

Practice Class Test

Data Analysis Level M

1 Introduction

This is a practice test to help you prepare for the two class tests for Data Analysis and it does not count towards your final grade. In this practice class test you are tasked with producing a report using R Markdown on the data set described below.

Your report should include:

- An appropriate Title and your Student Number;
- An Introduction section detailing the data set and question of interest;
- An Exploratory Data Analysis section;
- A Formal Data Analysis section; and
- A Conclusions section.

Although this practice class test won't be marked, the two class tests are each marked out of 25 MARKS, which are broken down as follows:

- Title and Student Number: 1 MARK
- Introduction: 3 MARKS
- Exploratory data analysis: 7 MARKS
- Formal data analysis: 10 MARKS
- Conclusions: 3 MARKS
- General layout: 1 MARK

2 Anatomical Data from Domestic Cats

Digitalis is a heart medicine similar to toxins found in a genus of plants commonly known as foxglove. These plants can be poisonous towards humans and pets. As part of digitalis experiments, 144 domestic male and female adult cats had their heart weight in grams (**Hwt**) and body weight in kilograms (**Bwt**) measured.

3 Question of interest

Use what you have learned in previous weeks to produce a report on the following question of interest:

Using a linear model, describe the heart weights of male and female adult cats. What does the model say about the difference, on average, between male and female cats?

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4 Instructions

- Go to the “**Practice Class Test Files**” folder in the “**Week 4: Report writing using R Markdown**” section of the **Data Analysis Moodle page**.
- Download the contents of the folder to your **M: drive**. The folder contains two files:
 1. the data in `cats.csv` and
 2. a R Markdown template named `PracticeClassTestTemplate.Rmd`.
- Save the template `.Rmd` file as `yourstudentnumber_PracticeClassTest.Rmd` in your **M: drive** and open it from within R studio.
- The template `.Rmd` file includes the necessary R packages to produce your report and complete your analysis. It also reads the data set into R. Before you start to work, compile the template `.Rmd` and check that the `.pdf` file is produced.
- When you have finished your report, click on the **Practice Class Test Upload** link in the “**Week 4: Report writing using R Markdown**” section of the **Data Analysis Moodle page** and upload your report as the PDF file `yourstudentnumber_PracticeClassTest.pdf`. Also upload the R Markdown file `yourstudentnumber_PracticeClassTest.Rmd`.

In the actual class tests only the `.pdf` file will be marked. The `.Rmd` file will only be considered if there was a problem compiling the `.pdf` file.