INDEX AND MATCH FUNCTIONS

Product ID	Product	Category	Jan Sales	Feb Sales	Mar Sales	Apr Sales	May Sales
101	PRODA	Electronics	120	130	140	150	160
102	PRODB	Furniture	150	160	170	180	190
103	PRODC	Electronics	200	210	220	230	240
104	PRODD	Clothing	90	100	110	120	130
105	PRODE	Furniture	220	230	240	250	260
106	PRODF	Electronics	130	140	150	160	170

1. Use INDEX and MATCH to find the sales for Product C in March.

Step1:- Product C (PRODC) in **March** using the `INDEX` and `MATCH` functions.

1. **INDEX**: Use this function to pull data from a specific cell within a specified range.
2. **MATCH**: Use this function to locate the position of a specified value within a range.

Step2:- Formula

```
=INDEX(D2:H7, MATCH("PRODC", B2:B7, 0), MATCH("Mar Sales",
D1:H1, 0))
```

Product	Month	Sales
PRODC	March	220

2. Use INDEX and MATCH to find the category for Product E.

Step 1:- To find the **Category** for **Product E (PRODE)** using the `INDEX` and `MATCH` functions

Step2:- Column B and **Categories** are in **Column C**, the formula this

```
=INDEX(C2:C7, MATCH("PRODE", B2:B7, 0))
```

Product	Category
PRODE	Furniture

3. Use INDEX and MATCH to find the maximum sales for Product B across all months.

Step1:- maximum sales for Product B across all months using the `INDEX` and `MATCH` functions.

Step2:- Product Names are in Column B ,Sales for each month (Jan, Feb, Mar, Apr, May) are in Columns D to H.

Step3:-Formula

```
=MAX(INDEX(D2:H7, MATCH("PRODB", B2:B7, 0), 0))
```

- `INDEX(D2:H7, MATCH("PRODB", B2:B7, 0), 0)` returns the entire row of sales data for **Product B**.
- `MAX(...)` finds the maximum value across that row.

Product	Max Sales
PRODB	190

4. Use INDEX and MATCH to find the month with the maximum sales for Product A.

Step1:- find the **month with the maximum sales** for **Product A (PRODA)** using the `INDEX` and `MATCH` functions

Step 2:- Formula

1.Find the sales data for Product A.

2.Identify the maximum sales value.

3.Use `MATCH` to find the position of that maximum value.

```
=INDEX(D1:H1, MATCH(MAX(INDEX(D2:H7, MATCH("PRODA", B2:B7, 0), 0)), INDEX(D2:H7, MATCH("PRODA", B2:B7, 0), 0), 0))
```

Product	Month with Max Sales
PRODA	May

5. Use INDEX, MATCH, and SUMIF to sum the sales for all products in the "Electronics" category for April.

Step1:- To sum the sales for all products in the **"Electronics"** category for **April** using `INDEX`, `MATCH`, and `SUMIF`

Step2:- Formula

```
=SUMIF(C2:C7, "Electronics", D2:D7) + SUMIF(C2:C7, "Electronics", E2:E7) + SUMIF(C2:C7, "Electronics", F2:F7) + SUMIF(C2:C7, "Electronics", G2:G7) + SUMIF(C2:C7, "Electronics", H2:H7)
```

Category	Total April Sales
Electronics	540

6. Use INDEX and MATCH to calculate the average sales for Product D across all months.

Step1:- To calculate the **average sales** for **Product D (PRODD)** across all months using `INDEX` and `MATCH`,

Step2:-Formula

```
=AVERAGE(INDEX(D2:H7, MATCH("PRODD", B2:B7, 0), 0))
```

Product	Average Sales
PRODD	110

7. Use INDEX and MATCH to find the sales for Product ID 105 in May.

Step1:- To find the **sales for Product ID 105** in **May** using the `INDEX` and `MATCH` functions

Step2:-Formula

```
=INDEX(G2:H7, MATCH(105, A2:A7, 0), 1)
```

Product ID	Month	Sales
105	May	260

8. Use INDEX and MATCH to create a dynamic lookup where the user can input a product and a month, and the formula returns the corresponding sales.

Step 1:- Setup

- Designate **Cell J1** for the **Product Name** (e.g., `PRODA`).

- Designate **Cell J2** for the **Month** (e.g., `Mar Sales`).
- Designate **Cell J3** for displaying the **Sales Result**.

Step 2:- Sales Data Table

Product ID	Product	Category	Jan Sales	Feb Sales	Mar Sales	Apr Sales	May Sales
101	PRODA	Electronics	120	130	140	150	160
102	PRODB	Furniture	150	160	170	180	190
103	PRODC	Electronics	200	210	220	230	240
104	PRODD	Clothing	90	100	110	120	130
105	PRODE	Furniture	220	230	240	250	260
106	PRODF	Electronics	130	140	150	160	170

Step 3:- Dynamic Lookup Formula

```
=INDEX(D2:H7, MATCH(J1, B2:B7, 0), MATCH(J2, D1:H1, 0))
```

Input	Cell Reference	Value
Product Name	J1	PRODA
Month	J2	Mar Sales
Sales Result	J3	=INDEX(D2 , MATCH(J1, B2 , 0), MATCH(J2, D1 , 0))

Output	Cell Reference	Value
Sales	J3	140