Omari’s Report Case Study

To complete this Case Study, you will need to have this document AND the Omari’s Report Case Study Excel Document open.

**Currency Used**: There are approximately 18 countries in the world that use the term “dollars” to refer to their currency. While we use dollars in this case study, the principles discussed here are applicable to any currency used in any country.

# **1. Understand the Problem**

Omari has an internship at the headquarters of a sporting goods store chain. His team needs to give the company a recommendation on where and when to build and open their next store. His team has collected data on the following information, which can be found in the Omari’s Report Case Study Excel Document:

**Tab 1**: Number of Students

**Tab 2**: Sales by Age

**Tab 3**: Sales & Distance from Stadium

**Tab 4**: Average Monthly Sales

Omari was given the assignment by his supervisor to make some charts and graphs of his team's data and come up with some recommendations for where and when to build and open their next store. This information will help the team make an informed decision at their next meeting.

Pretend you are Omari. Finish inputting data, correct any mistakes, appropriately summarize the data with charts and graphs, and write your recommendations.

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| --- | --- |
| Question | Answer |
| State the problem in your own words. | Omari needs to make sure that the collected data is accurate and is presented in a visually understandable way so the company knows where to open the new store. |

**Finish adding the information. Complete on Spreadsheet:**

1. Go to the Number of Students spreadsheet.
2. Enter the information below into the chart in the spreadsheet (yellow boxes).

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| --- | --- |
| **Norway Census Information** City: Bergen | |
| Children age 6-10 | 74,126 |
| Children age 11-15 | 76,583 |
| Children age 16-18 | 76,014 |
| Adults age 19-25 | 67,451 |

# **2. Identifying Variables and Assumptions**

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| Question | Answer |
| List three variables in this problem.  **Hint**: A variable is an element of a situation that has the potential to vary or change in value. | 1. Children age  2. City  3. Number of students |
| List three assumptions for this problem.  **Hint**: Assumptions are ideas or concepts that are accepted as true. Assumptions are like removing the "what ifs" in a scenario. | 1. There will be a higher number of students in the oldest age range.  2. Brazil is a very populated country, so it will have more students.  3. There will be more students in European countries than in African countries. |

# **3. Apply Quantitative Tools**

**Do the following in the spreadsheet**. If you don’t know which type of graph would be appropriate for each set of data, review the reading.

## Number of Students

1. Omari created a graph for the Number of Students data, but he’s not happy with the results. Create a more appropriate graph for the Number of Students data.  
   **Hint**: The graph should have the names of the cities on the horizontal axis.
2. Make sure you give the graph a title and label both the horizontal and vertical axes.

## Sales by Age

1. Create a graph of Annual Sales for each Age Group.
2. Make sure you give the graph a title and label both the horizontal and vertical axes.

## Sales & Distance from a Stadium

1. Check the Average Total Sales and the Standard Deviation of Total Sales for Store 1 Sales and Store 2 Sales (orange boxes). **HINT**: There are mistakes you will need to fix.
2. Compute all the remaining numerical summaries (blue boxes).
3. Fill in the missing information in the Store Distance from Stadium chart (yellow boxes).
4. Insert a graph that could illustrate a relationship between the Average Annual Sales for each store and the Distance of the store from the nearest stadium.
5. Make sure you give the graph a title and label both the horizontal and vertical axes.

## Average Monthly Sales

1. Create a chart of Average Monthly Sales against the Month Number.
2. Make sure you give the graph a title and label both the horizontal and vertical axes.

# **4. Make an Informed Decision**

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| Question | Answer |
| What would you say during the next meeting when presenting the Number of Students chart and graph? | The city with more enrolled students in all group ages is Recife, Brazil. |
| What would you say during the next meeting when presenting the Sales by Age chart and graph? | The age group with the most sales is 16-18. |
| What would you say during the next meeting when presenting the Sales and Distance from Stadium chart and graph? | The stores with the less distance to a stadium have the most sales. |
| What would you say during the next meeting when presenting the Average Monthly Sales chart and graph? | The month with the most sales is month number 8 (August). Throughout the year, sales increase from January to August, and then decrease. |
| Provide a recommendation for both **where** and **when** the sporting goods company should build and open their next store, based on your insights from the graphics and data. | Recommendation:  The next store should be opened in Recife, Brazil, between March and August.  Reason for giving this recommendation:  Recife, Brazil has the highest number of students between 16-18, and the most sales come from this age group. The average monthly sales for all stores is higher between this months, and decreases after August. |

# **5. Evaluate Your Reasoning**

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| --- | --- |
| Question | Answer |
| What questions should Omari ask himself to evaluate his decision? (List at least three questions.) | 1. Does opening the store in Recife, Brazil make sense?  2. Are there any consequences of opening the store we haven’t considered?  3. Are our assumptions reasonable? |

# Turning in Your Assignment

1. Make sure all the answer boxes are filled in on this document.
2. Make sure all the colored boxes in the Excel spreadsheet are completed.
3. Make sure all your graphs have a title and both the horizontal and vertical axes are labeled.
4. Review the rubric before you turn in this assignment to make sure you will get the best grade possible for your work.
5. Turn in both this document and the Excel spreadsheet.