

**What is a primary key in a table?**

A column (or set of columns) that uniquely identifies each row in a table.

**Name the two types of table relationships in Power BI.**

- One-to-Many (1:\*)
- Many-to-One (\*:1)

**How do you create a relationship between two tables in Power BI?**

Drag and drop a column from one table to a related column in another table in the Model view.

**What is a "star schema"?**

A data model with a central fact table connected to multiple dimension tables.

**Which table is typically the fact table in a sales dataset?**

The **Sales** table.

**Why is ProductID in Sales.csv a foreign key?**

Because it links each sale to a product in the Product table, creating a relationship between tables.

**Fix a relationship error where ProductID has mismatched data types.**

Change ProductID to the same data type (e.g. both to whole number or text) in Power Query or the data model.

**Explain why a star schema improves performance.**

Because it simplifies joins, reduces data redundancy, and helps Power BI run faster queries on smaller dimension tables instead of one big flat table.

**Use bidirectional filtering sparingly—when is it appropriate?**

Use it only when you need filters to flow *both ways* between tables—for example, when slicers or visuals rely on context from many related tables. Otherwise, it can cause ambiguous relationships and slow performance.

**Write DAX to enforce referential integrity if a CustomerID is deleted.**

Valid Sales =

```
FILTER (  
    Sales,  
    Sales[CustomerID] IN VALUES ( Customers[CustomerID] )  
)
```

**How to resolve circular relationships in Power BI models:**

- **Remove unnecessary relationships** — keep only the essential links.
- **Use DAX measures** instead of relationships where possible.
- **Redesign the model** into a **star schema**, ensuring dimension tables connect to facts without loops.
- **Switch to single-direction filtering** rather than bidirectional on relationships.