

1- Calculate Total Sales Revenue by Year

```
SELECT YEAR(OrderDate) AS OrderYear,  
       SUM(SalesAmount) AS TotalSalesRevenue  
FROM Sales.SalesOrderHeader  
GROUP BY YEAR(OrderDate)  
ORDER BY OrderYear;
```

2- Find the Most Popular Products by Quantity Sold

```
SELECT ProductID,  
       ProductName,  
       SUM(OrderQty) AS TotalQuantitySold  
FROM Sales.SalesOrderDetail  
GROUP BY ProductID, ProductName  
ORDER BY TotalQuantitySold DESC  
LIMIT 10; -- Get top 10 most popular products
```

3- Identify the Top Selling Product Categories

```
SELECT ProductCategoryName,  
       SUM(OrderQty) AS TotalQuantitySold  
FROM Sales.SalesOrderDetail sod  
JOIN Production.Product prod ON sod.ProductID = prod.ProductID  
JOIN Production.ProductSubcategory subcat ON prod.ProductSubcategoryID =  
       subcat.ProductSubcategoryID  
JOIN Production.ProductCategory cat ON subcat.ProductCategoryID =  
       cat.ProductCategoryID  
GROUP BY ProductCategoryName  
ORDER BY TotalQuantitySold DESC;
```

4- Find Customers with High Total Sales

**HAVING SUM(OrderQty) > (SELECT AVG(OrderQty) FROM
Sales.SalesOrderDetail));**

7- Calculate Running Total Sales Amount

**SELECT OrderDate,
SalesOrderID,
SalesAmount,
SUM(SalesAmount) OVER (ORDER BY OrderDate) AS RunningTotal
FROM Sales.SalesOrderHeader;**

8- Calculate Moving Average Sales Amount

**SELECT OrderDate,
SalesOrderID,
SalesAmount,
AVG(SalesAmount) OVER (ORDER BY OrderDate ROWS BETWEEN 2
PRECEDING AND CURRENT ROW) AS MovingAverage
FROM Sales.SalesOrderHeader;**

9- Calculate Percentile Rank of Sales Amount

**SELECT SalesOrderID,
TotalDue,
PERCENT_RANK() OVER (ORDER BY TotalDue) AS PercentileRank
FROM Sales.SalesOrderHeader;**

10- Find Employees with No Sales Orders

**SELECT BusinessEntityID,
FirstName,
LastName
FROM HumanResources.Employee
WHERE BusinessEntityID NOT IN (SELECT DISTINCT SalesPersonID FROM
Sales.SalesOrderHeader);**

