SQL Analysis: DataCo Supply Chain Dataset

## 1. Which cities have the most late deliveries?

SELECT "Customer City", COUNT(\*) AS late\_count  
FROM DataCoSupplyChainDataset  
WHERE "Late\_delivery\_risk" = 1  
GROUP BY "Customer City"  
ORDER BY late\_count DESC;

## 2. Which shipping mode has the highest late delivery risk?

SELECT "Shipping Mode", AVG("Late\_delivery\_risk") AS late\_rate  
FROM DataCoSupplyChainDataset  
GROUP BY "Shipping Mode"  
ORDER BY late\_rate DESC;

## 3. What is the average shipping delay per product category?

SELECT "Category Name",   
 AVG("Days for shipping (real)" - "Days for shipment (scheduled)") AS avg\_delay  
FROM DataCoSupplyChainDataset  
GROUP BY "Category Name"  
ORDER BY avg\_delay DESC;

## 4. Which order regions have the highest percentage of late deliveries?

SELECT "Order Region",   
 COUNT(\*) AS total\_orders,  
 SUM("Late\_delivery\_risk") AS late\_orders,  
 ROUND(SUM("Late\_delivery\_risk") \* 100.0 / COUNT(\*), 2) AS late\_rate  
FROM DataCoSupplyChainDataset  
GROUP BY "Order Region"  
ORDER BY late\_rate DESC;

## 5. What is the trend of late deliveries over time?

SELECT DATE("order date (DateOrders)") AS order\_date,   
 SUM("Late\_delivery\_risk") AS late\_orders  
FROM DataCoSupplyChainDataset  
GROUP BY order\_date  
ORDER BY order\_date;

## 6. Which product categories generate the most profit?

SELECT "Category Name",   
 SUM("Order Profit Per Order") AS total\_profit  
FROM DataCoSupplyChainDataset  
GROUP BY "Category Name"  
ORDER BY total\_profit DESC;

## 7. Which departments have the highest average order profit?

SELECT "Department Name",   
 AVG("Order Profit Per Order") AS avg\_profit  
FROM DataCoSupplyChainDataset  
GROUP BY "Department Name"  
ORDER BY avg\_profit DESC;

## 8. Who are the top 10 customers by total sales?

SELECT CONCAT("Customer Fname", ' ', "Customer Lname") AS customer\_name,   
 SUM("Sales") AS total\_sales  
FROM DataCoSupplyChainDataset  
GROUP BY customer\_name  
ORDER BY total\_sales DESC  
LIMIT 10;

## 9. Which regions contribute most to the company's profit?

SELECT "Order Region",   
 SUM("Order Profit Per Order") AS total\_profit  
FROM DataCoSupplyChainDataset  
GROUP BY "Order Region"  
ORDER BY total\_profit DESC;

## 10. What is the average benefit per order by shipping mode?

SELECT "Shipping Mode",   
 AVG("Benefit per order") AS avg\_benefit  
FROM DataCoSupplyChainDataset  
GROUP BY "Shipping Mode";

## 11. Which products have the highest total sales?

SELECT "Product Name",   
 SUM("Sales") AS total\_sales  
FROM DataCoSupplyChainDataset  
GROUP BY "Product Name"  
ORDER BY total\_sales DESC  
LIMIT 10;

## 12. What are the top 5 most ordered product categories?

SELECT "Category Name",   
 COUNT(\*) AS order\_count  
FROM DataCoSupplyChainDataset  
GROUP BY "Category Name"  
ORDER BY order\_count DESC  
LIMIT 5;

## 13. Which product categories are most often associated with late deliveries?

SELECT "Category Name",   
 SUM("Late\_delivery\_risk") AS late\_count  
FROM DataCoSupplyChainDataset  
GROUP BY "Category Name"  
ORDER BY late\_count DESC;

## 14. What is the average order item discount rate per department?

SELECT "Department Name",   
 AVG("Order Item Discount Rate") AS avg\_discount\_rate  
FROM DataCoSupplyChainDataset  
GROUP BY "Department Name"  
ORDER BY avg\_discount\_rate DESC;

## 15. How many items are ordered per product?

SELECT "Product Name",   
 SUM("Order Item Quantity") AS total\_quantity  
FROM DataCoSupplyChainDataset  
GROUP BY "Product Name"  
ORDER BY total\_quantity DESC  
LIMIT 10;

## 16. Which customer segments generate the highest sales?

SELECT "Customer Segment",   
 SUM("Sales") AS total\_sales  
FROM DataCoSupplyChainDataset  
GROUP BY "Customer Segment"  
ORDER BY total\_sales DESC;

## 17. Which countries have the highest number of customers?

SELECT "Customer Country",   
 COUNT(DISTINCT "Customer Id") AS customer\_count  
FROM DataCoSupplyChainDataset  
GROUP BY "Customer Country"  
ORDER BY customer\_count DESC;

## 18. What is the average profit per customer segment?

SELECT "Customer Segment",   
 AVG("Order Profit Per Order") AS avg\_profit  
FROM DataCoSupplyChainDataset  
GROUP BY "Customer Segment"  
ORDER BY avg\_profit DESC;

## 19. What is the correlation between shipping days and delivery risk?

SELECT "Days for shipping (real)",   
 AVG("Late\_delivery\_risk") AS late\_ratio  
FROM DataCoSupplyChainDataset  
GROUP BY "Days for shipping (real)"  
ORDER BY "Days for shipping (real)";

## 20. How many orders were placed each month?

SELECT DATE\_FORMAT(STR\_TO\_DATE("order date (DateOrders)", '%m/%d/%Y %H:%i'), '%Y-%m') AS month,   
 COUNT(\*) AS orders  
FROM DataCoSupplyChainDataset  
GROUP BY month  
ORDER BY month;