

Sales Data Analysis

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Time Taken: Approximately 1.30 Hours

Section 1: Data Preparation

1. **Missing/Incorrect Dates:**

Replaced missing or incorrect dates with the average of the previous and next valid dates. Example: For Row 3, calculated as `AVERAGE(Row2_Date, Row4_Date)`.

2. **Standardizing Columns:**

Corrected typos in the "Region" (e.g., "Northh" → "North") and "Salesperson" fields using Excel's `TRIM()` and `CLEAN()` functions.

3. **Validation:**

Flagged rows where Quantity or Unit Price were blank or zero. Added a **Data Issue** column with the comment "Check Quantity/Price" for flagged rows. Used `IF()` and `ISBLANK()` functions.

Example: `IF(OR(ISBLANK (condition),"Check Quantity/Price",""))`

Section 2: Data Analysis

1. **Total Sales:** Calculated for each row as Quantity * Unit Price. Invalid rows (flagged in Data Issue) were excluded from this calculation.

2. **Dynamic Discount:**

Applied discount rules using the following conditions:

- $\geq \$2,000$: 15% discount.
- \$1,000 to \$1,999: 10% discount.
- Otherwise: No discount.

3. **Advanced Analysis**

- **Pivot Tables:**

Created a pivot table summarizing total sales by **Product** and **Region**. Highlighted the top-performing product and region.

- **Top 3 Salespersons:**

Used formulas to calculate total sales for each salesperson and identified the top 3 performers.

- **Error Check:**

Used conditional formatting to flag rows where discounts exceeded \$300 and added comments explaining the issue.

4. **Sales Performance Evaluation:** Compared actual sales by region (calculated via the pivot table) with predefined targets. Created a table to indicate whether each region met its target.

Section 3: Key findings

1. **Top Sales Insights**

Top Product: Furniture with sale amount 86598

Top Sales Region for the top product: East

2. Top Salespersons

Jane Smith	9660
Ali Khan	9340
Ali Khan	9080

3. Sales Performance

All regions met the target.

Region	Actual Sales	Target Sales	Performance
East	201184	15000	Target Met
North	65481	10000	Target Met
South	106631	8000	Target Met
West	125281	12000	Target Met

4. Discount Analysis

Rows where discounts exceeded \$300 were flagged due to high sales and a 15% discount rate.