1. What is the difference between "Merge" and "Append" in Power Query?

   Merge adds tables horizontally and asks for keys from each table to join. Append does not ask for key and adds vertically and if column names match adds, if not creates new columns for each not matching column.

2. How do you split a "Full Name" column into "First Name" and "Last Name"?

   Right click on “FullName” column and choose Split column/ by delimeter option and enter the required information.

3. What is "Pivot Columns" used for?

   It takes unique values from one column and turns them into new column headers, while using values from another column to fill the new columns.

4. How do you undo a step in Power Query?

   Go to Applied steps and click on “x” delete sign.

5. What is the purpose of "Reference" vs. "Duplicate" in queries?

   Reference just references to the query and if changes to the query are made reference also changes. But Duplicate creates a new duplicate of the query which is not connected to the original query.

6. Merge Orders.csv and Customers.xlsx on CustID (inner join).

   In Merging window choose Orders table and Customer table and for options choose inner join.
   Source = Table.NestedJoin(Orders, {"CustID"}, Customers, {"CustID"}, "Customers", JoinKind.LeftOuter),

   #"Expanded Customers" = Table.ExpandTableColumn(Source, "Customers", {"CustID", "Name", "Email"}, {"Customers.CustID", "Customers.Name", "Customers.Email"})

7. Pivot the Product column to show total Quantity per product.

   Select the Product column (this will become your new column headers). Go to the Transform tab. Click Pivot Column. In the dialog: Values Column: Select Quantity. Aggregate Function: Choose Sum (or your preferred aggregation)

8. Append two tables with identical columns (e.g., Orders_Jan.csv + Orders_Feb.csv).

   Import two tables with identical columns and use Home tab/Combine/Appen Queries to append two tables. The result will have the same number of columns.

9. Use "Fill Down" to replace nulls in the Email column with the previous value.

Go to Email column, click on right side of the mouse and in the Fill part choose “Down” option

10. Extract the domain (e.g., "example.com") from the Email column.

    Go to Email column, click on right side of the mouse and click on Split column/ by delimeter option and in “Selet or enter delimeter” part enter custom and then enter “@” sign.

11. Write M-code to merge queries dynamically based on a parameter (e.g., JoinType = "Inner").

    Source = Table.NestedJoin(Orders, {"CustID"}, Customers, {"CustID"}, "Customers", JoinKind.Inner),

    #"Expanded Customers" = Table.ExpandTableColumn(Source, "Customers", {"CustID", "Name", "Email"}, {"Customers.CustID", "Customers.Name", "Customers.Email"})

12. Unpivot a table with columns like "Jan_Sales," "Feb_Sales" into a "Month" and "Sales" format.

    Source = Table.FromRows(Json.Document(Binary.Decompress(Binary.FromText("i45WclTSUTI0ABIWQGypFKsTreQEZJkBsTlYNDYWAA==", BinaryEncoding.Base64), Compression.Deflate)), let _t = ((type nullable text) meta [Serialized.Text = true]) in type table [Product = _t, Jan_Sales = _t, Feb_Sales = _t, Mar_Sales = _t]),

    #"Changed Type" = Table.TransformColumnTypes(Source,{{"Product", type text}, {"Jan_Sales", Int64.Type}, {"Feb_Sales", Int64.Type}, {"Mar_Sales", Int64.Type}}),

    #"Unpivoted Columns" = Table.UnpivotOtherColumns(#"Changed Type", {"Product"}, "Attribute", "Value")

13. Handle errors in a custom column (e.g., division by zero) using try…otherwise.

    #"AddCustomColumn" = Table.AddColumn(#"Changed Type", "Price", each try [TotalPrice] / [Quantity] otherwise null, type number)

14. Create a function in Power Query to clean phone numbers (e.g., remove dashes).

    CleanPhoneNumber = (phone as text) as text =>

    Text.Select(phone, {"0".."9"}),

    #"AddColumns" = Table.AddColumn(#"Changed Type", "Cleaned_Phone", each CleanPhoneNumber([Phone]), type text)

15. Optimize a query with 10+ steps—identify bottlenecks and simplify.