

Practice quiz question 4

Answer each question in a clearly annotated script.

You should use the format of scripts like the one that was given to you in the first week.

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

The dataset '*SheepFitness.csv*' should be downloaded from moodle. The dataset contains two variables, bodysize (mothers body size) and fitness (number of offspring). Researchers would like to know if a relationship exists between the female body condition (as measured by sheep body weight (kg)) and the number of offspring produced.

Construct a model to investigate the relationship between the mother's body mass and the number of offspring she produced.

Marking guidance

1 mark for the hypothesis; 2 marks for preliminary data exploration and visualisation, 4 marks for model building and validation, 3 marks for reporting your results and presenting plot with modelled line.