1.What is a primary key in a table?
2.Name the two types of table relationships in Power BI.
3.How do you create a relationship between two tables in Power BI?
4.What is a "star schema"?
5.Which table is typically the fact table in a sales dataset?

6.Link Sales.csv to Customers.csv using CustomerID (one-to-many).
7.Why is ProductID in Sales.csv a foreign key?
8.Fix a relationship error where ProductID has mismatched data types.
9.Explain why a star schema improves performance.
10.Add a new column TotalSales in Sales (Quantity * Price from Products).
11.Optimize a model with circular relationships—how would you resolve it?
12.Create a role-playing dimension for OrderDate and ShipDate.
13.Handle a many-to-many relationship between Customers and Products.
14.Use bidirectional filtering sparingly—when is it appropriate?
15.Write DAX to enforce referential integrity if a CustomerID is deleted.

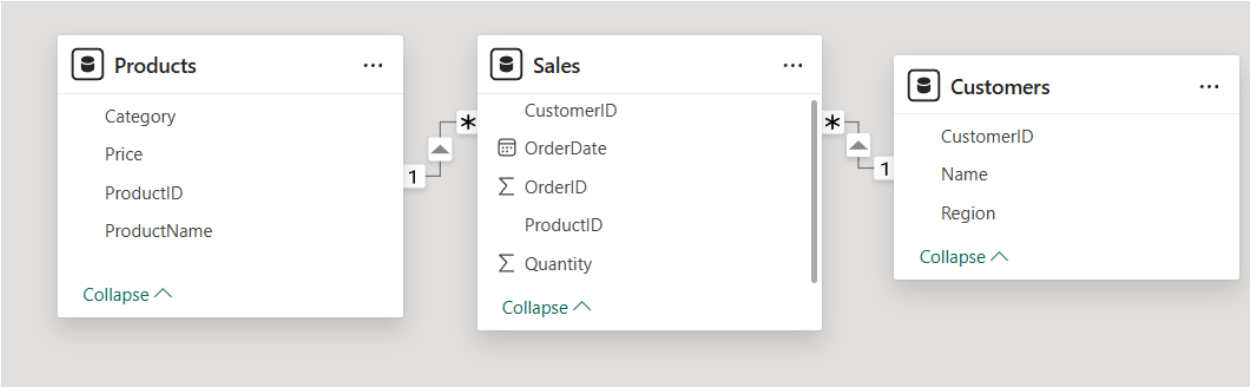
1. What is a primary key in a table?
A primary key is a column that uniquely identifies each row in a table. The primary key only accepts unique values and does not allow nulls.

2. Name the two types of table relationships in Power BI.
1. One-to-many
2. Many-to-many

3. How do you create a relationship between two tables in Power BI?
There are several ways to create a relationship in Power BI:
1. Drag and Drop – Select the desired column and drag it onto the column you want to relate it to.
2. Go to Model View, click Manage Relationships > New, choose the columns to relate, and then click Save.

4. What is a "star schema"?
A star schema is a type of data model. In a star schema, there is a central fact table surrounded by related dimension tables.

5. Which table is typically the fact table in a sales dataset?
In this dataset, the Sales table is considered the fact table.



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

Because in Products.csv, each product appears only once, but in Sales.csv, a product can be ordered multiple times. Therefore, ProductID in Sales refers to the unique entry in Products.

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

If Products.ProductID and Sales.ProductID have different data types, a relationship error will occur.
To fix it, go to Transform Data and make sure both columns have the same data type.

9. Explain why a star schema improves performance.

The fact table is Sales, and the dimension tables are Products and Customers.
In a star schema, queries run faster and DAX formulas are easier to write and process efficiently.

11. Optimize a model with circular relationships—how would you resolve it?

To resolve it, I make one of the relationships inactive to break the circular reference.

12. Create a role-playing dimension for OrderDate and ShipDate.

Since ShipDate is not available, I joined Products.Price with Sales.Price instead.
(Note: This seems unclear — do you want help rewriting it more accurately?)

13. Handle a many-to-many relationship between Customers and Products.

In this case, the Sales table acts as a bridge table, connecting Customers and Products.
That’s why there is a many-to-many relationship between them.

14. Use bidirectional filtering sparingly — when is it appropriate?

Bidirectional filtering is appropriate only in specific scenarios where single-direction filtering is not enough to achieve correct and expected behavior in reports.