Practice quiz question 2

Answer each question in a clearly annotated script.

To receive feedback, submit your script via the link on Moodle, save your script as "your_name_practice_2" (e.g. smith_practice_2).

Make sure your name, student ID and date is at the top of your quiz script.

In questions where you are asked to analyse data, you should follow the analysis pathways set out in the lectures, e.g.:

1. Write clear hypotheses

2. Explore descriptive statistics – means, standard deviation, distribution etc

3. Create appropriate plots to visualise/explore data

4. Decide on test(s) to be done (see flow chart)

5. Examine assumptions of tests: normality, variances, independence

6. Carry out tests

7. Report your results: results statements / plots

Section 1 [10 marks]

The dataset *enrich.csv* is available on Moodle. This dataset contains the results of a study looking at the amount of pacing behavior of lions in captivity. The researchers tested three different types of environmental enrichment within lion enclosures to examine the effect each treatment had on the amount of pacing (a proxy measure of animal anxiety). The dataset contains two variables,

pacing – amount of pacing (recorded in minutes) recorded over the observation period (2 hours)
type – three enclosure enrichment treatments

Examine the dataset to answer the following research question; is there a difference in lion anxiety (pacing behaviour) between the three enrichment treatments?

Marking guidance

1 mark for the hypothesis; 2 marks for preliminary data exploration and visualisation, 2 marks for testing the assumptions and reporting, 2 marks for selection and carrying out correct tests, 3 marks reporting your results and presenting the data.