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| **Data Set: MakeUpFilter** |
| **Question / Problem:** Compare the net sales and gross sales for the foundation product in 2021 |
| **Variables:**   * Name variable – Nominal, identifies the salesperson. * Product variable – Nominal, filters data for "Foundation." * Units variable – Numerical ratio variable, sums up the total units sold. * Date (Nominal): Used to filter data, extracting only the transactions from 2021**.** |
| **Techniques used:**  **Filters:**   * Filtered by Date so that 2021 was the only year included. * Filtered by Units Sold, greater than 0, excluding returns and refunds.   **Grouping and Extractions:**   * Created a Pivot Table with the product name and the Gross Sales and Net Sales. * Formula to calculate the Net (=IF(Units > 0, Units \* Price, 0) * Gross sales summed up over the entire range (=SUM(E2:E99)) sales.   **Visualization**   * A pivot table and a clustered bar chart were used for presenting sales differences. * Values: Sum of Gross Sale, Sum of Net Sales * Rows: Product * A Bar Chart was used to visualise the difference between net and gross sales for the foundation production in 2021 |
| **Analysis and Visualisation:**  **Pivot Table showing the Gross Sales and Net Sales**  **A close-up of a number  Description automatically generated**  **Clustered Bar Chart showing the Gross Sales and Net Sales**  **A screenshot of a computer  Description automatically generated**  The chart shows there is a difference of €1,526.257 between the Net Sales and the Gross Sales.  **1. Filtering:**   * **By Date (2021)**: Ensures that the analysis is focused on the relevant time frame. * **Exclusion of Negative Values**: Helps calculate accurate net sales by removing refunds and returns, which affect the gross sales but aren't relevant for the "net" calculation.   **2. Formulas:**   * **Net Sales Formula**: A conditional formula like =IF(Units > 0, Units \* Price, 0) calculates net sales only if units sold are positive. * **Gross Sales Formula**: The total gross sales calculated using SUM function aggregates all sales without excluding returns/refunds.   **3. Pivot Table:**   * Used for grouping and summarizing data (e.g., gross and net sales by product). * Organized with:   + **Rows**: Product names   + **Values**: Sum of gross sales and sum of net sales.   **4. Visualization:**   * A **Clustered Bar Chart**: Offers a clear visual comparison between net sales and gross sales. |
| **Considerations:**   * **Refunds**: The **Units** and **Price** filters specifically excluded any refunds or returns (transactions with negative values) because the objective was to calculate **Net Sales** and not **Gross Sales** (which would include returns). * **Data Accuracy**: Only the transactions in 2021 were considered, which is important for ensuring the analysis is specific to the requested year. |