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**Submission for Task-3 Tableau Task**

**Explanation:**

**Task 1: Formulas for YTD Sales, YTD LY Sales, YoY Growth**

**YTD Sales**

**Logic:**

* YTD Sales calculates the cumulative sum of sales from the beginning of the current year to the current date.

**Formula:**

Sql:

IF YEAR([Order Date]) = YEAR(TODAY()) AND MONTH([Order Date]) <= MONTH(TODAY()) THEN SUM([Sales]) END

**YTD LY Sales**

**Logic:**

* YTD LY Sales calculates the cumulative sum of sales from the beginning of the previous year to the current date.

**Formula:**

Sql:

IF YEAR([Order Date]) = YEAR(TODAY())-1 AND MONTH([Order Date]) <= MONTH(TODAY()) THEN SUM([Sales]) END

**YoY Growth**

**Logic:**

* YoY Growth calculates the percentage change in sales compared to the same period in the previous year.

**Formula:**

Sql:

(SUM([YTD Sales]) / SUM([YTD LY Sales])) - 1

**Task 2: Formulas for YTD Sales, YTD LY Sales, YoY Growth (Financial Year starting in April)**

**Logic:**

* Adjust the conditions in the above formulas to consider April as the start of the financial year.

**Task 3: Chart/Table for Top Sub-Category within Each Category**

**Logic:**

* Display only the top Sub-Category within each Category dynamically changing based on the selection.

**Implementation:**

* Create a calculated field for ranking: **RANK\_UNIQUE(SUM([Sales]))**.
* Place Category, Sub-Category, and the calculated field on Rows.
* Filter the view to show only where the rank is 1.

**Task 4: Formula to Compute Target Achievement %**

**Logic:**

* Calculate the Target Achievement percentage based on user input.

**Formula:**

Sql:

SUM([Sales]) / [Target]

**Task 5: Bar Chart with Month as X-axis**

**Logic:**

* Display a bar chart with the Month on the X-axis and Sales/Quantity on the Y-axis.
* Show the Top 5 Product Names based on Profit in the tooltip.

**Implementation:**

* Create a calculated field for Top 5 Product Names based on Profit.
* Place the Month field on Columns and either Sales or Quantity on Rows.
* Allow users to switch between Sales and Quantity using a parameter.
* Show the calculated field for Top 5 Product Names in the tooltip.

**Task 6: Categorize Customers into Score between 1 to 4**

**Logic:**

* Categorize customers into scores (1 to 4) based on their Total Sales.

**Formula:**

* Create a calculated field for Total Sales.
* Use a WINDOW\_PERCENTILE function to categorize customers.