SUPERSTORE DATA ANALYSIS

BUSINESS PROBLEM

Superstore has seen increasing sales over the past few months, but profits have not grown at the same rate. Management wants to identify what is causing this imbalance and optimize sales strategies to ensure sustainable profitability.

<u>Problems to be addressed :</u>

- How do sales vary across different regions?

- Which customer segment contributes the most to total sales?

- How has sales revenue changed compared to the previous year?

- Are there seasonal patterns in sales performance?

- Which regions are the most and least profitable?

- How do discounts impact profit margins across different products?

- Which products are generating the highest profit?

- Which products are consistently underperforming in terms of profit?

REGION WISE SALES

This bar chart represents Region-wise Sales across three product categories

Observation:

1. **Highest Sales Region for Each Category:**

    o   Furniture: Highest sales in South (52K)

    o   Office Supplies: Highest sales in Central (45K)

    o   Technology: Highest sales in West (53K

2. **Lowest Sales Region for Each Category:**

    o   Furniture: Lowest in West (36K)

    o   Office Supplies: Lowest in West (39K)

    o   Technology: Lowest in Central (34K)

3. **Regional Sales Comparison:**

    o   South: Strong in Furniture (52K), balanced in Office Supplies and Technology (both 40K).

    o   East: Close sales figures across all categories (Furniture: 43K, Office Supplies: 45K, Technology: 40K).

    o   West: Technology dominates (53K), while Furniture and Office Supplies are lower (36K and 39K).

    o   Central: Office Supplies

    o   (45K) and Furniture (46K) perform well, while Technology lags (34K).
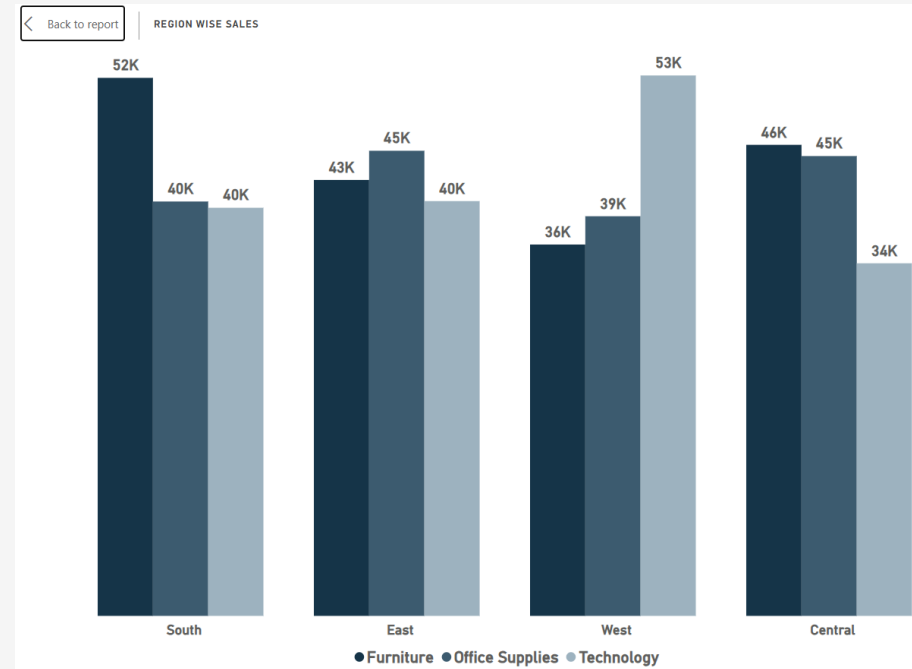
SALES VS PREVIOUS YEAR SALES

This chart visualizes Total Sales vs. Previous Year Sales across different months.
Both sales values are nearly identical, indicating a comparative analysis of year-over-year (YoY) performance.

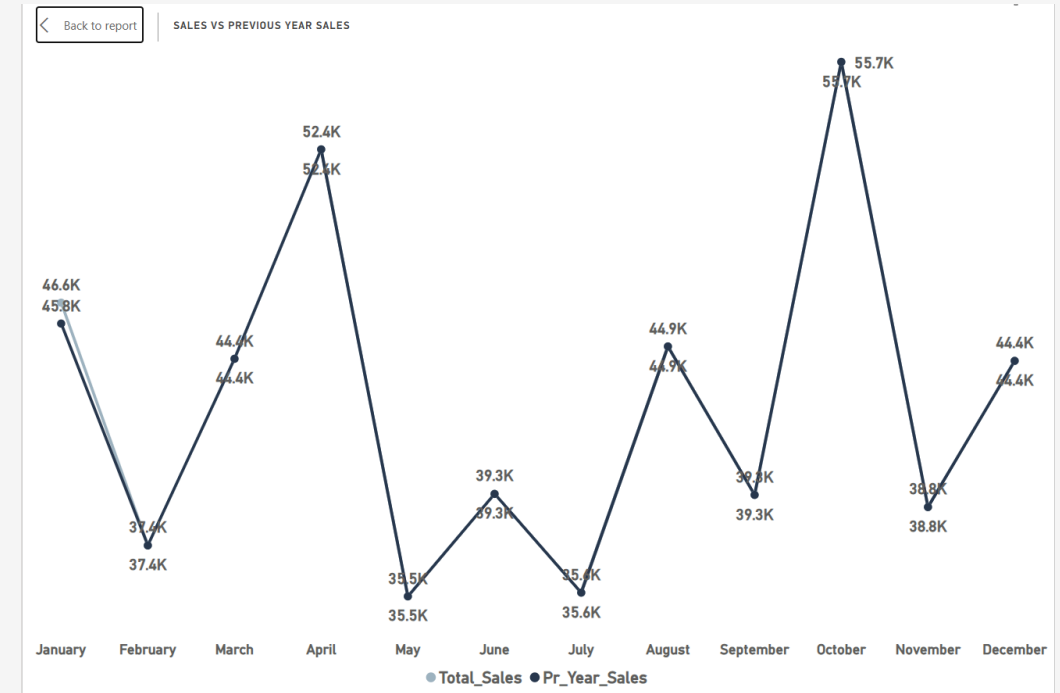**Observations:**
Highest Sales Months:
- October had the highest sales at 55.7K, slightly exceeding the previous year's 55.7K.
- April also had strong sales at 52.4K, matching last year's figure.

Lowest Sales Months:
- May saw the lowest sales, with 35.5K, the same as the previous year.
- February had a drop to 37.4K from January's 46.6K.

Consistent Trends:
- Sales for almost every month are exactly equal or show minimal deviation compared to the previous year.
- This suggests a stable sales pattern without significant growth or decline.
- Sales tend to peak in April and October.
- Sharp dips occur in May and November, indicating seasonal trends.

IMPACT OF DISCOUNTS ON PROFIT MARGIN

Observations:

1. **Dense clustering** at lower discount values:
   - Most data points are concentrated between 0.0 and 0.2
   - This suggests that a majority of sales occur with lower discounts.

2. **Profit margin varies widely:**
   - At low discount levels (0-20%), profit margins are scattered, indicating some transactions remain profitable, while others are less so.
   - At higher discount levels (above 0.3 or 30%), the number of data points decreases, suggesting fewer transactions occur with high discounts.

3. **Effect on different categories:**
   - Furniture (dark points) seems to be spread more across higher discount levels, meaning discounts may be more common or larger in this category.
   - Office Supplies (medium shade) and Technology (lightest shade) are mostly concentrated at lower discount levels, suggesting these products might have tighter pricing strategies.
   - If profit margins decrease significantly with increasing discounts, it would indicate that discounting strategy needs to be optimized to maintain profitability.
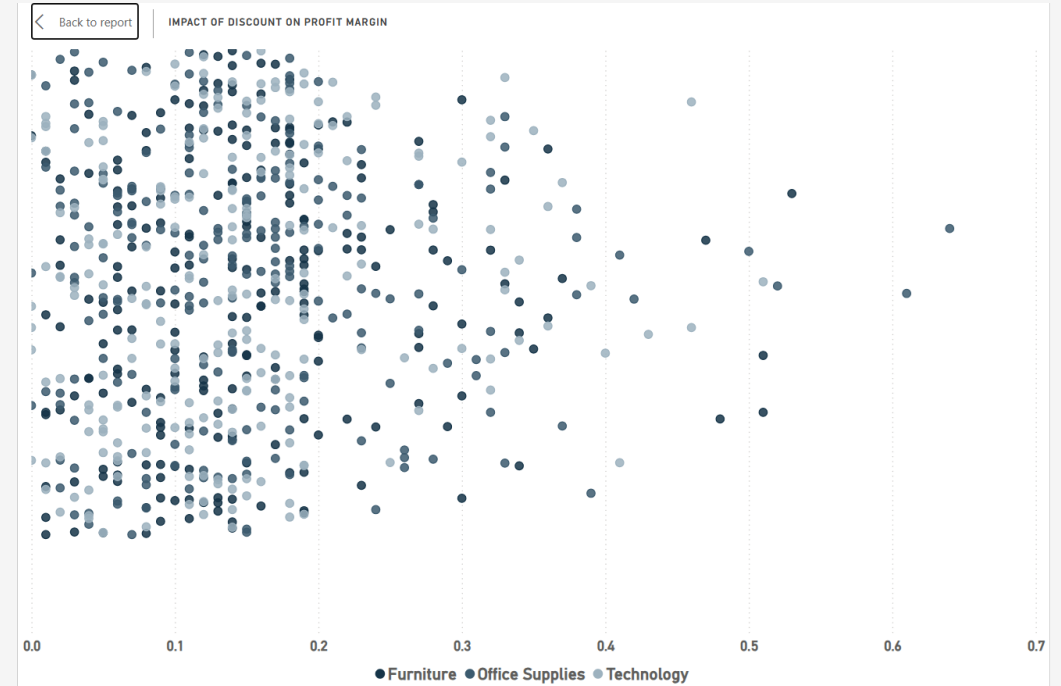
MONTHLY SALES TREND
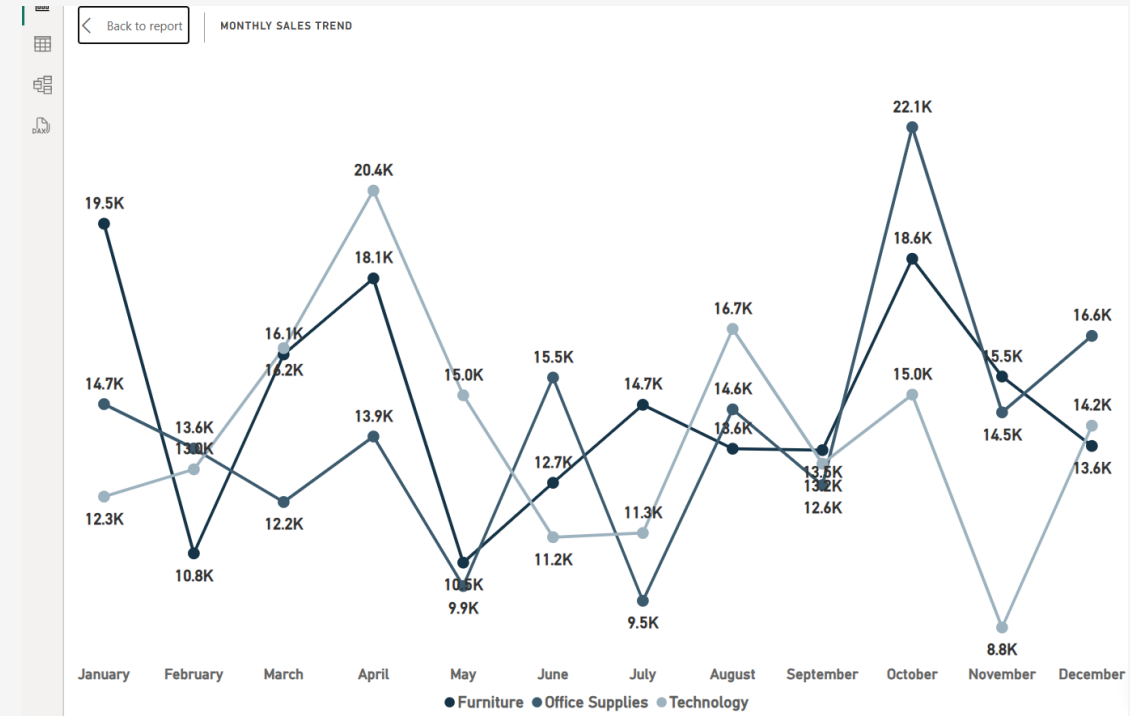
Observations:

Highest Sales:

- o Technology peaked in October (~22.1K).

- o Office Supplies had its highest sales in April (~20.4K).

- o Furniture reached a high in October (~18.6K).

Lowest Sales:

- o Office Supplies saw its lowest in November (~8.8K).

- o Furniture had a significant drop in July (~9.5K).

- o Technology saw a dip in May (~9.9K).

Major Changes :

- o Technology had a sharp increase from September to October.

- o Office Supplies showed a peak in April, possibly due to seasonal demand.

- o Furniture also had a notable increase in June and October.
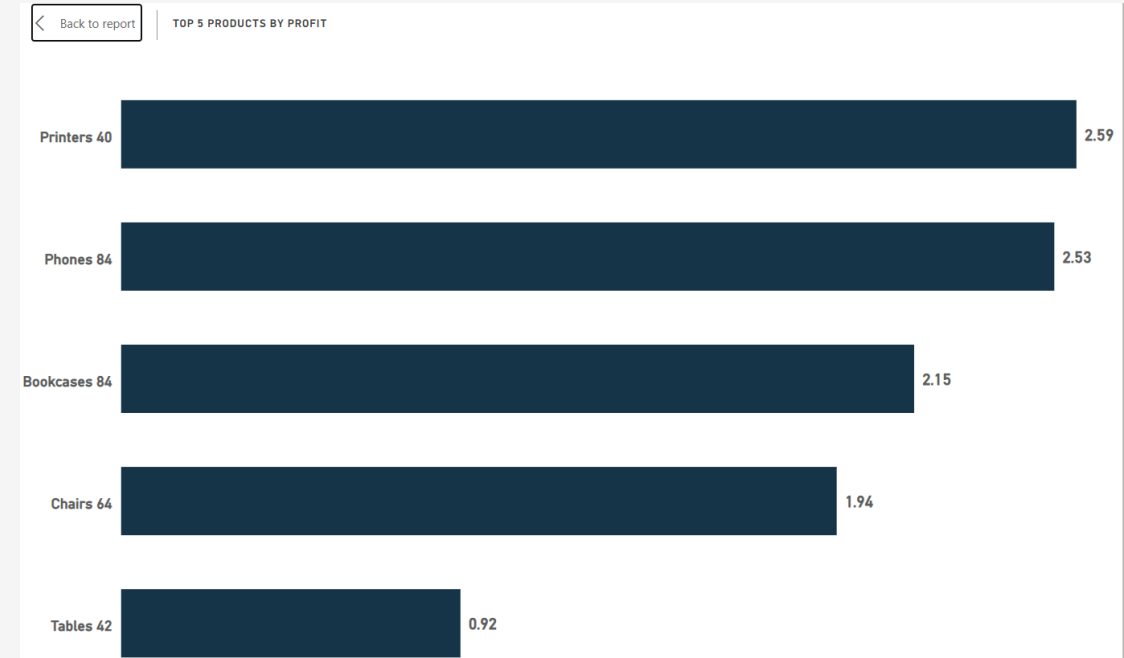
TOP 5 PRODUCTS BY PROFIT

Observations:

1.Top Profitable Products:

1. Printers (Profit: 2.59) is the most profitable product.

2. Phones (Profit: 2.53) is a close second.

3. Bookcases (Profit: 2.15) follows.

4. Chairs (Profit: 1.94) is in fourth place.

5. Tables (Profit: 0.92) has the least profit among the top 5.

2. Profit Distribution:

1. The top two products (Printers & Phones) contribute significantly to the total profit.

2. The profit drops gradually from Bookcases to Tables.

3. Tables have the lowest profit among the top 5, with less than 1.0.
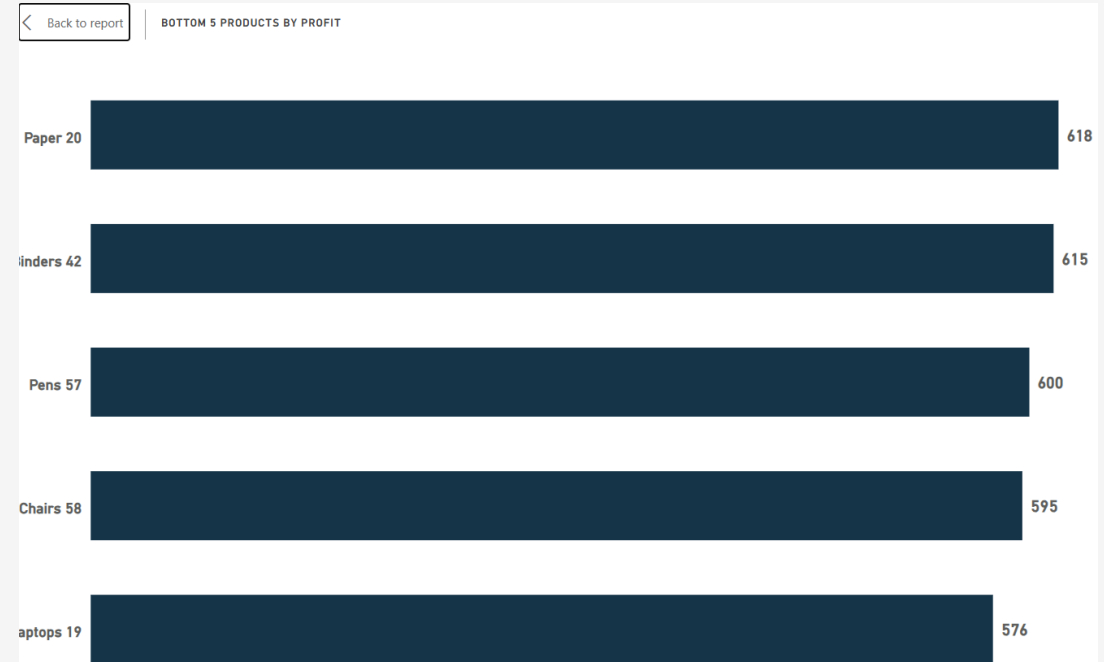
BOTTOM 5 PRODUCTS BY PROFIT

Observations:

1.Least Profitable Products:

1. Paper (Profit: 618) has the lowest profit among these.

2. Binders (Profit: 615) follows closely.

3. Pens (Profit: 600) is in the middle.

4. Chairs (Profit: 595) has slightly lower profit than Pens.

5. Laptops (Profit: 576) has the least profit among these 5.

2.Profit Trend:

1. The profit difference between the products is not significant, indicating a consistent trend in low-profit products.

2. Laptops, despite being a high-value product, have low profit, which may be due to high costs, discounts, or low sales volume.

Back to report | BOTTOM 5 PRODUCTS BY PROFIT

Paper 20 — 618

Binders 42 — 615

Pens 57 — 600

Chairs 58 — 595

Laptops 19 — 576

BUSINESS INSIGHTS AND RECOMMENDATIONS

- April and October shows high sales, therefore businesses should capitalize with brand promotions, marketing and special discounts

- November is a weak month, especially for Office Supplies

- There seems to be a decline in May & November. Strategies like targeted discounts or promotional offers could help boost revenue during these months

- The profit margins seems to be affected because of discounts. Therefore, If the profit margins drop sharply beyond a certain discount level, companies should limit discounts above that threshold

- Furniture is strongest in the South, indicating high demand—perhaps due to consumer preference or business needs.

- Office Supplies have consistent demand, with peak sales in Central, making it a stable category.

- States like California, Texas, and New York have higher profit and a mix of regional contributions.