```sql
USE INDEXING;

-- 1. Find the Total Revenue and Profit generated.
SELECT
    ROUND(SUM(SALES),2) AS TOTAL_REVENUE,
    ROUND(SUM(PROFIT),2) as total_PROFIT
from SUPERSTORE;
```

| TOTAL_REVENUE | TOTAL_PROFIT |
|---|---|
| 1174336.64 | 134146.22 |

```sql
-- 2. Find the Segment-wise distribution of Sales.
SELECT
    SEGMENT,
    ROUND(sum(SALES),2) as TOTAL_SALES
from SUPERSTORE
group by SEGMENT
order by  TOTAL_SALES DESC;
```

| SEGMENT | TOTAL_SALES |
|---|---|
| Consumer | 624094.85 |
| Corporate | 350747.62 |
| Home Office | 199494.17 |

```sql
-- 3. Find the Top 3 Most Profitable Products.
SELECT
    `PRODUCT NAME`,
    ROUND(SUM(PROFIT),2) as TOTAL_PROFIT
from SUPERSTORE
group by `PRODUCT NAME`
order by TOTAL_PROFIT DESC
LIMIT 3;
```

| PRODUCT NAME | TOTAL_PROFIT |
|---|---|
| Sauder Classic Bookcase, Metal | 2978.37 |
| Nokia Smart Phone, with Caller ID | 2887.59 |
| Novimex Executive Leather Armchair, Adjustable | 2523.55 |

## -- 4. Find Number of Orders Placed After January 2016.

SELECT

   COUNT(*) as ORDERS_AFTER_JAN2016

from SUPERSTORE

where `ORDER DATE` > '2016-01-31';

| ORDERS_AFTER_JAN2016 |
|---|
| 1437 |

## -- 5. Find Number of States from Mexico

SELECT

   COUNT(DISTINCT STATE) as STATES_FROM_MEXICO

FROM SUPERSTORE

Where COUNTRY = 'Mexico';

| STATES_FROM_MEXICO |
|---|
| 0 |

## -- 6. which products and subcategories are most and least profitable ?

SELECT `PRODUCT NAME`,

   ROUND(SUM(PROFIT),2) AS total_profit,

   ROUND(SUM(SALES),2)  AS total_sales

from SUPERSTORE

group by `PRODUCT NAME`

order by  total_profit DESC

LIMIT 5;

| | PRODUCT NAME | total_profit | total_sales |
|---|---|---|---|
| ▶ | Sauder Classic Bookcase, Metal | 2978.37 | 7054.29 |
| | Nokia Smart Phone, with Caller ID | 2887.59 | 16867.22 |
| | Novimex Executive Leather Armchair, Adjustable | 2523.55 | 10066.99 |
| | Hon Executive Leather Armchair, Adjustable | 2410.27 | 16622.08 |
| | Brother Copy Machine, Color | 1963.36 | 7308.04 |

-- 7. Which customer segment contributes the most to the total revenue?

SELECT SEGMENT,

    ROUND(sum(SALES),2) AS total_sales

FROM SUPERSTORE

group by SEGMENT

order by total_sales DESC

LIMIT 1;

| | SEGMENT | total_sales |
|---|---|---|
| ▶ | Consumer | 624094.85 |

-- 8. What is the year-over-year growth in sales and Profit?

WITH yearly AS (

 SELECT

  YEAR(`ORDER DATE`) AS Year,

  SUM(SALES) AS Total_Sales,

  SUM(PROFIT) AS Total_Profit

 FROM SUPERSTORE

 GROUP BY YEAR(`ORDER DATE`)

)

SELECT

 Year,

 ROUND(Total_Sales,2) AS Total_Sales,

 ROUND(Total_Profit,2) AS Total_Profit,

ROUND(((Total_Sales - LAG(Total_Sales) OVER (ORDER BY Year)) / LAG(Total_Sales) OVER (ORDER BY Year)) * 100, 2) AS Sales_Growth_Percent,

ROUND(((Total_Profit - LAG(Total_Profit) OVER (ORDER BY Year)) / LAG(Total_Profit) OVER (ORDER BY Year)) * 100, 2) AS Profit_Growth_Percent

FROM yearly

ORDER BY Year;

| Year | Total_Sales | Total_Profit | Sales_Growth_Percent | Profit_Growth_Percent |
|------|-------------|--------------|----------------------|------------------------|
| NULL | 1174336.6362799979 | 134146.21628000017 | NULL | NULL |

-- 9. Which countries and cities are driving the highest sales?

SELECT COUNTRY,

ROUND(SUM(SALES),2) AS total_sales,

ROUND(SUM(PROFIT),2) AS total_profit

FROM SUPERSTORE

GROUP BY COUNTRY

ORDER BY total_sales DESC

LIMIT 20;

| COUNTRY | total_sales | total_profit |
|---------|-------------|--------------|
| Australia | 925235.85 | 103907.43 |
| Austria | 92539.05 | 24341.7 |
| Argentina | 57511.78 | -18693.8 |
| Algeria | 36091.59 | 9106.5 |
| Angola | 25554 | 6494.97 |
| Afghanistan | 21673.32 | 5460.3 |
| Azerbaijan | 5631.51 | 1831.05 |
| Bangladesh | 5385.48 | 906.81 |
| Albania | 3888.12 | 709.32 |
| Bahrain | 669.18 | 12.84 |
| Armenia | 156.75 | 69.09 |

-- 10. What is the average delivery time from order to ship date across regions?

SELECT REGION,

    ROUND(AVG(DATEDIFF(`SHIP DATE`, `ORDER DATE`)),2) AS avg_delivery_days,

    MIN(DATEDIFF(`SHIP DATE`, `ORDER DATE`)) AS min_delivery_days,

    MAX(DATEDIFF(`SHIP DATE`, `ORDER DATE`)) AS max_delivery_days

FROM SUPERSTORE

GROUP BY REGION

ORDER BY avg_delivery_days DESC;

| REGION | avg_delivery_days | min_delivery_days | max_delivery_days |
|---|---|---|---|
| Southern Asia | NULL | NULL | NULL |
| Southern Europe | NULL | NULL | NULL |
| North Africa | NULL | NULL | NULL |
| Central Africa | NULL | NULL | NULL |
| South America | NULL | NULL | NULL |
| Western Asia | NULL | NULL | NULL |
| Oceania | NULL | NULL | NULL |
| Western Europe | NULL | NULL | NULL |

-- 11. what is the profit distribution across order priority?

SELECT `ORDER PRIORITY`,

    COUNT(*)       AS orders,

    ROUND(SUM(SALES),2)   AS total_sales,

    ROUND(SUM(PROFIT),2)   AS total_profit,

    ROUND(AVG(PROFIT),2)   AS avg_profit_per_order,

    ROUND(STDDEV_SAMP(PROFIT),2) AS profit_stddev   -- or STDDEV(PROFIT) depending on DB

FROM SUPERSTORE

GROUP BY `ORDER PRIORITY`

ORDER BY total_profit DESC;

| ORDER PRIORITY | orders | total_sales | total_profit | avg_profit_per_order | profit_stddev |
|---|---|---|---|---|---|
| Medium | 2294 | 675915.93 | 73509.69 | 32.04 | 143.98 |
| High | 1269 | 377508.06 | 46576.52 | 36.7 | 146.49 |
| Critical | 286 | 82706.29 | 9776.81 | 34.18 | 150.58 |
| Low | 135 | 38206.35 | 4283.19 | 31.73 | 170.26 |

-- 12. Suggest data-driven recommendations for improving profit and reducing losses.

SELECT `ORDER ID`, SUM(PROFIT) AS profit_sum, SUM(SHIPPING_COST) AS shipping_sum, SUM(DISCOUNT) AS discount_sum

FROM SUPERSTORE

GROUP BY `ORDER ID`

HAVING (shipping_sum + discount_sum) > profit_sum

LIMIT 50;

| Category | Sub-Category | Product Name | Total_Sales | Total_Profit | Avg_Discount |
|---|---|---|---|---|---|
| Furniture | Bookcases | Ikea Library with Doors, Traditional | 6359.324999999999 | -1748.1749999999997 | 0.0000 |
| Technology | Machines | Panasonic Inkjet, Red | 2226.528 | -1410.192 | 0.0000 |
| Furniture | Tables | Chromcraft Conference Table, with Bottom Stor... | 2356.209 | -1335.291 | 0.5000 |
| Furniture | Tables | Bevis Wood Table, with Bottom Storage | 3361.743 | -1056.807 | 0.0000 |
| Furniture | Tables | Lesro Wood Table, Adjustable Height | 2301.138 | -953.442 | 0.0000 |
| Furniture | Bookcases | Safco Classic Bookcase, Pine | 2768.8500000000004 | -909.9 | 0.0000 |
| Furniture | Bookcases | Bush Library with Doors, Pine | 2267.154 | -872.886 | 0.0000 |
| Furniture | Tables | Chromcraft Round Table, Rectangular | 464.67 | -836.43 | 1.0000 |
| Furniture | Chairs | Office Star Executive Leather Armchair, Black | 1682.748 | -813.492 | 0.0000 |
| Furniture | Tables | Lesro Conference Table, Adjustable Height | 515.862 | -773.838 | 1.0000 |