1. Explain the difference between Relative , Absolute and Mixed Cell Referencing.
   You have the following dataset:

| Vehicle | Prices |
|---|---|
| Car | 500000 |
| Bicycle | 10500 |
| Auto-Rickshaw | 25000 |

➔ Relative, absolute, and mixed references decide whether Excel changes the cell address when you copy a formula.

**Relative reference**

- The form looks like A2 (no dollar sign).
- When you copy the formula down or across, both row and column change automatically.
- Example with our table: if Car price is in B2, writing =B2*10% and copying down will automatically become =B3*10% for Bicycle and =B4*10% for Auto-Rickshaw.

**Absolute reference**

- The form looks like $A$2 (dollar before column and row).
- When we copy the formula, it always points to the same fixed cell.
- Example: if tax rate 10% is stored in D1, then =B2*$D$1 copied down for Bicycle and Auto-Rickshaw will still use cell D1 only.

**Mixed reference**

- The form looks like $A2 (column fixed, row changes) or A$2 (row fixed, column changes).
- Only one part is locked; the other part moves when we copy the formula.
- Example: if prices are in column B and we copy formulas across columns, using $B2 keeps column B same for all vehicles, while row 2, 3, 4 change for Car, Bicycle, Auto-Rickshaw.

2. Write a formula to calculate the total sales of Car and Bicycle only.

➔ The formula to calculate the total sales for Car and Bicycle only is =B2+B3 or equivalently =SUM(B2:B3)
Assuming the dataset is structured with Vehicle names in column A (A2: Car, A3: Bicycle) and Prices in column B (B2: 50000, B3: 10500), this yields a total of 60500.

Copy the formula to any cell (e.g., B5) and press Enter to compute the result.

3. Using the data below, write a formula to calculate the average sales of items priced above 100 but less than 300:

| Item | Price | Sales |
|---|---|---|
| Item A | 90 | 1000 |
| Item B | 150 | 1200 |
| Item C | 250 | 1500 |

➔ The formula =AVERAGEIFS(C2:C4, B2:B4, ">100", B2:B4, "<300") computes the average of sales values in range C2:C4 for items whose prices in B2:B4 meet both criteria: greater than 100 and less than 300.

4. Count how many customer names are recorded.

➔ We use the =COUNTA(B2:B51) formula to count the number of customer names in column B.

- Range B2:B51 contains all customer names from Amit Sharma to Vivek Malhotra.
- COUNTA counts all non-empty cells, so it returns the total number of recorded customers

5. Calculate the Total Sales for each row using a formula.

➔ E2 → Quantity

F2 → Unit Price

Multiplying them gives **Total Sales per order**

So:

**Total Sales = Quantity × Unit Price**

In cell **H2**, we enter this formula:

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=E2*F2
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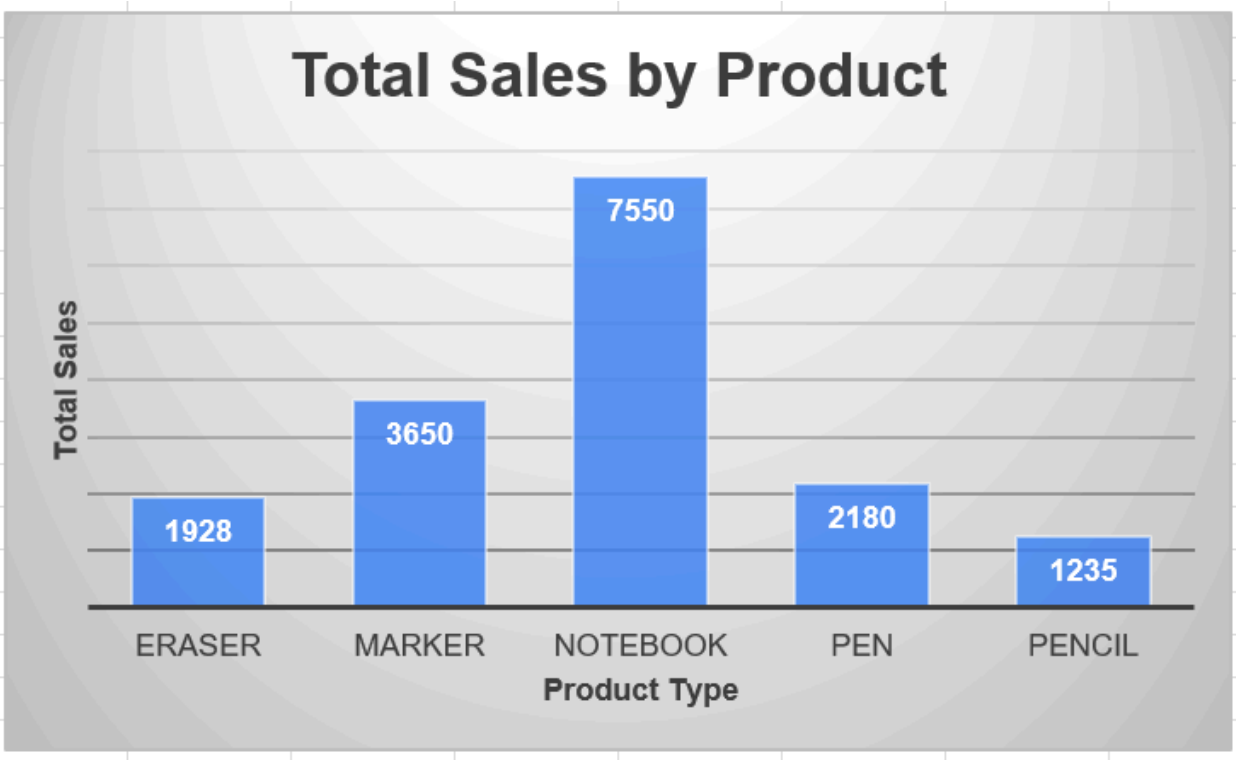
Drag the fill handle down to apply the formula to all rows

6. Calculate the total sales of Notebooks in the North region only.

➔ We use =SUMPRODUCT() formula to find the total sum of Notebooks in the North region only.
=SUMPRODUCT((C2:C51="North")*(D2:D51="Notebook")*(E2:E51)*(F2:F51))
Where,
C-Region
D-Product Type
E-Quantity
F-Unit Price

7. Create a column chart showing total sales by product.



8. Insert a line chart showing daily sales trend.