1. List three data sources Power BI can connect to.

- Excel workbooks (`.xlsx`, `.xls`)
- SQL Server databases
- Web APIs (e.g., JSON endpoints)
  (Bonus: SharePoint, Azure SQL, Google Analytics, CSV files, etc.)

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2. What is the first step to import data into Power BI Desktop?

- Click **Home → Get Data**, choose your data source type (e.g., CSV, Excel, SQL), and locate your file or database.

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3. How do you refresh imported data in Power BI?

- In **Power BI Desktop**: Click **Home → Refresh**.
- In **Power BI Service**: Set up **Scheduled Refresh** under dataset settings (requires a gateway for local sources).

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4. What file formats can Power BI import directly? (Name two.)

- **CSV** (`.csv`)
- **Excel** (`.xlsx`)
  (Bonus: XML, JSON, Text, PBIX, etc.)

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5. What does the "Navigator" window show after selecting a data source?

- A preview of available tables, sheets, or queries inside the selected data source, with the option to select specific ones to load.

---

6. Import `Sales_Data.csv` and load only the "Product" and "Price" columns.

Steps:

1. **Get Data → Text/CSV → Select Sales_Data.csv**
2. In **Navigator**, click **Transform Data**
3. Remove all columns except **Product** and **Price**
4. Click **Close & Load**

---

7. How would you change `OrderDate` to a date format during import?

- In **Power Query**:
    1. Select `OrderDate` column.
    2. Go to **Home → Data Type → Date**.
    3. If needed, use **Using Locale** to match your file's date format.

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8. What is the difference between "Load" and "Transform Data" in the import dialog?

- **Load** → Brings data directly into Power BI without changes.
- **Transform Data** → Opens Power Query to clean/reshape data before loading.

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9. Why might you see an error when connecting to a SQL database? (Name one reason.)

- Invalid server name or credentials
- Network/firewall restrictions blocking access
- Missing permissions to the database

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10. How do you replace a data source after importing it?

- **Home → Transform Data → Data Source Settings → Change Source**
- Select the new file or database and confirm.

---

11. Write the M-code to import only rows where `Quantity > 1`.

Let

Source = Csv.Document(File.Contents("C:\Data\Sales_Data.csv"), [Delimiter=",", Columns=5, Encoding=65001, QuoteStyle=QuoteStyle.None]),

PromoteHeaders = Table.PromoteHeaders(Source, [PromoteAllScalars=true]),

FilterRows = Table.SelectRows(PromoteHeaders, each [Quantity] > 1)

in

FilterRows

12. How would you change the data source if Sales_Data.csv changed?

- Go to **Data Source Settings** → **Change Source** and point to the new file location.
- If the schema is the same, Power BI will keep your transformations.

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13. Troubleshoot: Your CSV import fails due to a "mixed data type" error—how do you fix it?

- In **Power Query**, set the correct data type using **Change Type with Locale** or
- Use **Detect Data Type** after cleaning rows with incorrect values.

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14. Connect to a live SQL database with parameters (e.g., filter by year).

- In Power Query:
    1. Create a **Parameter** for Year.
    2. Use it in your SQL query or filter step.
    3. This allows the user to change the year without editing the query manually.

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15. How would you automate data imports using Power BI and Power Automate?

- In **Power BI Service**, enable **Scheduled Refresh**.
- Use **Power Automate** to trigger refreshes based on events (e.g., file upload to SharePoint, new row in Excel).

- Power Automate flow → *Refresh a dataset in Power BI* action.