

# STAT 477

## Take Home Exam 1

Below is the take home exam for the material covered in Module 1. You may only receive help from me on the take home exam. Receiving assistance from any other source will be considered academic dishonesty and treated as such.

Your responses to the questions below should be prepared on the computer and uploaded to Canvas before the deadline. Your responses should be written in paragraph form. You should include all tables and graphs as a part of this paragraph structure in your write-up, not separately at the end.

**Background:** As a part of lecture, I presented a study conducted several years ago with my colleague, Dr. Dan Nettleton, to test the resemblance between a parent and his/her child. In our study, we used the equivalent of a “baby picture line-up” to test whether or not independent judges (students in our introductory statistics courses) could pick the baby belonging to the parent from a group of four babies total.

For this take home exam, you will be looking at the survey and data for Dr. Nettleton and his son Sam. The responses of the students/judges are available in Canvas in the file **Babies.csv**. Dr. Nettleton’s son is baby B. Use the survey responses to answer the research questions below. In your write-up, make sure to include the appropriate data summaries, graphs, and inference procedures to fully support your answer to each research question.

- Do the students/judges detect a resemblance between Dr. Nettleton and any of the babies pictured?
- Do the students/judges detect a resemblance between Dr. Nettleton and his son Sam?
- Write a summary of the overall results of the study of resemblance between Dr. Nettleton and his son Sam.