

Question #1

a) What could go wrong in our calculation is, calculating the average of the Average Order Value without taking into account the total number (frequency) of the orders. Since mean or average is affected by outliers, attention to the frequency of the data must be given.

b)

1) The method I could use is using the **Median** since a median is more descriptive of a data set than the average. It is also not affected by outliers when means are affected.

2) Another way would be to calculate the Average Order Value using **Mean** while taking frequency or total items into consideration of the

$$AOV = \text{Sum}(\text{order_amount}) / \text{Sum}(\text{total_items})$$

c) 1) Median = MEDIAN(order_amount)
= \$ 284

2) AOV = Sum (order_amount)/ Sum (total_items)
= \$ 15,725,640.00/ 43,936.00
= \$ 357.92

Both of these values are numbers that are well below than \$3145.13 and realistic price of sneakers.

Question #2

a) SELECT COUNT (Orders.ShipperID) FROM [Orders]
JOIN [Shippers] ON Orders.ShipperID = Shippers.ShipperID
WHERE ShipperName = "Speedy Express";

b) SELECT Employees.LastName
FROM ((Orders
JOIN Employees ON Orders.EmployeeID = Employees.EmployeeID)
JOIN OrderDetails ON Orders.OrderID = OrderDetails.OrderID)
GROUP BY LastName
ORDER BY COUNT(OrderDetails.OrderID) DESC
LIMIT 1;

c) SELECT ProductName
FROM (((OrderDetails
JOIN Products ON OrderDetails.ProductID = Products.ProductID)
JOIN Orders ON OrderDetails.OrderID = Orders.OrderID)
JOIN Customers ON Orders.CustomerID = Customers.CustomerID)

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WHERE Country = "Germany"  
GROUP BY ProductName  
ORDER BY SUM(Quantity) DESC;  
LIMIT 1;
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