be a Modern Scientist* and
- Chapters 1-5 of Nate Silver's *The Signal and the Noise*.

Writing Code into the Answer Sheet

Occasionally, we ask you to provide R code in your response. Do not include the `library` command at any time for any of your code. Instead, assume in all questions that all relevant packages have been loaded in R. A list of R packages that Dr. Love used in building the Quiz and its answer sketch is available in the next section.

Packages and Settings used by Dr. Love

This doesn't mean you need to use all of these packages, nor does it mean that you are prevented from using other packages we've discussed in class to complete the Quiz.

```
library(here)
library(knitr)
library(janitor)
library(magrittr)
library(naniar)
library(patchwork)
library(GGally)
library(equatiomatic)
library(simputation)
library(rms)        # includes Hmisc
library(tidymodels) # includes broom, rsample, etc.
library(tidyverse)  # includes dplyr, ggplot, etc.

# Note that all data files were downloaded onto
# my machine into a subfolder called data below
# my main R Project directory for Quiz 1.

theme_set(theme_bw())
opts_chunk$set(comment = NA)
options(dplyr.summarise.inform = FALSE)
```