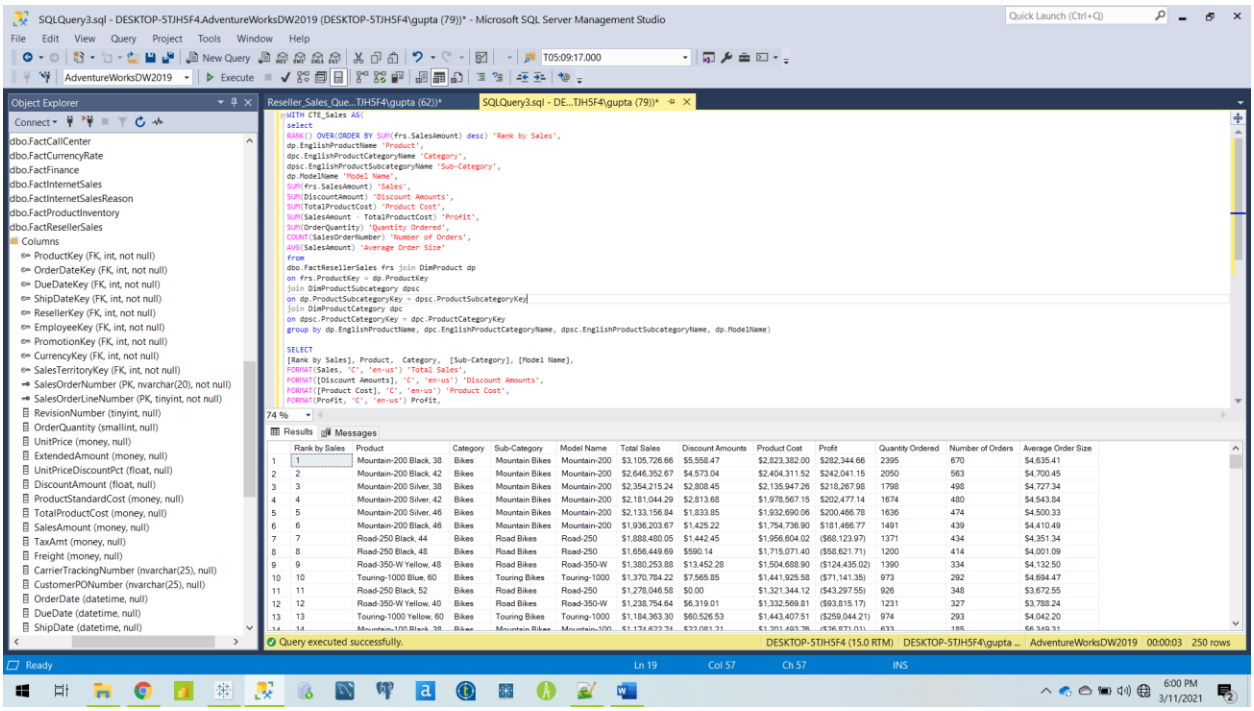
What are the sales, discount amounts, product costs, profit, quantity ordered, number of orders & average order size (sales amount) of reseller sales by Product Hierarchy (Category, Subcategory, Model & Product) and ranked by sales?

```
WITH CTE_Sales AS(
select
RANK() OVER(ORDER BY SUM(frs.SalesAmount) desc) 'Rank by Sales',
dp.EnglishProductName 'Product',
dpc.EnglishProductCategoryName 'Category',
dpsc.EnglishProductSubcategoryName 'Sub-Category',
dp.ModelName 'Model Name',
SUM(frs.SalesAmount) 'Sales',
SUM(DiscountAmount) 'Discount Amounts',
SUM(TotalProductCost) 'Product Cost',
SUM(SalesAmount - TotalProductCost) 'Profit',
SUM(OrderQuantity) 'Quantity Ordered',
COUNT(SalesOrderNumber) 'Number of Orders',
AVG(SalesAmount) 'Average Order Size'
from dbo.FactResellerSales frs join DimProduct dp
on frs.ProductKey = dp.ProductKey
join DimProductSubcategory dpsc
on dp.ProductSubcategoryKey = dpsc.ProductSubcategoryKey
join DimProductCategory dpc
on dpsc.ProductCategoryKey = dpc.ProductCategoryKey
group by dp.EnglishProductName, dpc.EnglishProductCategoryName,
dpsc.EnglishProductSubcategoryName, dp.ModelName)

SELECT
[Rank by Sales], Product,  Category,  [Sub-Category], [Model Name],
FORMAT(Sales, 'C', 'en-us') 'Total Sales',
FORMAT([Discount Amounts], 'C', 'en-us') 'Discount Amounts',
FORMAT([Product Cost], 'C', 'en-us') 'Product Cost',
FORMAT(Profit, 'C', 'en-us') Profit,
[Quantity Ordered],
[Number of Orders],
FORMAT([Average Order Size], 'C', 'en-us')'Average Order Size'
FROM CTE_Sales
```

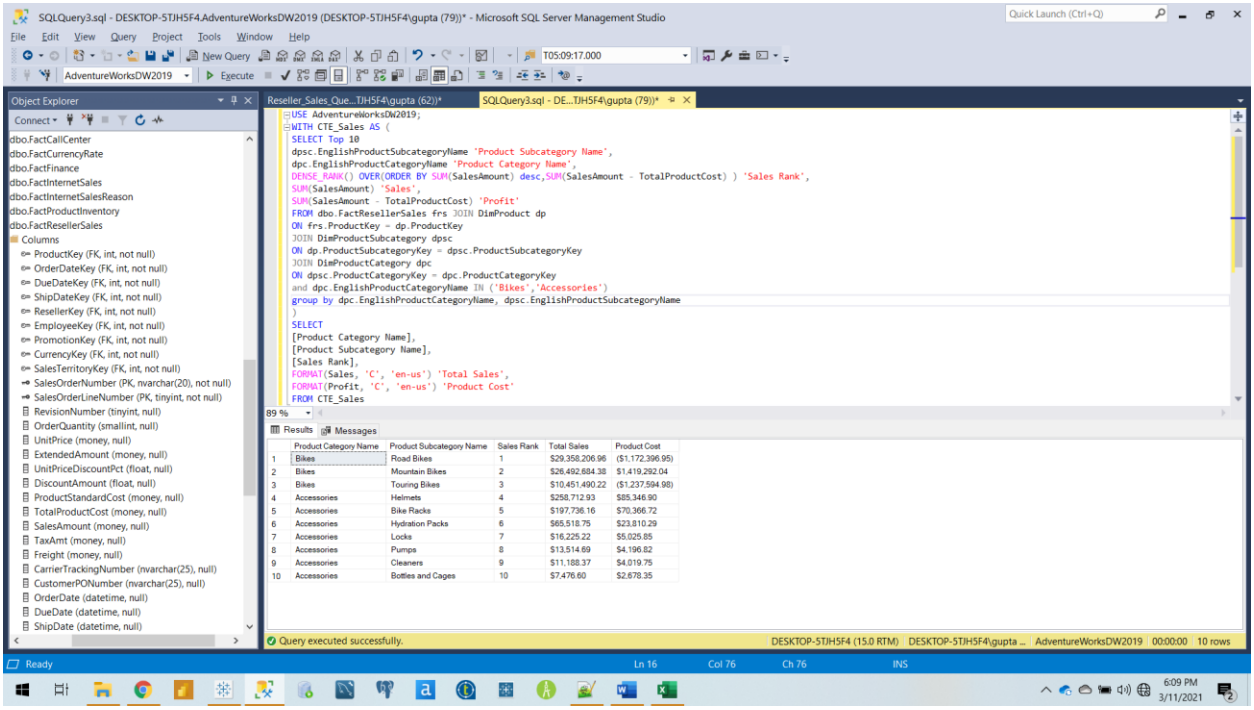


What are the top 10 & bottom product subcategories by sales & profits for bike & accessories?

TOP 10

```
USE AdventureWorksDW2019;
WITH CTE_Sales AS (
SELECT Top 10
dpsc.EnglishProductSubcategoryName 'Product Subcategory Name',
dpc.EnglishProductCategoryName 'Product Category Name',
DENSE_RANK() OVER(ORDER BY SUM(SalesAmount) desc,SUM(SalesAmount - TotalProductCost) ) 'Sales Rank',
SUM(SalesAmount) 'Sales',
SUM(SalesAmount - TotalProductCost) 'Profit'
FROM dbo.FactResellerSales frs JOIN DimProduct dp
ON frs.ProductKey = dp.ProductKey
JOIN DimProductSubcategory dpsc
ON dp.ProductSubcategoryKey = dpsc.ProductSubcategoryKey
JOIN DimProductCategory dpc
ON dpsc.ProductCategoryKey = dpc.ProductCategoryKey
and dpc.EnglishProductCategoryName IN ('Bikes','Accessories')
group by dpc.EnglishProductCategoryName, dpsc.EnglishProductSubcategoryName
)
SELECT
```

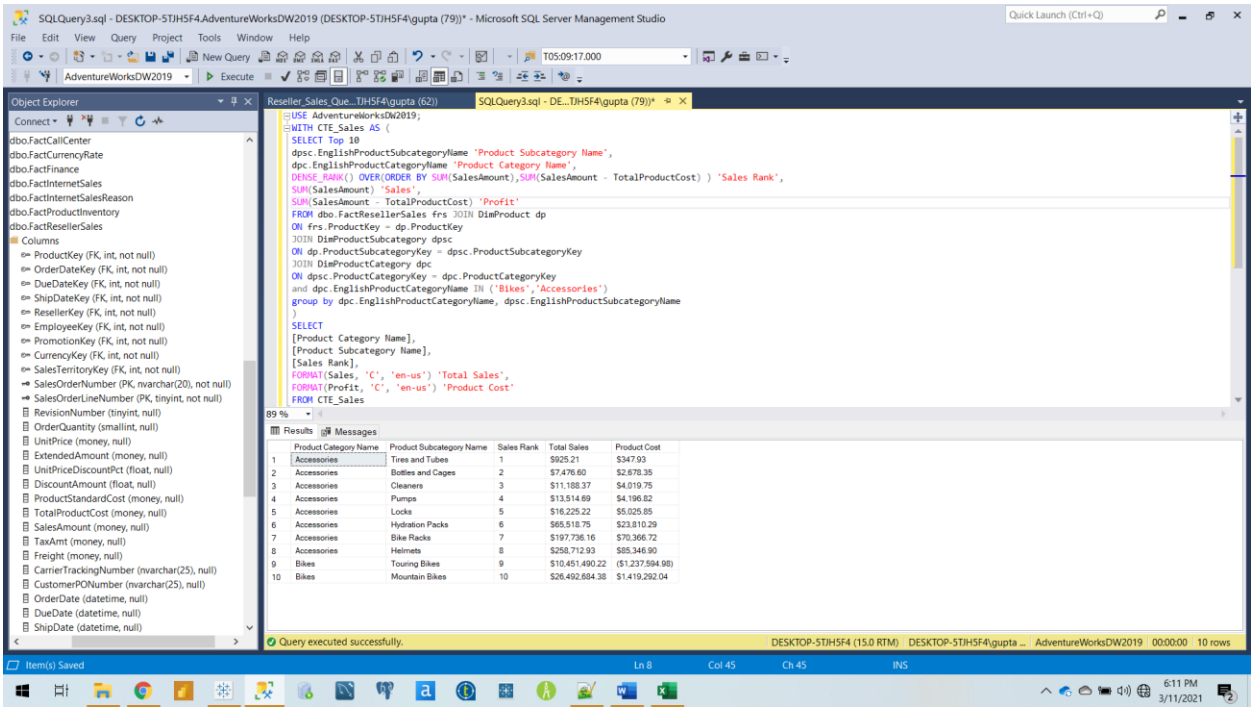
```
[Product Category Name],
[Product Subcategory Name],
[Sales Rank],
FORMAT(Sales, 'C', 'en-us') 'Total Sales',
FORMAT(Profit, 'C', 'en-us') 'Product Cost'
FROM CTE_Sales
```



BOTTOM 10

```
USE AdventureWorksDW2019;
WITH CTE_Sales AS (
SELECT Top 10
dpsc.EnglishProductSubcategoryName 'Product Subcategory Name',
dpc.EnglishProductCategoryName 'Product Category Name',
DENSE_RANK() OVER(ORDER BY SUM(SalesAmount),SUM(SalesAmount - TotalProductCost) ) 'Sales
Rank',
SUM(SalesAmount) 'Sales',
SUM(SalesAmount - TotalProductCost) 'Profit'
FROM dbo.FactResellerSales frs JOIN DimProduct dp
ON frs.ProductKey = dp.ProductKey
JOIN DimProductSubcategory dpsc
ON dp.ProductSubcategoryKey = dpsc.ProductSubcategoryKey
JOIN DimProductCategory dpc
ON dpsc.ProductCategoryKey = dpc.ProductCategoryKey
and dpc.EnglishProductCategoryName IN ('Bikes','Accessories')
group by dpc.EnglishProductCategoryName, dpsc.EnglishProductSubcategoryName
)
```

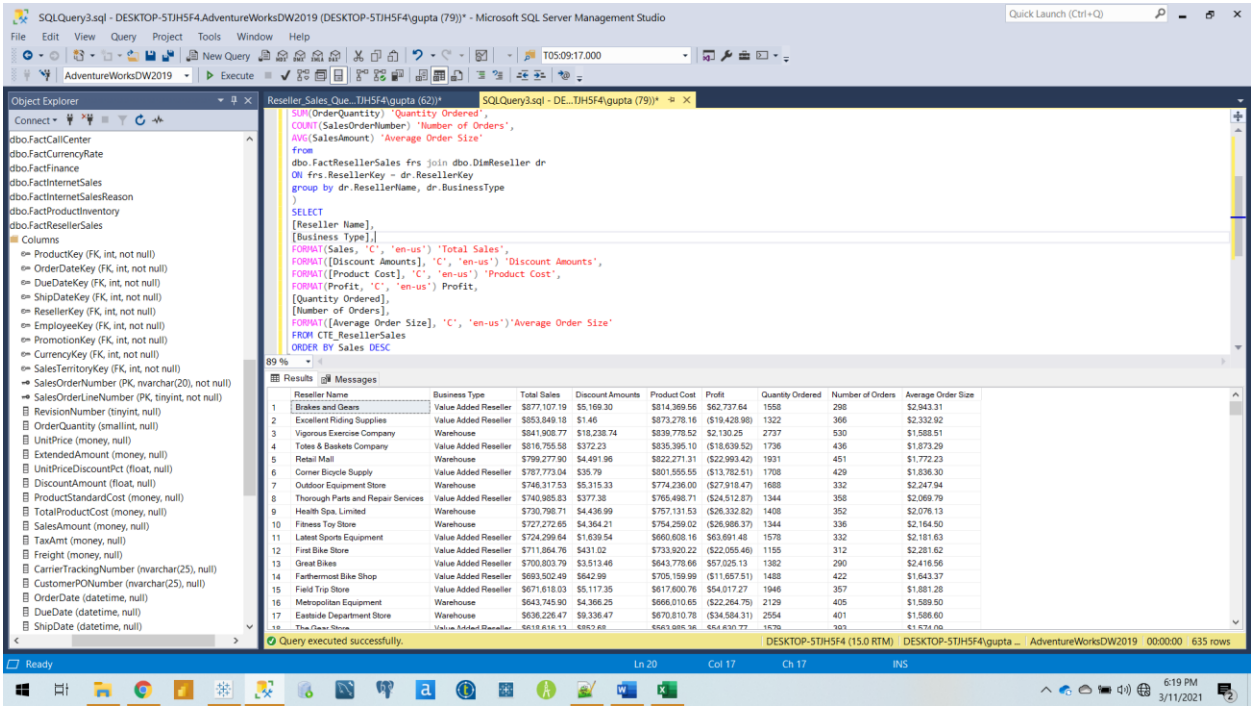
```
SELECT
[Product Category Name],
[Product Subcategory Name],
[Sales Rank],
FORMAT(Sales, 'C', 'en-us') 'Total Sales',
FORMAT(Profit, 'C', 'en-us') 'Product Cost'
FROM CTE_Sales
```



What are the sales, discount amounts, product costs, profit, quantity ordered, number of orders & average order size (sales amount) of reseller sales by reseller hierarchy (business type, reseller name)?

```
use AdventureWorksDW2019;
WITH CTE_ResellerSales AS(
select
dr.ResellerName 'Reseller Name',
dr.BusinessType 'Business Type',
SUM(frs.SalesAmount) 'Sales',
SUM(DiscountAmount) 'Discount Amounts',
SUM(TotalProductCost) 'Product Cost',
SUM(SalesAmount - TotalProductCost) 'Profit',
SUM(OrderQuantity) 'Quantity Ordered',
COUNT(SalesOrderNumber) 'Number of Orders',
AVG(SalesAmount) 'Average Order Size'
```

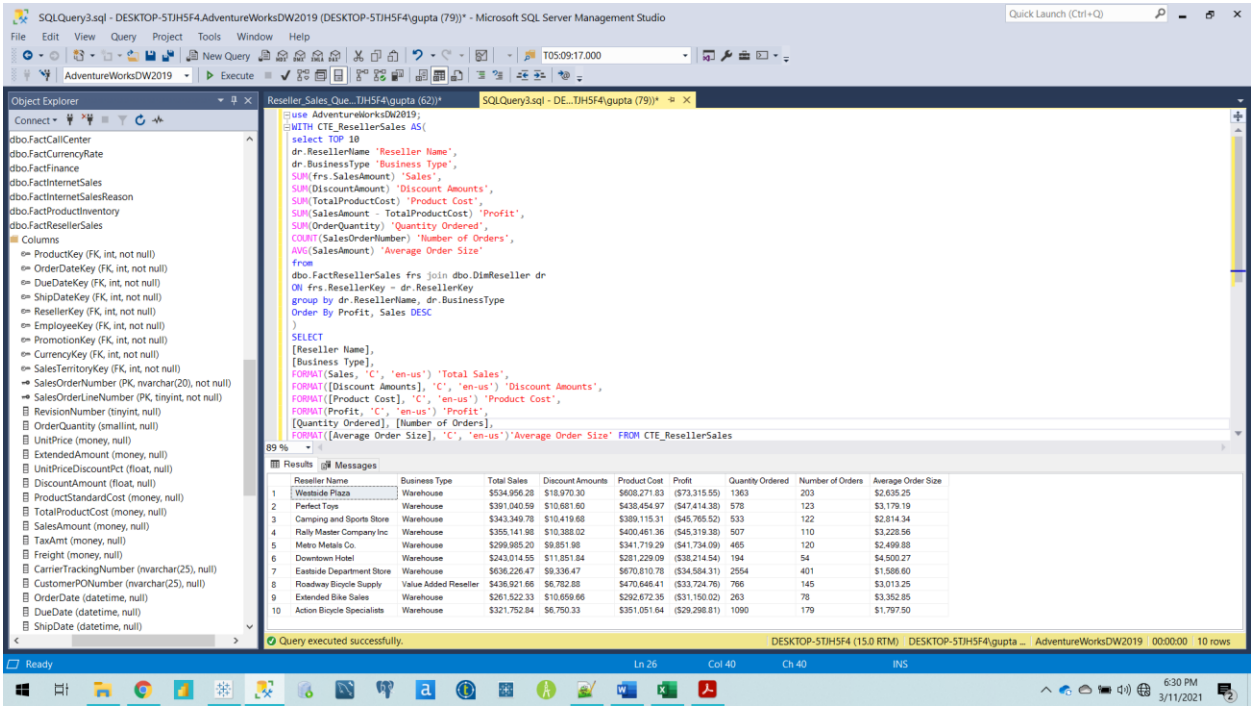
```
from
dbo.FactResellerSales frs join dbo.DimReseller dr
ON frs.ResellerKey = dr.ResellerKey
group by dr.ResellerName, dr.BusinessType
)
SELECT
[Reseller Name],
[Business Type],
FORMAT(Sales, 'C', 'en-us') 'Total Sales',
FORMAT([Discount Amounts], 'C', 'en-us') 'Discount Amounts',
FORMAT([Product Cost], 'C', 'en-us') 'Product Cost',
FORMAT(Profit, 'C', 'en-us') Profit,
[Quantity Ordered],
[Number of Orders],
FORMAT([Average Order Size], 'C', 'en-us')'Average Order Size'
FROM CTE_ResellerSales
ORDER BY Sales DESC
```



What resellers are in the top 10 by sales & profit?

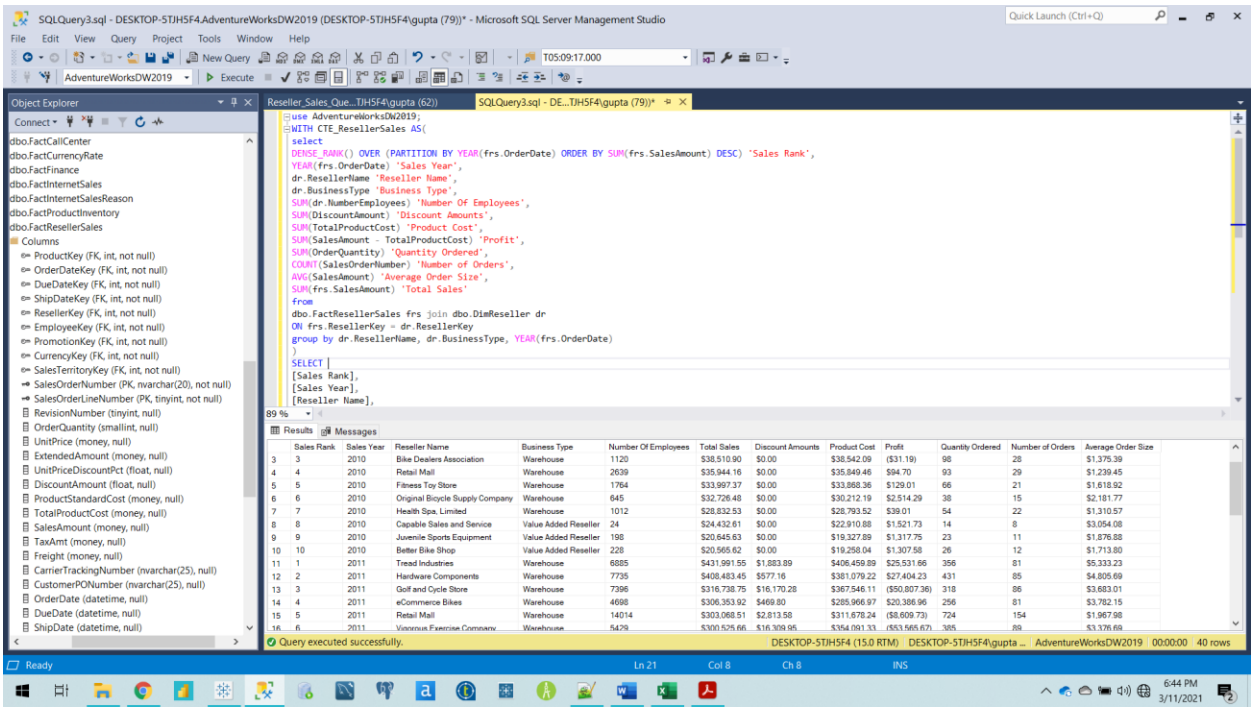
```
use AdventureWorksDW2019;
WITH CTE_ResellerSales AS(
select TOP 10
dr.ResellerName 'Reseller Name',
```

```
dr.BusinessType 'Business Type',
SUM(frs.SalesAmount) 'Sales',
SUM(DiscountAmount) 'Discount Amounts',
SUM(TotalProductCost) 'Product Cost',
SUM(SalesAmount - TotalProductCost) 'Profit',
SUM(OrderQuantity) 'Quantity Ordered',
COUNT(SalesOrderNumber) 'Number of Orders',
AVG(SalesAmount) 'Average Order Size'
from
dbo.FactResellerSales frs join dbo.DimReseller dr
ON frs.ResellerKey = dr.ResellerKey
group by dr.ResellerName, dr.BusinessType
Order By Profit, Sales DESC
)
SELECT
[Reseller Name],
[Business Type],
FORMAT(Sales, 'C', 'en-us') 'Total Sales',
FORMAT([Discount Amounts], 'C', 'en-us') 'Discount Amounts',
FORMAT([Product Cost], 'C', 'en-us') 'Product Cost',
FORMAT(Profit, 'C', 'en-us') 'Profit',
[Quantity Ordered],
[Number of Orders],
FORMAT([Average Order Size], 'C', 'en-us')'Average Order Size'
FROM CTE_ResellerSales
```



What are some of the key attributes of resellers ?

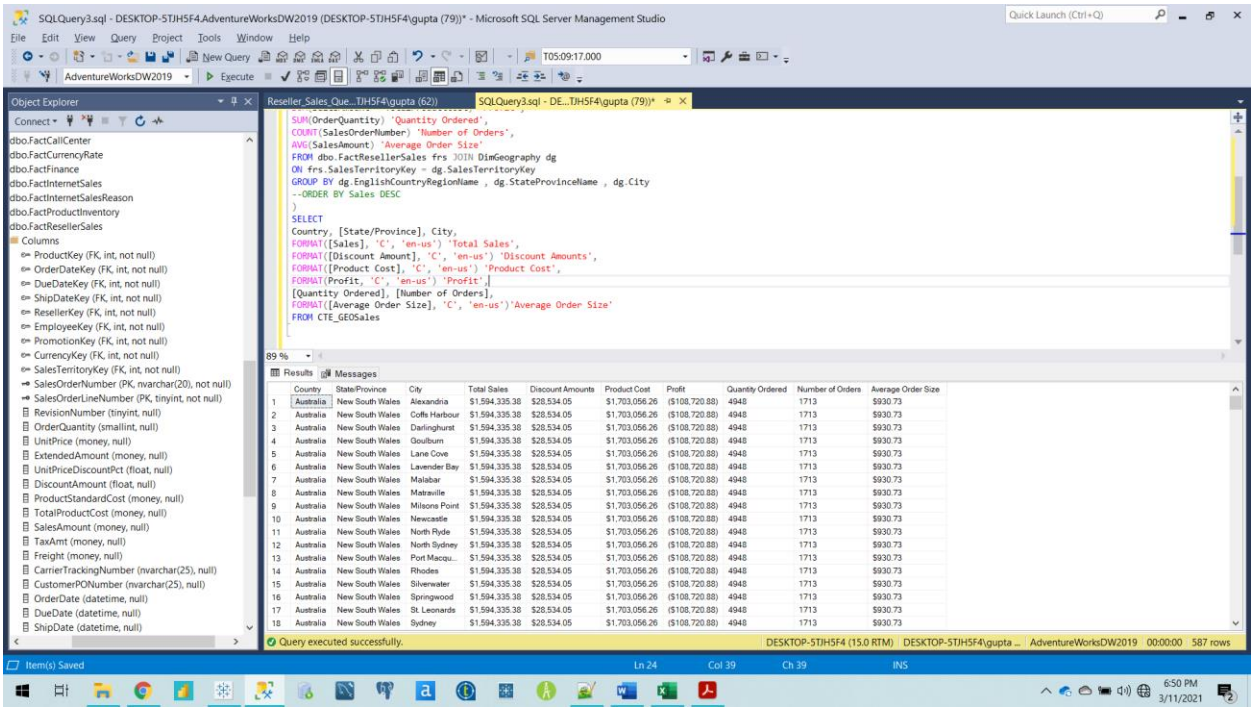
```
/*
The Resellers have the Name and the Business type for which we found out Number of Employeses,
Discount Amount, Product Cost, Profit, Total Sales etc., on Yearly basis. So here we are finding the top 10
Resellers for the years from 2010 to 2013.
*/
use AdventureWorksDW2019;
WITH CTE_ResellerSales AS(
select
DENSE_RANK() OVER (PARTITION BY YEAR(frs.OrderDate) ORDER BY SUM(frs.SalesAmount) DESC) 'Sales
Rank',
YEAR(frs.OrderDate) 'Sales Year',
dr.ResellerName 'Reseller Name',
dr.BusinessType 'Business Type',
SUM(dr.NumberEmployees) 'Number Of Employees',
SUM(DiscountAmount) 'Discount Amounts',
SUM(TotalProductCost) 'Product Cost',
SUM(SalesAmount - TotalProductCost) 'Profit',
SUM(OrderQuantity) 'Quantity Ordered',
COUNT(SalesOrderNumber) 'Number of Orders',
AVG(SalesAmount) 'Average Order Size',
SUM(frs.SalesAmount) 'Total Sales'
from
dbo.FactResellerSales frs join dbo.DimReseller dr
ON frs.ResellerKey = dr.ResellerKey
group by dr.ResellerName, dr.BusinessType, YEAR(frs.OrderDate)
)
SELECT
[Sales Rank],
[Sales Year],
[Reseller Name],
[Business Type],
[Number Of Employees],
FORMAT([Total Sales], 'C', 'en-us') 'Total Sales',
FORMAT([Discount Amounts], 'C', 'en-us') 'Discount Amounts',
FORMAT([Product Cost], 'C', 'en-us') 'Product Cost',
FORMAT(Profit, 'C', 'en-us') 'Profit',
[Quantity Ordered], [Number of Orders],
FORMAT([Average Order Size], 'C', 'en-us')'Average Order Size'
FROM CTE_ResellerSales
WHERE [Sales Rank] between 1 and 10
ORDER BY [Sales Year]
```



What are the sales, discount amounts, product costs, profit, quantity ordered, number of orders & average order size (sales amount) of reseller sales by Geo Hierarchy (Country, State/Province & City of Reseller)?

```
use AdventureWorksDW2019;
WITH CTE_GEOSales AS(
SELECT
dg.EnglishCountryRegionName 'Country',
dg.StateProvinceName 'State/Province',
dg.City 'City',
SUM(SalesAmount) 'Sales',
SUM(DiscountAmount) 'Discount Amount',
SUM(TotalProductCost) 'Product Cost',
SUM(SalesAmount - TotalProductCost) 'Profit',
SUM(OrderQuantity) 'Quantity Ordered',
COUNT(SalesOrderNumber) 'Number of Orders',
AVG(SalesAmount) 'Average Order Size'
FROM dbo.FactResellerSales frs JOIN DimGeography dg
ON frs.SalesTerritoryKey = dg.SalesTerritoryKey
GROUP BY dg.EnglishCountryRegionName , dg.StateProvinceName , dg.City
--ORDER BY Sales DESC
)
SELECT
Country, [State/Province], City,
FORMAT([Sales], 'C', 'en-us') 'Total Sales',
```

```
FORMAT([Discount Amount], 'C', 'en-us') 'Discount Amounts',
FORMAT([Product Cost], 'C', 'en-us') 'Product Cost',
FORMAT(Profit, 'C', 'en-us') 'Profit',
[Quantity Ordered], [Number of Orders],
FORMAT([Average Order Size], 'C', 'en-us')'Average Order Size'
FROM CTE_GEOSales
```

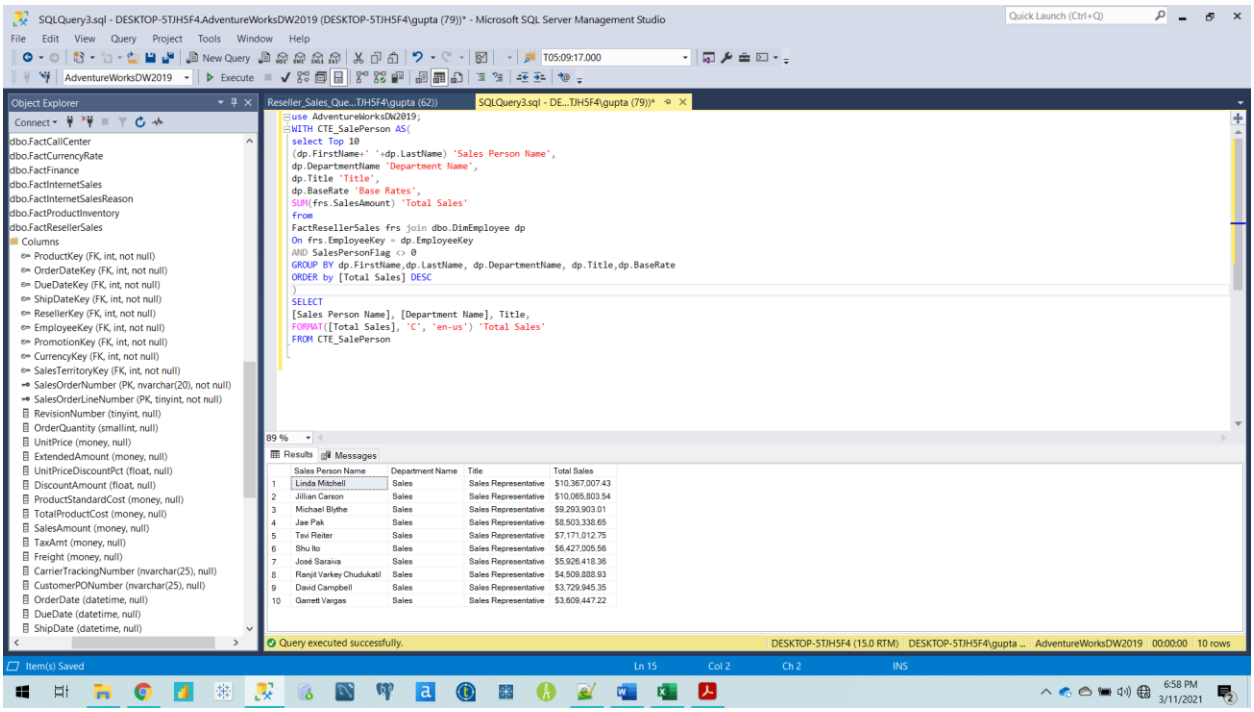


Who are the top salespeople?

/ We are considering Top 10.*/*

```
use AdventureWorksDW2019;
WITH CTE_SalePerson AS(
select Top 10
(dp.FirstName+' '+dp.LastName) 'Sales Person Name',
dp.DepartmentName 'Department Name',
dp.Title 'Title',
dp.BaseRate 'Base Rates',
SUM(frs.SalesAmount) 'Total Sales'
from
FactResellerSales frs join dbo.DimEmployee dp
On frs.EmployeeKey = dp.EmployeeKey
AND SalesPersonFlag <> 0
GROUP BY dp.FirstName,dp.LastName, dp.DepartmentName, dp.Title,dp.BaseRate
ORDER by [Total Sales] DESC
```

```
)
SELECT
[Sales Person Name], [Department Name], Title,
FORMAT([Total Sales], 'C', 'en-us') 'Total Sales'
FROM CTE_SalePerson
```

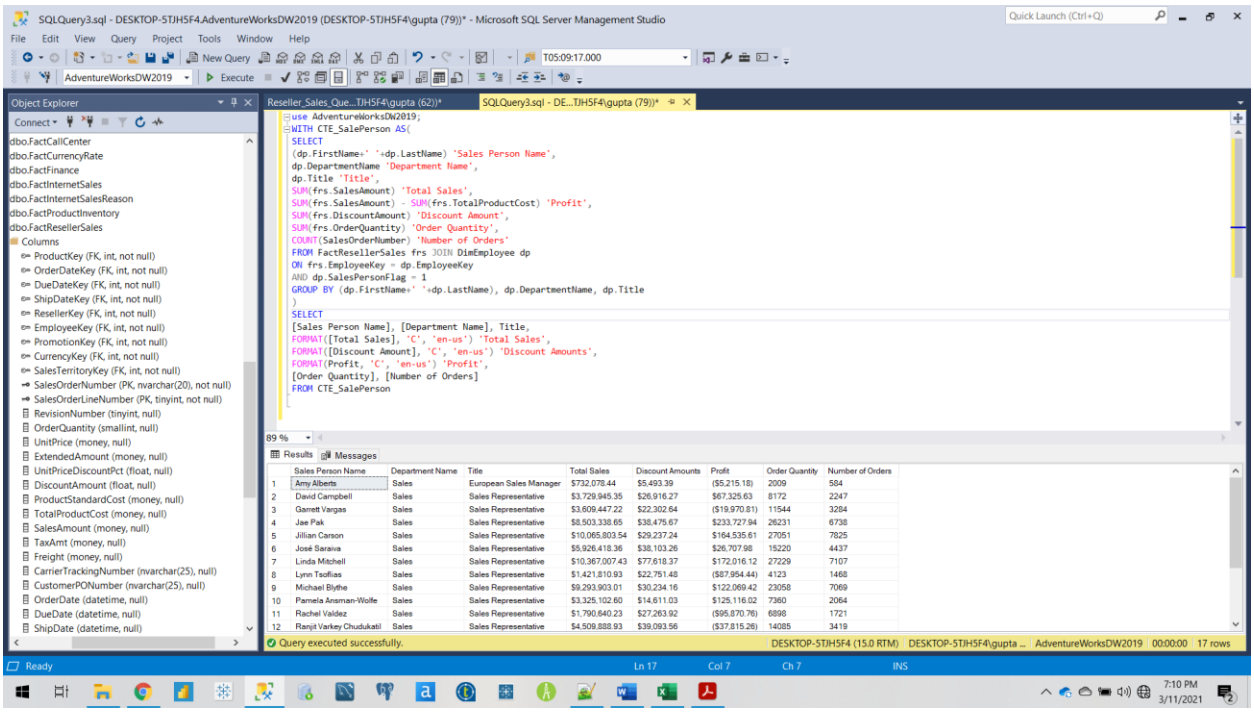


What are some of the key attributes of salespeople (that are tracked by AdventureWorks)?

*/*Some of the Key attributes of Sales People are – Sales, Profit, Discount Amount, Quantity by Employee Name, title and Department*/*

```
use AdventureWorksDW2019;
WITH CTE_SalePerson AS(
SELECT
(dp.FirstName+' '+dp.LastName) 'Sales Person Name',
dp.DepartmentName 'Department Name',
dp.Title 'Title',
SUM(frs.SalesAmount) 'Total Sales',
SUM(frs.SalesAmount) - SUM(frs.TotalProductCost) 'Profit',
SUM(frs.DiscountAmount) 'Discount Amount',
SUM(frs.OrderQuantity) 'Order Quantity',
COUNT(SalesOrderNumber) 'Number of Orders'
FROM FactResellerSales frs JOIN DimEmployee dp
ON frs.EmployeeKey = dp.EmployeeKey
AND dp.SalesPersonFlag = 1
```

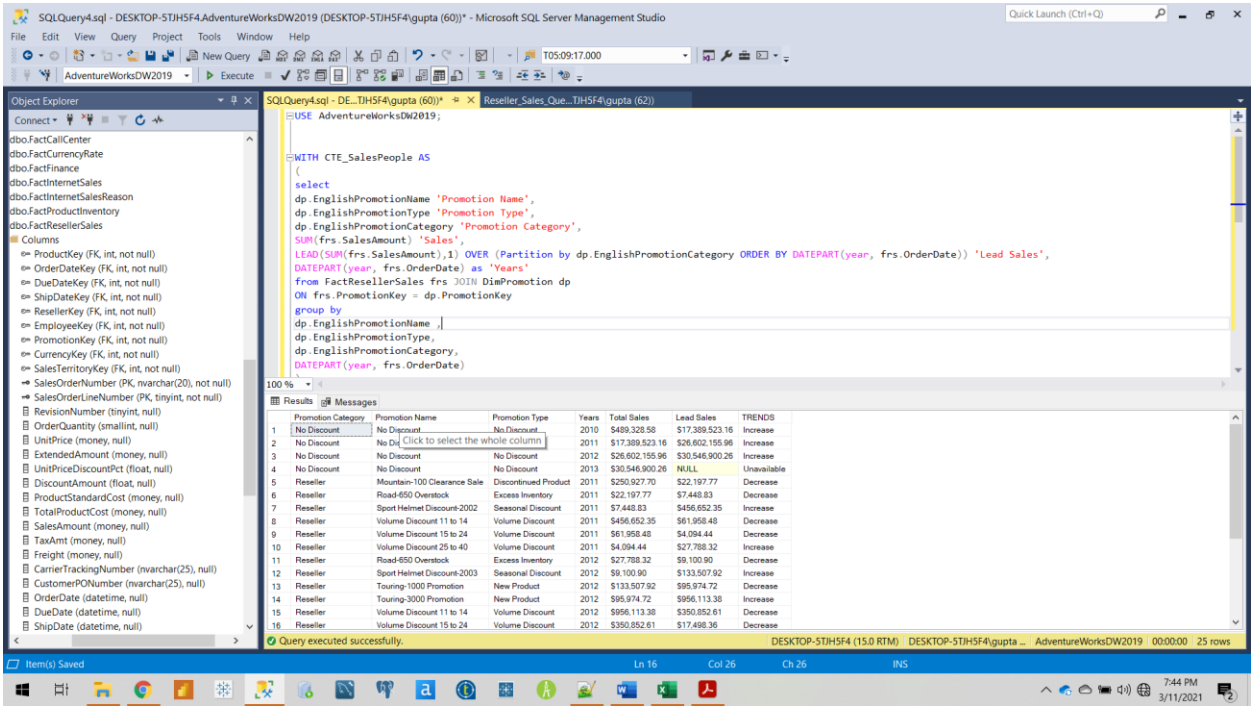
```
GROUP BY (dp.FirstName+' '+dp.LastName), dp.DepartmentName, dp.Title
)
SELECT
[Sales Person Name],
[Department Name],
Title,
FORMAT([Total Sales], 'C', 'en-us') 'Total Sales',
FORMAT([Discount Amount], 'C', 'en-us') 'Discount Amounts',
FORMAT(Profit, 'C', 'en-us') 'Profit',
[Order Quantity],
[Number of Orders]
FROM CTE_SalePerson
```



What has been the impact of sales promotions?

```
/*
 Promotions are divided by their Categories for which we are showing the Sales Trends, Ordered by Years. Trends shows the increase , decrease or no change in the sale considering the leading sales. Also, if the data in unavailable for the preceding/leading sale then the trend value set as 'unavailable'.
*/
WITH CTE_Promotion AS
(
select
dp.EnglishPromotionName 'Promotion Name',
```

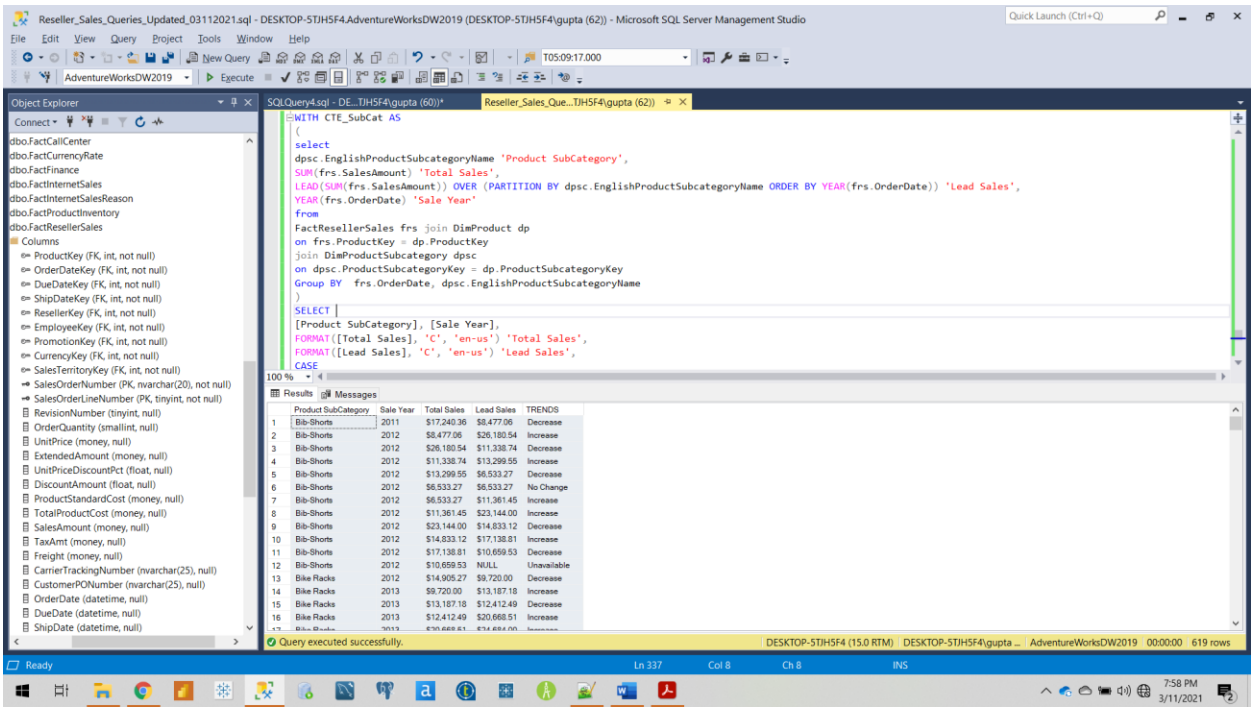
```
dp.EnglishPromotionType 'Promotion Type',
dp.EnglishPromotionCategory 'Promotion Category',
SUM(frs.SalesAmount) 'Sales',
LEAD(SUM(frs.SalesAmount),1) OVER (Partition by dp.EnglishPromotionCategory ORDER BY
DATEPART(year, frs.OrderDate)) 'Lead Sales',
DATEPART(year, frs.OrderDate) as 'Years'
from FactResellerSales frs JOIN DimPromotion dp
ON frs.PromotionKey = dp.PromotionKey
group by
dp.EnglishPromotionName ,
dp.EnglishPromotionType,
dp.EnglishPromotionCategory,
DATEPART(year, frs.OrderDate)
)
SELECT
[Promotion Category],[Promotion Name],[Promotion Type],Years,
FORMAT([Sales], 'C', 'en-us') 'Total Sales',
FORMAT([Lead Sales], 'C', 'en-us') 'Lead Sales',
CASE
WHEN [Lead Sales] > [Sales]  THEN 'Increase'
WHEN [Lead Sales] = [Sales]  THEN 'No Change'
WHEN [Lead Sales] < [Sales]  THEN 'Decrease'
else 'Unavailable'
END AS TRENDS
FROM CTE_Promotion
ORDER BY [Promotion Category]
```



Are sales growing overall and what are the sales trends for specific product subcategories?

/
Product Sub-Categories have the Sales Trends, Ordered by Years. Trends shows the increase , decrease or no change in the sale considering the leading sales. Also, if the data in unavailable for the preceding/leading sale then the trend value set as 'unavailable'. So, the Sales neither increasing or decreasing for any category. We can see the fluctuation of increment/decrement/no change.
**/*

```
WITH CTE_SubCat AS
(
select
dpsc.EnglishProductSubcategoryName 'Product SubCategory',
SUM(frs.SalesAmount) 'Total Sales',
LEAD(SUM(frs.SalesAmount)) OVER (PARTITION BY dpsc.EnglishProductSubcategoryName ORDER BY
YEAR(frs.OrderDate)) 'Lead Sales',
YEAR(frs.OrderDate) 'Sale Year'
from
FactResellerSales frs join DimProduct dp
on frs.ProductKey = dp.ProductKey
join DimProductSubcategory dpsc
on dpsc.ProductSubcategoryKey = dp.ProductSubcategoryKey
Group BY  frs.OrderDate, dpsc.EnglishProductSubcategoryName
)
SELECT
[Product SubCategory], [Sale Year],
FORMAT([Total Sales], 'C', 'en-us') 'Total Sales',
FORMAT([Lead Sales], 'C', 'en-us') 'Lead Sales',
CASE
WHEN [Lead Sales] > [Total Sales]  THEN 'Increase'
WHEN [Lead Sales] = [Total Sales]  THEN 'No Change'
WHEN [Lead Sales] < [Total Sales]  THEN 'Decrease'
else 'Unavailable'
END AS TRENDS
FROM CTE_SubCat
ORDER BY [Product SubCategory]
```


Reseller_Sales_Queries_Updated_03112021.sql - DESKTOP-5TJH5F4.AdventureWorksDW2019 (DESKTOP-5TJH5F4\gupta (62)) - Microsoft SQL Server Management Studio
Object Explorer
SQLQuery4.sql - DE...TJH5F4\gupta (60))*
Reseller_Sales_Que...TJH5F4\gupta (62))
WITH CTE_SubCat AS
(
select
dpsc.EnglishProductSubcategoryName 'Product SubCategory',
SUM(frs.SalesAmount) 'Total Sales',
LEAD(SUM(frs.SalesAmount)) OVER (PARTITION BY dpsc.EnglishProductSubcategoryName ORDER BY YEAR(frs.OrderDate)) 'Lead Sales',
YEAR(frs.OrderDate) 'Sale Year'
from
FactResellerSales frs join DimProduct dp
on frs.ProductKey = dp.ProductKey
join DimProductSubcategory dpsc
on dpsc.ProductSubcategoryKey = dp.ProductSubcategoryKey
Group BY frs.OrderDate, dpsc.EnglishProductSubcategoryName
)
SELECT
[Product SubCategory], [Sale Year],
FORMAT([Total Sales], 'C', 'en-us') 'Total Sales',
FORMAT([Lead Sales], 'C', 'en-us') 'Lead Sales',
CASE
Results
Messages
Product SubCategory Sale Year Total Sales Lead Sales TRENDS
1 Bib-Shorts 2011 $17,240.36 $8,477.06 Decrease
2 Bib-Shorts 2012 $8,477.06 $26,180.54 Increase
3 Bib-Shorts 2012 $26,180.54 $11,338.74 Decrease
4 Bib-Shorts 2012 $11,338.74 $13,299.55 Increase
5 Bib-Shorts 2012 $13,299.55 $6,533.27 Decrease
6 Bib-Shorts 2012 $6,533.27 $6,533.27 No Change
7 Bib-Shorts 2012 $6,533.27 $11,361.45 Increase
8 Bib-Shorts 2012 $11,361.45 $23,144.00 Increase
9 Bib-Shorts 2012 $23,144.00 $14,833.12 Decrease
10 Bib-Shorts 2012 $14,833.12 $17,138.81 Increase
11 Bib-Shorts 2012 $17,138.81 $10,659.53 Decrease
12 Bib-Shorts 2012 $10,659.53 NULL Unavailable
13 Bike Racks 2012 $14,905.27 $9,720.00 Decrease
14 Bike Racks 2013 $9,720.00 $13,187.18 Increase
15 Bike Racks 2013 $13,187.18 $12,412.49 Decrease
16 Bike Racks 2013 $12,412.49 $20,668.51 Increase
Query executed successfully.
Ready
Ln 337
Col 8
Ch 8
INS
7:58 PM
3/11/2021