Lesson 3

1. What is the purpose of the "Applied Steps" pane in Power Query?

It shows a **step-by-step list of all transformations** you have applied to your data (e.g., rename columns, filter rows, etc.).
You can:

- Reorder, delete, or edit any step
- See how each transformation changes the dataset

2. How do you remove duplicate rows in Power Query?

Select the columns you want to check duplicates on, then:

- Go to the **Home** tab → **Remove Rows** → **Remove Duplicates**

3. What does the "Filter" icon do in Power Query?

It's like Excel's filter:

- It allows you to **filter** rows by values, date ranges, numbers, conditions, etc.
- Appears next to each column header

4. How would you rename a column from "CustID" to "CustomerID"?

- Right-click on the CustID column header → Select **Rename**
- Type: CustomerID

5. What happens if you click "Close & Apply" in Power Query?

It:

- Applies all changes you've made in Power Query
- Loads the cleaned data back into **Power BI** for visuals and analysis

6. Remove all rows where Quantity is less than 2.

In Power Query:

- Click the **filter icon** on the Quantity column

- Choose **“Number Filters” → “Greater than or equal to” → 2**

Or use M-code:

= Table.SelectRows(Source, each [Quantity] >= 2)

7. **Split the OrderDate column into separate "Year," "Month," and "Day" columns.**

In Power Query:

- Select OrderDate → Go to **Add Column → Date** → choose:
  - **Year** → Year
  - **Month** → Month
  - **Day** → Day

If it's text, first convert it to **Date** type using Transform → Data Type → Date.

8. **Replace all "Mouse" entries in the Product column with "Computer Mouse."**

- Right-click the Product column → **Replace Values**
  - Find: Mouse
  - Replace with: Computer Mouse

9. **Sort the table by OrderDate (newest first).**

- Click the OrderDate column header
- Go to **Sort Descending** (in the Home tab or right-click menu)

10. **How would you handle null values in the Price column?**

Options:

- Replace nulls with a default value:
  Transform → Replace Values → Replace null with 0

- Or remove those rows:
  Home → Remove Rows → Remove Blank Rows

11. Write custom M-code to add a column calculating TotalSpent = Quantity * Price.

Go to:

- **Add Column → Custom Column**

= [Quantity] * [Price]

Name the column: TotalSpent

12. Group the table by CustID to show total spending per customer.

Steps:

- Go to **Transform → Group By**
- Group by: CustID
- Operation: **Sum** of TotalSpent
- Name the new column: CustomerSpending

13. Fix inconsistent date formats (e.g., 01/10/2023 vs. 2023-01-10) in OrderDate.

- Convert the column to **Date type** (Transform → Data Type → Date)
  Power BI standardizes the date automatically if it's valid.

If you still have issues, use:

- Transform → Locale → Date → use locale that matches format (e.g., English (US))

14. Create a conditional column: Label orders as "High Value" if Price > 100.

- Go to **Add Column → Conditional Column**
  - Column Name: ValueCategory
  - If Price > 100 → then "High Value" else "Standard"

15. Optimize the query to reduce refresh time (e.g., remove unused columns early).

✅ Best practices:

- Remove unused columns early (Home → Remove Columns)
- Filter rows as early as possible
- Avoid complex calculated columns inside Power Query
- Disable loading of intermediate queries (right-click → uncheck "Enable Load")