**Power BI Questions**

**1. How do you create and manage relationships between tables in Power BI?**

* Navigate to **Model View** in Power BI.
* Drag and drop columns between tables to create a **relationship**.
* Define **cardinality** (e.g., one-to-many, many-to-one) and **cross-filter direction**.
* Use **Manage Relationships** in the **Modeling** tab to modify or delete relationships.
* Relationships help in **data modeling** by connecting tables for accurate analysis.

**2. What is DAX, and how can you use it to create calculated columns or measures in Power BI?**

* **DAX (Data Analysis Expressions)** is a formula language used in Power BI.
* **Calculated Column**: Adds a new column using row-by-row calculations.

DAX

SalesWithTax = Sales[Amount] \* 1.18

* **Measure**: Performs dynamic aggregation on filtered data.

DAX

TotalSales = SUM(Sales[Amount])

* Measures are more efficient than calculated columns for aggregations.

**3. Explain the use of the "Merge Queries" feature in Power Query.**

* **Merge Queries** combines data from multiple tables based on a **common column**.
* Helps in **data transformation and integration** before loading data into Power BI.
* Example: Merging Orders with Customers using CustomerID as the key.
* Located in **Power Query Editor > Home > Merge Queries**.

**4. How can you use KPI (Key Performance Indicator) visuals in Power BI to track performance metrics?**

* **KPI visuals** track business metrics against a target value.
* Requires a **base value (e.g., total sales)** and a **target value (e.g., sales goal)**.
* Example:
  + **Indicator**: SUM(Sales[Amount])
  + **Target**: SUM(Targets[Goal])
  + **Trend**: A date-based column for tracking progress over time.
* Helps in real-time monitoring of business goals.

**5. What steps would you take to reduce the size of a Power BI report file?**

* **Remove unused columns and tables** in Power Query.
* **Use aggregations** instead of raw data where possible.
* **Optimize DAX calculations**, using measures instead of calculated columns.
* **Disable auto-date/time tables** in Power BI options.
* **Use appropriate data types**, e.g., replacing TEXT with INTEGER where possible.