1. Purpose of the "Applied Steps" pane

The **Applied Steps** pane (on the right side of Power Query Editor) shows each transformation you've made — like filtering, renaming, removing columns, etc.
☑ **Purpose:**

- Tracks your data transformation history.
- Allows you to **edit**, **reorder**, or **delete** steps.
- Each step corresponds to a line in the M-code behind the query.

🖌️ 2. Remove duplicate rows

Go to:
Home tab → Remove Rows → Remove Duplicates
You can also right-click a column header → **Remove Duplicates** (removes duplicates based on that column).

M-code example:

```
= Table.Distinct(Source)
```

or (based on columns)

```
= Table.Distinct(Source, {"CustID", "OrderDate"})
```

🔍 3. Filter icon function

The **Filter icon** (on a column header) lets you include or exclude specific values or set conditions (like greater than, equals, contains).
☑ Used to filter rows just like Excel's filter but recorded as a transformation step.

🖍️ 4. Rename a column

Right-click the column → **Rename** → Type `CustomerID`
M-code:

```
= Table.RenameColumns(Source, {{"CustID", "CustomerID"}})
```

💾 5. What "Close & Apply" does

Clicking **Close & Apply**:

- **Applies** all transformations in Power Query.
- **Loads** the cleaned data back into Power BI's data model (or Excel, depending on context).

- **Closes** the Power Query Editor.

🚫 6. Remove all rows where Quantity < 2

Filter the column:
Click the filter icon → "Number Filters" → "Greater than or equal to" → `2`.

M-code:

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

🗓️ 7. Split OrderDate into Year, Month, Day

Select **OrderDate column → Add Column tab → Date → Year/Month/Day → Year/Month/Day**

M-code example:

```
= Table.AddColumn(Source, "Year", each Date.Year([OrderDate]))
= Table.AddColumn(#"Added Year", "Month", each Date.Month([OrderDate]))
= Table.AddColumn(#"Added Month", "Day", each Date.Day([OrderDate]))
```

🖱️ 8. Replace "Mouse" with "Computer Mouse"

Select the **Product** column → **Transform tab → Replace Values**
Old value: `Mouse`, New value: `Computer Mouse`.

M-code:

```
= Table.ReplaceValue(Source, "Mouse", "Computer Mouse", Replacer.ReplaceText,
{"Product"})
```

🗓️ 9. Sort by OrderDate (newest first)

Click the **OrderDate column header → Sort Descending**.

M-code:

```
= Table.Sort(Source, {{"OrderDate", Order.Descending}})
```

⚠️ 10. Handle null values in Price

Options:

- **Replace nulls:** e.g., replace with 0 →
  `Transform → Replace Values → null → 0`

- **Remove null rows:**
  `Home → Remove Rows → Remove Blank Rows`

M-code (replace nulls):

```
= Table.ReplaceValue(Source, null, 0, Replacer.ReplaceValue, {"Price"})
```

🧮 11. Custom M-code for TotalSpent = Quantity * Price

Add Column → Custom Column →

```
= [Quantity] * [Price]
```

M-code:

```
= Table.AddColumn(Source, "TotalSpent", each [Quantity] * [Price])
```

👥 12. Group by CustID (total spending per customer)

Home → Group By

- Group by: `CustID`
- New column: `TotalSpent`
- Operation: `Sum` of `[TotalSpent]`

M-code:

```
= Table.Group(Source, {"CustID"}, {{"TotalSpent", each
List.Sum([TotalSpent]), type number}})
```

🗓️ 13. Fix inconsistent date formats

Use **Transform → Data Type → Date**.
Power Query automatically parses different formats into a consistent date type.
If not, use:

```
= Table.TransformColumns(Source, {{"OrderDate", each
Date.FromText(Text.From(_)), type date}})
```

💰 14. Conditional column: “High Value” if Price > 100

Add Column → Conditional Column
Condition: `if [Price] > 100 then "High Value" else "Normal"`

M-code:

```
= Table.AddColumn(Source, "ValueLabel", each if [Price] > 100 then "High
Value" else "Normal")
```

15. Optimize query for refresh performance

Tips:

- **Remove unused columns early** (Home → Choose Columns → select only needed ones).
- **Filter data early** to reduce row count.
- **Avoid complex custom columns** unless necessary.
- **Disable load** for intermediate queries (right-click → “Enable load” off).
- **Use Table.Buffer** sparingly to cache data for multiple uses.

Example:

```
= Table.SelectColumns(Source, {"CustID", "OrderDate", "Product", "Quantity",
"Price"})
```