1. **What is the highest discount for a product in the Sales**?

SELECT MAX(UnitPriceDiscount)

AS HighestDiscount

FROM Sales.SalesOrderDetail;

1. **Which shipping method has the lowest shipping rate?**

SELECT TOP (1)ShipMethodID,

Name,ShipRate

FROM [Purchasing].[ShipMethod]

1. **Identify the top three salespersons in terms of Bonus earned and how much sales did the make last year?**

SELECT TOP 3 BusinessEntityID, Bonus, SalesLastYear

FROM Sales.SalesPerson

ORDER BY Bonus DESC;

1. **Can you provide a list of customers who purchased in March 2014 and the total amount they spent?**

SELECT CustomerID,

SUM(TotalDue)AS TotalSpent

FROM Sales.SalesOrderHeader

WHERE YEAR(OrderDate) = 2014 AND MONTH(OrderDate) = 3

GROUP BY CustomerID;

1. **can I get a better view of the last quarter, I noticed a change in the revenue. Which product category had the highest sales revenue, considering the Sales OrderDetail and Product(tables, category) tables?**

SELECT TOP (3) p.ProductSubcategoryID, c.Name, SUM(d.LineTotal) AS Revenue

FROM Production.Product p

JOIN Sales.SalesOrderDetail d ON p.ProductID = d.ProductID

JOIN Production.ProductCategory c ON p.ProductSubcategoryID = c.ProductCategoryID

WHERE DATEPART(QUARTER, d.ModifiedDate) = DATEPART(QUARTER, DATEADD(QUARTER, -1, GETDATE()))

AND DATEPART(YEAR, d.ModifiedDate) = DATEPART(YEAR, DATEADD(QUARTER, -1, GETDATE()))

GROUP BY p.ProductSubcategoryID, c.Name

ORDER BY Revenue DESC;

1. **For the customer with EntityID 301, what is the total amount spent on products in the ‘Bikes’ category in the last year, the customer need some clarification considering the Sales OrderHeader, Sales OrderDetail, Product, Product Subcategory, and Product Category tables**?

SELECT SUM(d.LineTotal) AS TotalSpent

FROM Sales.SalesOrderHeader h

JOIN Sales.SalesOrderDetail d ON h.SalesOrderID = d.SalesOrderID

JOIN Production.Product p ON d.ProductID = p.ProductID

JOIN Production.ProductSubcategory s ON p.ProductSubcategoryID = s.ProductSubcategoryID

JOIN Production.ProductCategory c ON s.ProductCategoryID = c.ProductCategoryID

WHERE h.CustomerID = 19 AND c.Name = 'Bikes'

AND YEAR(h.OrderDate) = YEAR(DATEADD(YEAR, -1, GETDATE()));

1. **Can you describe the relationship between the SalesOrderHeader and SalesOrderDetail tables in AdventureWorks?**

SELECT \*

FROM Sales.SalesOrderHeader AS h

JOIN Sales.SalesOrderDetail AS d

ON h.SalesOrderID = d.SalesOrderID;

1. **Can you create a list of tables in the Sales.Customer table that have columns with a data type of datetime**?

SELECT COLUMN\_NAME

FROM INFORMATION\_SCHEMA.COLUMNS

WHERE TABLE\_SCHEMA = 'Sales'

AND TABLE\_NAME = 'Customer'

AND DATA\_TYPE = 'datetime';