

Excel Basics Assignment Solutions

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Date: 09/01/2026

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**)

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.

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/-

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)			
(blank)			
Grand Total	1003	1092	16543

Steps:

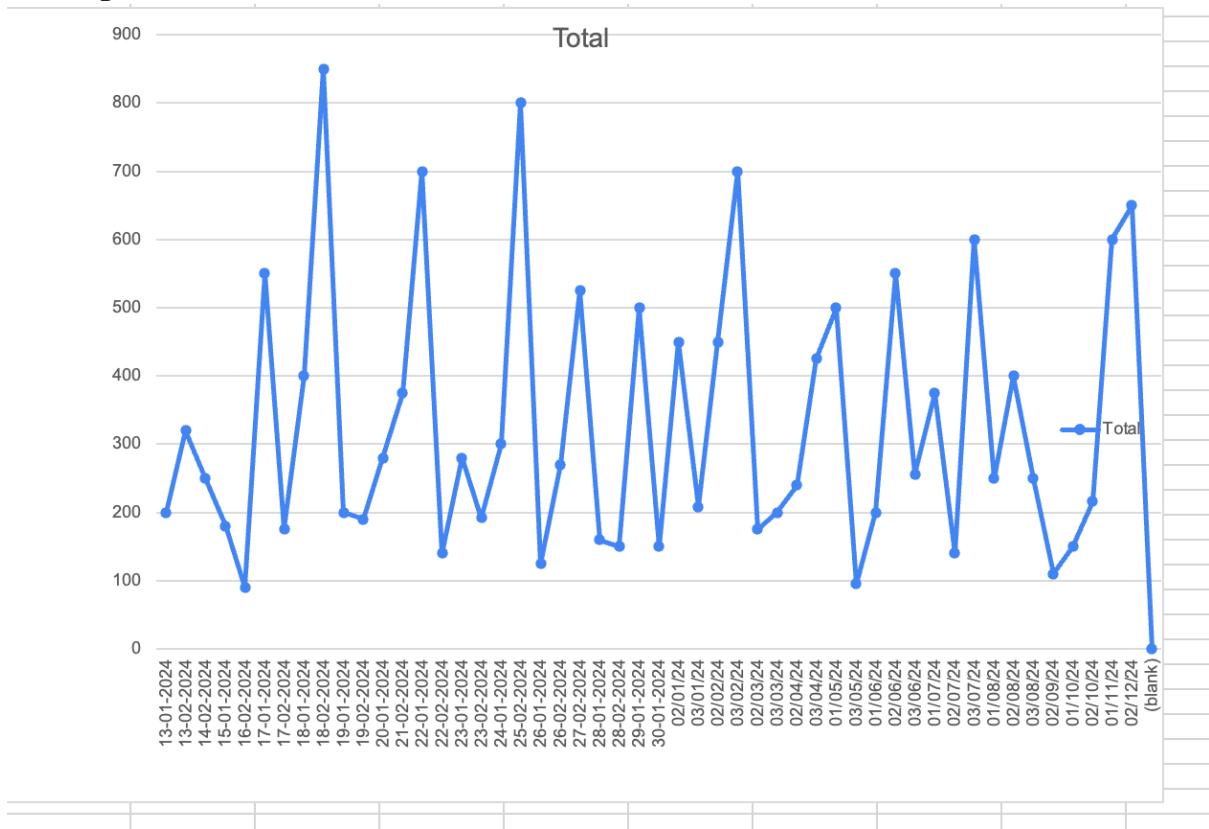
1. Select the entire dataset
2. Insert → **Pivot Table**
 - o Rows → Product
 - o Values → Sum of Total Sales
3. Select the Pivot Table
4. Insert → **Column Chart** → **Clustered Column**

Result:

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

8) Insert a line chart showing daily sales trend

Steps:



1. Create a Pivot Table:
 - o Rows → OrderDate
 - o 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**