Case Study 2: Kultra Mega Stores Inventory

Case Scenario I

1. Which product category had the highest sales?

SELECT [Product_Category], SUM(Sales) AS TotalSales

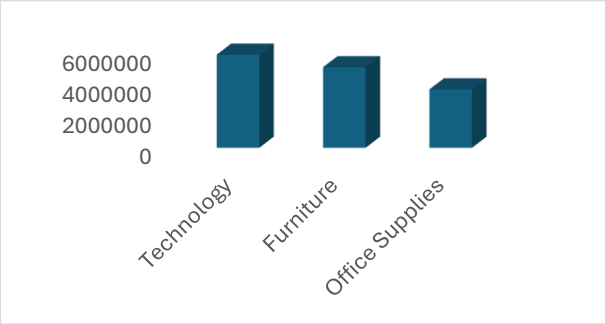
FROM [KMS Sql Case Study(2)]

GROUP BY [Product_Category]

ORDER BY TotalSales DESC

SELECT TOP 1

Product_Category	TotalSales
Technology	5984248
Furniture	5178591
Office Supplies	3752762



2. What are the Top 3 and Bottom 3 regions in terms of sales?

Region	TotalSales	RankType	Region2	TotalSales3	RankType4
West	3597549	Top	Nunavut	116376	Bottom
Ontario	3063212	Top	Northwest Territories	800847	Bottom
Prarie	2837305	Top	Yukon	975867	Bottom

--------Question 2----------

-- Top 3

SELECT TOP 3 Region, SUM(Sales) AS TotalSales, 'Top' AS RankType

FROM [KMS Sql Case Study(2)]

GROUP BY Region

ORDER BY TotalSales DESC

------BOTTOM 3------

SELECT TOP 3 Region, SUM(Sales) AS TotalSales, 'Bottom' AS RankType

FROM [KMS Sql Case Study(2)]

GROUP BY Region

ORDER BY TotalSales ASC;

3. **What were the total sales of appliances in Ontario?**

Total_Sales
202346.8396

SELECT SUM ([Sales]) AS [Total_Sales]

FROM [KMS Sql Case Study(2)]

WHERE [Region] = 'Ontario'

AND [Product_Sub_Category] = 'Appliances'

4. **Advise the management of KMS on what to do to increase the revenue from the bottom 10 customers**

Identify Bottom 10 Customers (SQL)

SELECT TOP 10 [Customer_Name], SUM(Sales) AS TotalSales

FROM KMS data

GROUP BY [Customer_Name]

ORDER BY TotalSales ASC;

Analyze Their Behavior

- What products do they typically buy?
- How often do they place orders?

SELECT [customer_name], [Product_Category], COUNT(*) AS OrderCount, SUM(Sales) AS TotalSpent

FROM [KMS Sql Case Study(2)]

WHERE [Customer_Name] IN (

```
    SELECT TOP 10 [Customer_Name]
    FROM [KMS Sql Case Study(2)]
    GROUP BY [Customer_Name]
    ORDER BY SUM(Sales) ASC
)
GROUP BY [Customer_Name], [Product_Category];
```

customer_name	Product_Category	OrderCount	TotalSpent
Chris McAfee	Furniture	1	321.6300049
Christine Kargatis	Furniture	1	244.8500061
Rick Huthwaite	Furniture	1	275.1099854
Chris McAfee	Office Supplies	1	28.54999924
Christine Kargatis	Office Supplies	1	48.36999893
Dorothy Dickinson	Office Supplies	1	198.0800018
Eric Murdock	Office Supplies	3	282.2299995
Jeremy Farry	Office Supplies	2	85.72000217
Katrina Edelman	Office Supplies	2	180.760006
Mark Hamilton	Office Supplies	1	364.6900024
Natalie DeCherney	Office Supplies	1	125.9000015
Nicole Fjeld	Office Supplies	2	153.0300064
Rick Huthwaite	Office Supplies	2	140.7099953
Eric Murdock	Technology	1	61.09799957
Mark Hamilton	Technology	1	86.30000305

KMS should:

1. Engage Them with Personalized Promotions

- Offer discounts or bundled offers based on what they already buy.

2. Upsell or Cross-Sell Products

- If they only buy low-cost items (e.g., accessories), suggest related high-value items (e.g., appliances or electronics).

3. Loyalty Rewards Offer

- Give incentives for ordering frequently (e.g., free shipping after X orders).

6. Survey or Contact Them for Feedback

- Ask why they don't buy more. Feedback can reveal hidden barriers (e.g., website experience, delivery issues, unclear product specs).

5. **KMS incurred the most shipping cost using which shipping method?**

SELECT TOP 1 [Ship_Mode], SUM([Shipping_Cost]) AS TotalShippingCost

FROM [KMS Sql Case Study(2)]

GROUP BY [Ship_Mode]

ORDER BY TotalShippingCost DESC;

Ship_Mode	TotalShippingCost
Delivery Truck	51972

Case Scenario II

6. **. Who are the most valuable customers, and what products or services do they typically purchase?**

SELECT [Customer_Name], [Product_Category], SUM(Sales) AS CategorySales

FROM [KMS Sql Case Study(2)]

WHERE [Customer_Name] IN (

SELECT TOP 3 [Customer_Name]

FROM [KMS Sql Case Study(2)]

GROUP BY [Customer_Name]

ORDER BY SUM(Sales) DESC

)

GROUP BY [Customer_Name], [Product_Category]

ORDER BY [Customer_Name], CategorySales DESC;

Customer_Name	Product_Category	CategorySales
Deborah Brumfield	Technology	76795.79
Deborah Brumfield	Furniture	12809.62
Deborah Brumfield	Office Supplies	7827.72
Emily Phan	Technology	110481.97
Emily Phan	Furniture	4011.65
Emily Phan	Office Supplies	2630.82
Roy Skaria	Furniture	50177.24
Roy Skaria	Technology	30349.39
Roy Skaria	Office Supplies	12015.52

7. **Which small business customer had the highest sales?**

SELECT TOP 1 [Customer_Name], SUM(Sales) AS TotalSales

FROM [KMS Sql Case Study(2)]

WHERE [Customer_Segment] = 'Small Business'

GROUP BY [Customer_Name]

ORDER BY TotalSales DESC;

Customer_Name	TotalSales
Dennis Kane	75968

8. Which Corporate Customer placed the most number of orders in 2009 – 2012?

SELECT TOP 1 [Customer_Name], COUNT(DISTINCT [Order_ID]) AS OrderCount

FROM [KMS Sql Case Study(2)]

WHERE [Customer_Segment] = 'Corporate'

AND YEAR([Order_Date]) BETWEEN 2009 AND 2012

GROUP BY [Customer_Name]

ORDER BY OrderCount DESC;

Customer_Name	OrderCount
Adam Hart	18

9. Which consumer customer was the most profitable one?

SELECT TOP 1 [Customer_Name], SUM(Profit) AS TotalProfit

FROM [KMS Sql Case Study(2)]

WHERE [Customer_Segment] = 'Consumer'

GROUP BY [Customer_Name]

ORDER BY TotalProfit DESC;

Customer_Name	TotalProfit
Emily Phan	34005

10. Which customer returned items, and what segment do they belong to? (Answers limited to top 10)

SELECT top 10 KM.[Customer_Name], KM.[Customer_Segment]

FROM [KMS Sql Case Study(2)] KM

JOIN [Order_Status(2)] os ON KM.[Order_ID] = os.[Order_ID]

WHERE os.Status = 'Returned';

Customer_Name	Customer_Segment
Dorothy Badders	Home Office
Grant Carroll	Corporate
Grant Carroll	Corporate
Grant Carroll	Corporate
Edward Hooks	Consumer
Michelle Lonsdale	Home Office
Michelle Lonsdale	Home Office
Carlos Soltero	Small Business
Carlos Soltero	Small Business
Dorothy Badders	Home Office

11. If the delivery truck is the most economical but the slowest shipping method and Express Air is the fastest but the most expensive one, do you think the company appropriately spent shipping costs based on the Order Priority? Explain your answer

```
SELECT
 [Order_Priority],
 [Ship_Mode],
 COUNT([Order_ID]) AS NumberOfOrders,
 SUM([Shipping_Cost]) AS TotalShippingCost,
 AVG([Shipping_Cost]) AS AvgShippingCost
FROM [KMS Sql Case Study(2)]
GROUP BY [Order_Priority], [Ship_Mode]
ORDER BY [Order_Priority], [Ship_Mode];
```

Order_Priority	Ship_Mode	NumberOfOrders	TotalShippingCost	AvgShippingCost	Explanation
Critical	Delivery Truck	228	10783.82	47.30	not appropriate
Critical	Express Air	200	1742.10	8.71	Appropriate
Critical	Regular Air	1180	8586.76	7.28	Apropriate
High	Delivery Truck	248	11206.88	45.19	overbilled
High	Express Air	212	1453.53	6.86	Appropriate
High	Regular Air	1308	10005.01	7.65	Appropriate
Low	Delivery Truck	250	11131.61	44.53	Appropriate
Low	Express Air	190	1551.63	8.17	Not appropriate
Low	Regular Air	1280	10263.62	8.02	not appropriate
Medium	Delivery Truck	205	9461.62	46.15	Appropriate

Medium	Express Air	201	1633.59	8.13	not appropriate
Medium	Regular Air	1225	9418.72	7.69	not appropriate
Not Specified	Delivery Truck	215	9388.01	43.67	Appropriate
Not Specified	Express Air	180	1470.06	8.17	not appropriate
Not Specified	Regular Air	1277	9734.08	7.62	not appropriate

Critical and High Priority Orders:

- Expected Shipping Method: Express Air (fastest)
- Observation: Most Critical and High orders were shipped with Delivery Truck and Regular Air, which are slower. Misalignment between urgency and shipping method.

low and Not Specified Priority Orders:

- Expected Shipping Method: Delivery Truck (slow and cheap)
- Observation: Many Low and Not Specified orders used Express Air or Regular Air, which are more expensive. Overuse of expensive shipping on non-urgent orders.

The company did not always spend shipping costs appropriately based on order priority.