Scenario 1:

Answer 1:

Used Mysql and Mysql workbench. Attached Sql script(AirBnB.sql).

Answer 2:

policy_survey_pilot_audience.csv. Added Country and Region because this scenario is for the survey about local laws so it should be helpful for further analysis.

Answer 3:

EMEA:50
NAMER:37
LATAM:50
APAC:38

Answer 4:

A brief explanation of how you approached this task, any clarifying questions you would
ask stakeholders, and any assumptions you made to complete this task.

Approach and Assumptions:
To complete this task, I used MySQL and MySQL Workbench. Here's how I approached it:

- First, I identified the necessary tables and columns based on the provided tab names in the spreadsheet.
- I assumed that the recipient user IDs should be stored in the "recipients" table, and I used the columns "policy_email" and "active_status" to filter out the qualified audience.
- I joined the relevant tables and applied conditions to find the qualified audience for the survey pilot.
- Once I obtained the qualified recipients, I used subqueries and Common Table Expressions (CTEs) to calculate the sample size for each region.
- I assumed that more than 50 users per region are not needed, so I excluded any additional user IDs beyond the required count.

If there are any specific instructions or requirements for populating the sample when the number exceeds the needed count, please provide those details and I will incorporate them into the solution.

Scenario 2:

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Answer 1:

Total users per Campaign:
AU Parliament Advocacy: 399
New South Wales Speakout: 172
Victoria Stories: 158

Total Actions by Campaign:
AU Parliament Advocacy: 15
New South Wales Speakout: 2
Victoria Stories: 10

Conversion Rate(Actions by Users)
AU Parliament Advocacy: 3.76%
New South Wales Speakout: 1.16%
Victoria Stories: Victoria Stories 6.33%

Click Through Rate(Sent per click)
 AU Parliament Advocacy: 13.28%
 New South Wales Speakout: 9.88%
 Victoria Stories: 39.24%

Answer 2:
Campaign Dashboard (4 data visualization above those 4 metrics)

Answer 3:
When comparing the effectiveness of three campaigns, there are three key factors that contribute to the differences observed: the type of campaigns, as well as two key elements that impact the click-through rate (CTR).
The campaigns can be categorized into two types: Advocacy and Common Campaigns. In this analysis, we will compare the Advocacy campaign "Au Parliament Advocacy" with the Common Campaigns "Victoria Stories" and "New South Wales Speakout."

1. With a given dataset, it is challenging to establish a clear relationship between the conversion rate and campaign types. To gain insights, a simple comparison was conducted using the mean values of the conversion rate for the two campaign types. The Advocacy campaign had a conversion rate of 3.76, while the Common Campaigns had a conversion rate of (6.33 + 1.16) / 2 = 3.75. However, it is important to note that the impact of campaign types on the results of actions cannot be definitively determined with the available data.

Click-through rate is a crucial metric that demonstrates a strong correlation with the conversion rate. Two variables that can influence the CTR are the timing of the campaigns and the contents of the emails.

2. The Advocacy campaign, "Au Parliament Advocacy," was conducted in January. The Common Campaign "New South Wales Speakout" took place in June, while "Victoria Stories" was implemented in April.

According to information from www.australia.com, the low tourist season in Australia occurs between June and August due to winter weather, whereas the peak tourist season begins in December and extends through April. It is possible that higher tourist activity during the good seasons (December - April) may result in hosts checking their emails more frequently, potentially leading to differences in CTR across all three campaigns. However, it is important to note that the CTR differences observed between the two campaigns conducted during the peak tourist season are quite significant, making it difficult to attribute this discrepancy solely to the timing of the campaigns.

3. The content of the campaigns should also be thoroughly examined by the Australian team, particularly the subject lines and pre-headers. These elements play a vital role in capturing recipients' attention and driving them to click on the campaign emails. Analyzing the content can help shed light on the variations in CTR among the three campaigns.

In conclusion, while the type of campaigns, timing, and email content all contribute to the effectiveness of the campaigns, further analysis and investigation are required to establish more definitive insights into the observed differences in CTR and conversion rates.

Answer 4:
I utilized Tableau for the purpose of this analysis and data visualization.

Initially, I speculated that there might be some relationship based on the types of campaigns. However, the information provided indicated that the types of campaigns shared the same campaign ID. As a result, I formed a hypothesis that the differences observed might not be solely attributed to the types of campaigns. Due to the limitations of the given dataset, it was challenging to establish clear relationships between the variables.

One of the challenges encountered was related to the event types, as their meanings were not explicitly defined. Therefore, I decided to focus on the click-through rate (CTR), as it was evident that hosts needed to click on the campaign emails to register an event of "Click." By examining the CTR rates associated with the "sent" event, I identified strong correlations between CTR and actions taken for each campaign. However, finding key elements that could directly influence the CTR was difficult due to the limitations of the dataset.

In summary, Tableau was employed for data visualization and analysis purposes. Despite efforts to explore the relationships between variables, the given dataset presented challenges in drawing definitive conclusions. Further investigation and access to more comprehensive data may be required to gain deeper insights into the effectiveness of the campaigns and the factors influencing CTR.