**Question 3 Explanation:**

We are going to conduct a Test of Independence using Chi-Square test with Contingency table

We need to check whether the proportion of any of these samples are different or the same?

**Step 1**

**Make two Hypothesis one contradicting to other**

* **Null Hypothesis:** There is no association or dependency between the gender-based buyer rations across regions
* **Alternative Hypothesis:** There is a significant association or dependency between the gender-based buyer rations across regions

**Step 2**

Decide a cut-off value

* Significance 5%
* alpha = 0.05

**Step 3 (PYTHON CODE)**

**Step 4**

Comparing Evidence with Hypothesis

Compare p\_value with 'Alpha '(Significance Level)

If p\_value is > Alpha we fail to reject Null Hypothesis because of lack of evidence

If p\_value is < Alpha we reject Null Hypothesis

**ANSWER:**

Significance=0.050, p=0.810

Since p> Alpha, H0 is accepted

Therefore, there is no association or dependency between male-female buyers rations and are similar across regions. Hence, Independent samples