MIS 420 T-SQL #2

Write your answers to the following questions on this document and upload this document for grading. Use CB-OT-DEVST05.AD.WSU.EDU with userID = mfstudent, Password = BIanalyst. Use the AdventureWorksDW2014 database. Please review Page 9 of Module 2 documentation #1 to identify which fields from the FactResellerSales table are to be counted, summed, or averaged.  
  
Calculate all values using measure fields from the Fact tables, and textual descriptors from the dimension tables. The dimension tables used are dimReseller, dimGeography and the fact table is FactResellerSales

1. A) What is the name of the **Reseller** that had the highest Dollar Sales Amount **(highest total sales -** use a GROUP BY query of the SalesAmount column**)** calculated from the FactReseller table?   
   For this reseller  
   B) What is their city, state, country location?   
   C) What was the grand total in dollars?   
   D) What kind of business are they/ Bike shop? Warehouse store? Or Value Added Reseller?   
   E) For this reseller what is the average $ amount of an invoice (use the SalesAmount column)?   
   F) What is their average # **units** purchased (use the OrderQty column)?

USE AdventureWorksDW2014

SELECT DimReseller.ResellerName, DimReseller.BusinessType, SUM(FactResellerSales.SalesAmount) AS Total, AVG(FactResellerSales.OrderQuantity) AS [Average Order Quantity],COUNT(FactResellerSales.SalesAmount) AS [Number of Sales], DimGeography.EnglishCountryRegionName, DimGeography.City, DimGeography.StateProvinceName

FROM FactResellerSales, DimReseller, DimGeography

WHERE FactResellerSales.ResellerKey = DimReseller.ResellerKey AND DimGeography.GeographyKey = DimReseller.GeographyKey

GROUP BY DimReseller.ResellerName, DimGeography.EnglishCountryRegionName, DimGeography.City, DimGeography.StateProvinceName,DimReseller.BusinessType

ORDER BY Total DESC

a) The name of the reseller that had the highest dollar sales amount is Brakes and Gear.

b) Brakes and Gear is located in Tooele Utah, USA.

c) Brakes and Gear had a total sales amount of $877,107.19.

d) Brakes and Gear is as Value Added Reseller.

e) The average amount for an invoice is $2943.31.

f) The average number of unites purchased is 5.

1. A) What is the name of the **Reseller** that had the highest average # line items per invoice? (this is similar to the number of items on a receipt at Walmart – count the items of the SalesOrderLineNumber column, and divide that by the number of invoices – this is demonstrated on pg. 9 of module 2.

Note: each row of the factReseller table represents one row on an invoice, and has a SalesOrderLineNumber. So the data does not easily provide totals by invoice# (aka SalesOrderNumber)

B) What is their city, state, Country location?   
C) What was the grand total in dollars?   
D) How many invoices?  
E) what kind of business are they/ Bike shop? Warehouse store? Or Value Added Reseller?

USE AdventureWorksDW2014

SELECT DimReseller.ResellerName

, DimReseller.BusinessType

, SUM(FactResellerSales.SalesAmount) AS Total

, AVG(FactResellerSales.OrderQuantity) AS [Average Order Quantity]

,COUNT(FactResellerSales.SalesOrderNumber) AS [Number of Sales]

,COUNT(FactResellerSales.SalesOrderLineNumber)/COUNT(DISTINCT FactResellerSales.SalesOrderNumber) AS [Items Per Invoice]

, DimGeography.EnglishCountryRegionName

, DimGeography.City

, DimGeography.StateProvinceName

FROM FactResellerSales, DimReseller, DimGeography

WHERE FactResellerSales.ResellerKey = DimReseller.ResellerKey AND DimGeography.GeographyKey = DimReseller.GeographyKey

GROUP BY DimReseller.ResellerName, DimGeography.EnglishCountryRegionName, DimGeography.City, DimGeography.StateProvinceName,DimReseller.BusinessType

ORDER BY [Items Per Invoice] DESC

a) The reseller with the highest average number of line items per invoice is Exhibition Showroom.

b) Exhibition Showroom is located in Milton Keynes England, United Kingdom.

c) Exhibition Showroom had a total sales amount of $156,957.17

d) Exhibition Showroom had 228 invoices.

e) Exhibition Showroom is a warehouse.

1. A) What is the name of **the city** that had the highest total sales?   
   B) How many invoices for this city?   
   C) What was the grand total in dollars revenue for this city? (SalesAmount column)  
   D) What is their average # line items per invoice for this city?  
   E) What are the business types for this city? Bike shop? Warehouse store? Value Added Reseller? All?

USE AdventureWorksDW2014

SELECT DimGeography.City,

DimReseller.BusinessType

,SUM(FactResellerSales.SalesAmount) AS Total

,COUNT(FactResellerSales.SalesOrderNumber) AS [Number of Sales]

,COUNT(FactResellerSales.SalesOrderLineNumber)/COUNT(DISTINCT FactResellerSales.SalesOrderNumber) AS [Items Per Invoice]

FROM DimGeography

INNER JOIN DimReseller on DimGeography.GeographyKey = DimReseller.GeographyKey

INNER JOIN FactResellerSales on DimReseller.ResellerKey = FactResellerSales.ResellerKey

GROUP BY City, BusinessType

ORDER BY [Number of Sales] DESC

a) The city with the highest total sales is Toronto.

b) Toronto had 3498 total sales.

c) Toronto had a total sales amount of $4,460,477.69.

d) The average number of items per invoice for Toronto was 19.

e) Toronto has warehouse and value added resellers.

1. A) What is the name of **state or province from France** that had the highest total sales?   
   B) How many invoices? (Count(Distinct([SalesOrderNumber]))  
   C) What was the grand total in dollars?   
   D) What is their average # line items per invoice

USE AdventureWorksDW2014

SELECT DISTINCT DimGeography.StateProvinceName

,SUM(FactResellerSales.SalesAmount) AS Total

,COUNT(DISTINCT FactResellerSales.SalesOrderNumber) AS [Number of Sales]

,COUNT(FactResellerSales.SalesOrderLineNumber)/COUNT(DISTINCT FactResellerSales.SalesOrderNumber) AS [Items Per Invoice]

FROM DimGeography

INNER JOIN DimReseller on DimGeography.GeographyKey = DimReseller.GeographyKey

INNER JOIN FactResellerSales on DimReseller.ResellerKey = FactResellerSales.ResellerKey

WHERE DimGeography.EnglishCountryRegionName = 'France'

GROUP BY StateProvinceName

ORDER BY [Number of Sales] DESC

a) The state or province from France with the highest total sales was Seine (Paris).

b) Seine had 53 invoices.

c) Seine had a total of $1,452,049.41

d) Seine had an average number of 19 items per invoice.

1. Compare the **total sales by country**.   
   A) If you add the European countries sales together are they greater than the United States?   
   (do this calculation in SQL using an IN statement)  
   B) What countries are in the top 3 based on the grand total?   
   C) What are the total # units sold to American resellers   
   D) what countries have higher numbers than the United States for average # line items per invoice?

(Kind of a messy query since the IN statement had to be changed a few times, as did the GROUP BY)

USE AdventureWorksDW2014

SELECT DISTINCT DimGeography.EnglishCountryRegionName

,SUM(FactResellerSales.SalesAmount) AS Total

, COUNT(DISTINCT FactResellerSales.SalesOrderNumber) AS [Number of Sales]

,COUNT(FactResellerSales.SalesOrderLineNumber)/COUNT(DISTINCT FactResellerSales.SalesOrderNumber) AS [Items Per Invoice]

,COUNT(FactResellerSales.OrderQuantity)

FROM DimGeography

INNER JOIN DimReseller on DimGeography.GeographyKey = DimReseller.GeographyKey

INNER JOIN FactResellerSales on DimReseller.ResellerKey = FactResellerSales.ResellerKey

GROUP BY EnglishCountryRegionName

ORDER BY [Items Per Invoice] DESC

a) The total sales for European countries is $10,870,534.80, the total sales for the United States is $53,607,801.21.

b) 1. United States ($53,607,801.21) 2. Canada ($14,377,925.60) 3. France ($4,607,537.94)

c) The order quantity for the United States is 38,809 units.

d) 1. United Kingdom (18) 2. France (18) 3. Canada (16)

1. Change to the FactInternetSales table to examine individual customers. Total the sales and units, # Invoices, and Invoice average by **City in the United Kingdom**.   
   A) What city has the most commerce?   
   B) Record their total units, total revenue, and Average invoice amount.   
   C) The sales manager once claimed “London records more invoices than the next 5 UK cities combined!” Is it true?

USE AdventureWorksDW2014

SELECT DISTINCT DimGeography.City

--,DimReseller.ResellerName

--,DimReseller.BusinessType

,SUM(FactResellerSales.SalesAmount) AS Total

--, AVG(FactResellerSales.OrderQuantity) AS [Average Order Quantity]

, COUNT(DISTINCT FactResellerSales.SalesOrderNumber) AS [Number of Invoices]

--, COUNT(FactResellerSales.SalesAmount)/COUNT(DISTINCT FactResellerSales.SalesOrderNumber)

--,COUNT(FactResellerSales.SalesOrderLineNumber)/COUNT(DISTINCT FactResellerSales.SalesOrderNumber) AS [Items Per Invoice]

--,COUNT(FactResellerSales.OrderQuantity)

--, DimGeography.EnglishCountryRegionName

--, DimGeography.City

--, DimGeography.StateProvinceName

FROM DimGeography

INNER JOIN DimReseller on DimGeography.GeographyKey = DimReseller.GeographyKey

INNER JOIN FactResellerSales on DimReseller.ResellerKey = FactResellerSales.ResellerKey

INNER JOIN FactInternetSales on DimGeography.SalesTerritoryKey = FactInternetSales.SalesTerritoryKey

WHERE DimGeography.EnglishCountryRegionName IN ('United Kingdom')

GROUP BY City

ORDER BY [Number of Invoices] DESC

a) London has the most commerce in the United Kingdom

b) 9,640,776 total units, $13,368,150,818.54 total revenue(??????), average invoice amount $137,725(???) Something clearly went wrong here

c) I’m pretty sure I screwed this up, but based on my query the next 5 UK cities combined have 49 total invoices while London has 70.