Excel Basics Assignment Solutions

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Subject: Excel Basics - PWSkills Assignment

1. Explain the difference between Relative, Absolute, and Mixed Cell Referencing.

ANS:

- **Relative Referencing (e.g., `A1`)**

  * **Definition:** This is the default behaviour. The reference is relative to the position of the cell where the formula is written.

    - **Behaviour:** If you write `=A1+1` in cell B1 and drag it down to B2, the formula automatically changes to `=A2+1`. It "moves" with you.
    - **Use Case:** Performing the same operation on every row in a dataset.

- **Absolute Referencing (e.g., `$A$1`)**

  * **Definition:** The dollar signs (`$`) lock the reference to a specific cell.

    - **Behaviour:** If you write `=$A$1+1` in cell B1 and drag it down to B2, the formula remains `=$A$1+1`. It never changes position.
    - **Use Case:** Referencing a fixed value, like a tax rate or a constant stored in a specific cell.

- **Mixed Referencing (e.g., `$A1` or `A$1`)** * **Definition:** You lock either the row *or* the column, but not both.
    - **Behaviour:** * `$A1` (Column Absolute): The column A is locked, but the row 1 can change. Great for calculating across columns while keeping the row identifier fixed.
        - `A$1` (Row Absolute): The row 1 is locked, but column A can change. Great for calculating down rows while keeping a header value fixed.

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

ANS:

Dataset Reference:

- **A2**: Car (Price: 500,000)
- **A3**: Bicycle (Price: 10,500)
- **A4**: Auto-Rickshaw (Price: 25,000) *(Assuming "Vehicle" is in Column A and "Price" is in Column B)*

Solution: Since we only need the sum of two specific items from the list, we can simply add the cell references or use a SUM function.

Formula:

```
=B2 + B3
```

Alternatively, for a more dynamic solution that works even if the list order changes:

```
=SUM(SUMIF(A2:A4, {"Car","Bicycle"}, B2:B4))
```

3. Calculate the average sales of items priced above 100 but less than 300.

ANS:

Dataset Reference:

- **Item A**: Price 90 (Excluded, <100)
- **Item B**: Price 150 (Included)
- **Item C**: Price 250 (Included) *(Assuming "Price" is Column B and "Sales" is Column C)*

Solution: We need the `AVERAGEIFS` function, which allows for multiple criteria.

- **Criteria 1:** Price (`B2:B4`) > 100
- **Criteria 2:** Price (`B2:B4`) < 300
- **Average Range:** Sales (`C2:C4`)

Formula:

```
=AVERAGEIFS(C2:C4, B2:B4, ">100", B2:B4, "<300")
```

Result Calculation: Average of 1200 (Item B) and 1500 (Item C) = 1350

DATA SET HOMEWORK LINK

https://1drv.ms/x/c/A73E826E69916746/IQBenGOfIkXNS5s94UW2S5t9ASoag3JAXv4cx8AtsC7Uq1Y

4) Count how many customer names are recorded

- Each row represents **one customer order**
- Order IDs run from **1001 to 1050**
- Total rows (excluding header) = **50**

✅ Final Answer:

Total customer names recorded = 50

📊 Excel / Google Sheets Formula:

```
=COUNTA(B2:B51)
```

(Here, `CustomerName` is in column **B**)

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

📌 Logic:

Total Sales = Quantity × Unit Price

📊 Formula (enter in new column, e.g., column H, row 2):

```
=E2*F2
```

- `E` → Quantity
- `F` → Unit Price

👉 Drag the formula down to calculate Total Sales for all rows.

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

📌 Conditions:

- Product = **Notebook**
- Region = **North**

📊 Formula:

```
=SUMIFS(H2:H51, D2:D51, "Notebook", C2:C51, "North")
```

Where:

- `H` = Total Sales
- `D` = Product
- `C` = Region

✅ Final Calculated Answer:

Total Notebook Sales in North Region = ₹2900/-

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7) Create a column chart showing total sales by product

Row Labels	Sum of Quantity	Sum of UnitPrice	Sum of TOTAL SALES
East	**249**	**184**	**3118**
Eraser	81	24	648
Marker	37	75	925
Notebook	16	50	800
Pen	34	20	340
Pencil	81	15	405
North	**235**	**346**	**4941**
Eraser	42	16	336
Marker	43	50	1075
Notebook	58	250	2900
Pen	34	20	340
Pencil	58	10	290
South	**274**	**308**	**4742**
Eraser	24	8	192
Marker	33	50	825
Notebook	47	200	2350
Pen	105	40	1050
Pencil	65	10	325
West	**245**	**254**	**3742**
Eraser	94	24	752
Marker	33	50	825
Notebook	30	150	1500
Pen	45	20	450
Pencil	43	10	215
(blank)			
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Grand Total	**1003**	**1092**	**16543**

📊 Steps:

1. Select the entire dataset
2. Insert → **Pivot Table**
    - Rows → `Product`
    - Values → `Sum of Total Sales`
3. Select the Pivot Table
4. Insert → **Column Chart → Clustered Column**

📈 Result:

A column chart comparing **total sales of Notebook, Pen, Pencil, Marker, and Eraser**

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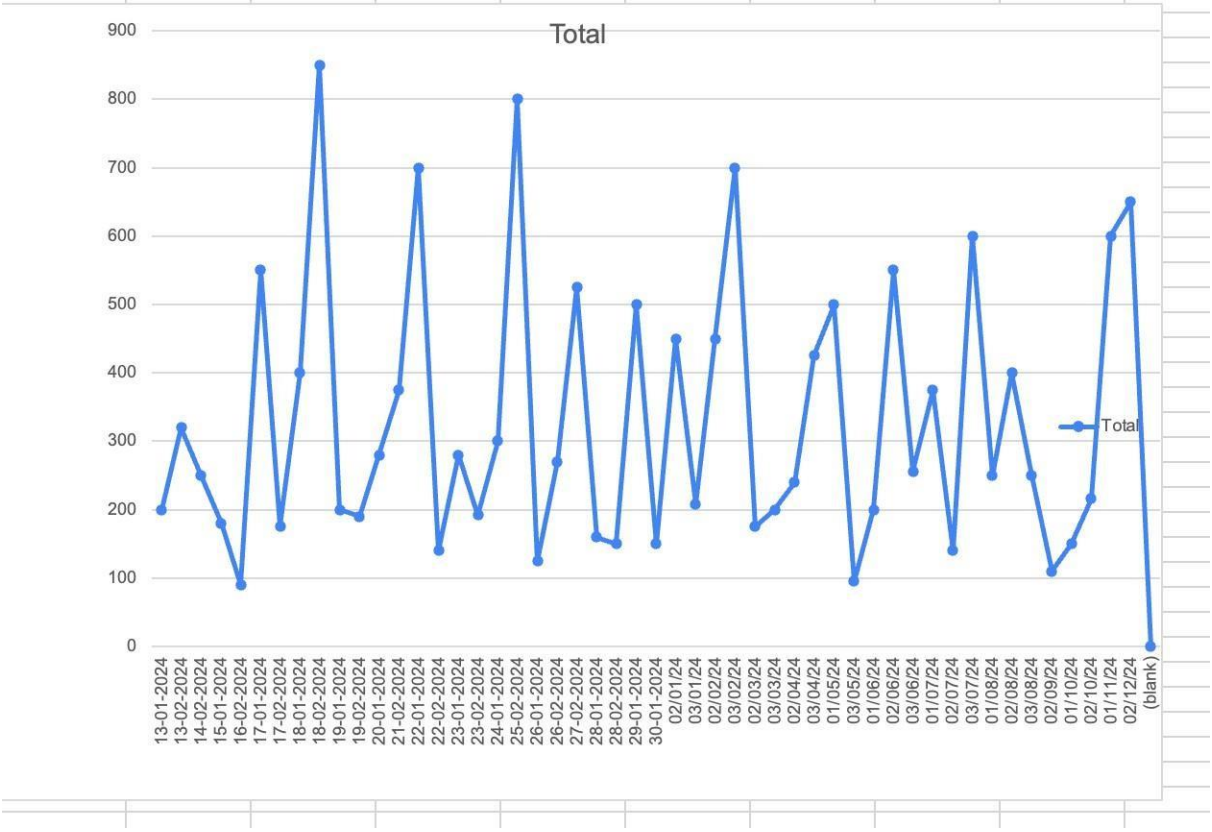
8) Insert a line chart showing daily sales trend

Steps:



1. Create a Pivot Table:
   - Rows → `OrderDate`
   - Values → `Sum of Total Sales`
2. Select the Pivot Table
3. Insert → **Line Chart**

Result:

A line chart showing how **sales change day-by-day from Jan to March 2024**