

To do: Make a submission

Opened: Thursday, 24 April 2025, 1:05 PM

Due: Friday, 2 May 2025, 12:55 PM

You are required to complete Part 1 and Part 2 of the Assignment

In your work, assume the 5% significance level.

Part 1

Microhabitat factors associated with forage and bed sites of barking deer in Hainan Island, China were examined. In this region woods make up 4.8% of the land, cultivated grass plot makes up 14.7%, and deciduous forests make up 39.6%. Of the 530 sites where the deer forage, 6 were categorized as woods, 18 as cultivated grassplot, and 71 as deciduous forests. The table below summarizes these data.

Woods	Cultivated grassplot	Deciduous forests	Other	Total
6	18	71	435	530

- a. Write the hypotheses for testing if barking deer prefer to forage in certain habitats over others.
- b. What type of test can we use to answer this research question?
- c. Check if the assumptions and conditions required for this test are satisfied.
- d. Do these data provide convincing evidence that barking deer prefer to forage in certain habitats over others? Conduct an appropriate hypothesis test to answer this research question.
 - Calculate the chi-squared statistic.
 - Calculate the degree of freedom.
 - Given that the p-value < 0.001, give a conclusion.

Part 2

The OpenIntro website occasionally experiments with design and link placement. We conducted one experiment testing three different placements of a download link for this textbook on the book’s main page to see which location, if any, led to the most downloads. The number of site visitors included in the experiment was 501 and is captured in one of the response combinations in the following table:

	Download	No Download
Position 1	16.0%	20.9%
Position 2	14.8%	21.2%
Position 3	11.9%	15.2%

- a. Calculate the actual number of site visitors in each of the six response categories.
- b. Each individual in the experiment had an equal chance of being in any of the three experiment groups. However, we see that there are slightly different totals for the groups. Do you think that there is any evidence that the groups were actually imbalanced? Make sure to clearly state hypotheses, check conditions, calculate the appropriate test statistic. Given that the

p-value is 0.01215, make your conclusion in context of the data.

This assignment will be assessed by your instructor using the rubric below.

Note: Always prioritize using JASP to retrieve values, as it will be a key tool for the final exam.

Add submission

Submission status

Attempt number	This is attempt 1.
Submission status	No submissions have been made yet
Grading status	Not graded
Time remaining	7 days 13 hours remaining

Grading criteria

Part 1: Testing of Hypothesis	Accurately describes all 4 steps (a)–(d), providing formulae at required steps and arrived at correct conclusion. 40 points	Accurately describes all 4 steps (a)–(d), providing formulae at each step and arrived at incorrect conclusion. 30 points	Missed any of (a)–(c) but explained (d) correctly, providing required formulae at step (d) and arrived at correct conclusion. 20 points	Incorrectly explained providing required formulae at all steps (a)–(d) and arrived at incorrect conclusion. 10 points	Unable to meet any of the preceding levels. 0 points
Part 2: Developing a model for testing of hypothesis and test	Accurately describes all 2 aspects (a)–(b), providing formulae at required steps and arrived at correct conclusion. 60 points	Accurately describes all 2 steps (a)–(b), providing formulae at required step and arrived at incorrect conclusion. 40 points	Correctly calculates (a) Unable to model statistic problem correctly (b) or inappropriate test uses (b). 15 points	Correctly calculates (a) failed to describe (b). 10 points	Unable to meet any of the preceding levels. 0 points