1. Show a list of Customer Name, Gender, Sales Person's Name and Sales Person's City for all products sold on September 2015, whose Sales Price is more than 20 and Quantity sold is more than 8.

```
SELECT AnswerOne.CustomerName AS "Customer Name",
AnswerOne.Gender AS "Customer Gender",
AnswerOne.SalesPersonName AS "Sales Person Name",
AnswerOne.City AS "Sales Person City"
FROM (SELECT ps.ProductID,
ps.SalesPrice,
ps.Quantity,
c.CustomerName,
c.Gender,
sp.SalesPersonName,
sp.City,
d.DATE,
SUM(ps.SalesPrice) AS TotalSalesPrice,
SUM(ps.Quantity) AS TotalQuantity
FROM Fact_ProductSales ps
LEFT JOIN Dim_Date d ON d.DateKey = ps.SalesDateKey
LEFT JOIN Dim_Product p ON p.ProductKey = ps.ProductID
LEFT JOIN Dim_SalesPerson sp ON sp.SalesPersonID = ps.SalesPersonID
LEFT JOIN Dim_Store s ON s.StoreID = ps.StoreID
LEFT JOIN Dim_Customer c ON c.customerid = ps.customerid
GROUP BY ps.ProductID, ps.SalesPrice, ps.Quantity, c.CustomerName, c.Gender,
sp.SalesPersonName, sp.City, d.DATE
        HAVING YEAR(d.DATE) = 2015
                AND SUM(ps.SalesPrice) > 20 AND SUM(ps.Quantity) > 8) AS AnswerOne
ORDER BY TotalQuantity DESC;
```

Customer Name	Customer Gender	Sales Person Name	Sales Person City
Harrison Ford	M	Tom Petty	Boulder
Elon Musk	M	Danny Weller	Berthoud
Linda Ronstadt	F	Tom Petty	Boulder
Elon Musk	M	Jacob Leis	Lafayette

2. Show a list of Store Name, Store's City and Product Name for all products sold on March 2017, whose Product Cost is less than 50 and store located in 'Boulder'.

```
SELECT AnswerTwo.StoreName AS "Store Name",
AnswerTwo.City AS "Store City",
AnswerTwo.ProductName AS "Product Name"
FROM (SELECT s.StoreName,
s.City,
p.ProductName,
ps.ProductCost,
d.DATE
FROM Fact_ProductSales ps
LEFT JOIN Dim_Store s ON ps.StoreID = s.StoreID
LEFT JOIN Dim_Product p ON p.ProductKey = ps.ProductID
LEFT JOIN Dim_Date d ON ps.SalesDateKey = d.DateKey
GROUP BY s.StoreName, s.City, p.ProductName, ps.ProductCost, d.DATE
        HAVING YEAR(d.DATE) = 2017 AND MONTH(d.Date) = 3
                AND ps.ProductCost < 50 AND s.City = 'Boulder') AS AnswerTwo
ORDER BY AnswerTwo.City;
```

Store Name	Store City	Product Name
ValueMart Boulder	Boulder	Wheat Flour 1kg
ValueMart Boulder	Boulder	Jasmine Rice 5kg
ValueMart Boulder	Boulder	SunFlower Oil 1 ltr

3. Show a list of Top 2 Sales Person's Name by their Total Revenue for 2017, i.e. Top 2 sales person with HIGHEST Total Revenue. Display Sales Person's Name and Total Revenue.

```
SELECT sp.SalesPersonName AS "Sales Person Name", SUM(ps.SalesPrice * ps.Quantity) AS
"Total Revenue"
FROM Fact_ProductSales ps
LEFT JOIN Dim_SalesPerson sp ON ps.SalesPersonID = sp.SalesPersonID
LEFT JOIN Dim_Date d ON ps.SalesDateKey = d.DateKey
WHERE YEAR(d.DATE) = 2017
GROUP BY sp.SalesPersonName
ORDER BY SUM(ps.SalesPrice * ps.Quantity) DESC
LIMIT 2;
```

Sales Person Name	Total Revenue
Julian Brand	2588.00
Jasmin Farah	1158.00

4. Display Customer Name and Total Revenue who has LOWEST Total Revenue in 2017.

```
SELECT c.CustomerName, SUM(ps.SalesPrice * ps.Quantity) AS "Total Revenue"
FROM Fact_ProductSales ps
LEFT JOIN Dim_Customer c ON ps.CustomerID = c.CustomerID
LEFT JOIN Dim_Date d ON ps.SalesDateKey = d.DateKey
WHERE YEAR(d.DATE) = 2017
GROUP BY c.CustomerName
ORDER BY SUM(ps.SalesPrice * ps.Quantity)
LIMIT 1;
```

CustomerName	Total Revenue
Melinda Gates	437.50

5. Show a list of Store Name (in alphabetical order) and their 'Total Sales Price' for the year between 2010 and 2017.

```
SELECT s.StoreName, SUM(ps.SalesPrice) AS "Total Sales Price"
FROM Fact_ProductSales ps
LEFT JOIN Dim_Store s ON ps.StoreID = s.StoreID
LEFT JOIN Dim_Date d ON ps.SalesDateKey = d.DateKey
WHERE YEAR(d.DATE) BETWEEN 2010 AND 2017
GROUP BY s.StoreName
ORDER BY s.StoreName ASC;
```

StoreName	Total Sales Price
ValueMart Berthoud	1554.00
ValueMart Boulder	7961.00
ValueMart Lyons	1759.50

6. Display a list of Store Name, Product Name and their Total Profits from product name like 'Jasmine Rice' for 2010.

```
SELECT s.StoreName, p.ProductName, (SUM(ps.SalesPrice * ps.Quantity) - SUM(ps.ProductCost))
AS "Total Profit"
FROM Fact_ProductSales ps
LEFT JOIN Dim_Store s ON ps.StoreID = s.StoreID
LEFT JOIN Dim_Product p ON ps.ProductID = p.ProductKey
LEFT JOIN Dim_Date d ON ps.SalesDateKey = d.DateKey
WHERE p.ProductName LIKE '%Jasmine Rice%' AND YEAR(d.DATE) = 2010
GROUP BY s.StoreName, p.ProductName;
```

StoreName	ProductName	Total Profit
ValueMart Boulder	Jasmine Rice 5kg	522.00
ValueMart Lyons	Jasmine Rice 5kg	244.00
ValueMart Berthoud	Jasmine Rice 5kg	243.00

7. Display Total Revenue from 'ValueMart Boulder' Store for each Quarter during 2016, sort your result by Quarter in chronological order. Display Quarter as well as Total Revenue.

```
SELECT s.StoreName, QUARTER(d.DATE) AS QuarterNo, SUM(ps.SalesPrice * ps.Quantity) AS
TotalRevenue
FROM Fact_ProductSales ps
LEFT JOIN Dim_Store s ON ps.StoreID = s.StoreID
LEFT JOIN Dim_Date d ON ps.SalesDateKey = d.DateKey
WHERE s.StoreName = 'ValueMart Boulder' AND YEAR(d.DATE) = 2016
GROUP BY S.StoreName, QuarterNo
ORDER BY QuarterNo;
```

StoreName	QuarterNo	TotalRevenue
ValueMart Boulder	1	1622.50
ValueMart Boulder	2	1144.50
ValueMart Boulder	3	2259.50
ValueMart Boulder	4	1492.50

8. Display Customer Name and Total Sales Price for all items purchased by customers Melinda Gates and Harrison Ford.

```
SELECT c.CustomerName, SUM(ps.SalesPrice) AS "Total Sales Price"
FROM Fact_ProductSales ps
LEFT JOIN Dim_Customer c ON ps.CustomerID = c.CustomerID
WHERE c.CustomerName IN ('Melinda Gates', 'Harrison Ford')
GROUP BY c.CustomerName;
```

CustomerName	Total Sales Price
Harrison Ford	2234.00
Melinda Gates	1717.00

9. Display Store Name, Sales Price and Quantity for all items sold in March 12th 2017.

```
SELECT s.StoreName, ps.SalesPrice, ps.Quantity
FROM Fact_ProductSales ps
LEFT JOIN Dim_Store s ON ps.StoreID = s.StoreID
LEFT JOIN Dim_Date d ON ps.SalesDateKey = d.DateKey
WHERE d.DATE = '2017-03-12';
```

StoreName	SalesPrice	Quantity
ValueMart Boulder	6.50	8
ValueMart Boulder	24.00	3
ValueMart Boulder	43.50	9

10. Display Sales Person's Name and Total Revenue for the best performing Sales Person, i.e., the Sales Person with the HIGHEST Total Revenue.

```
SELECT sp.SalesPersonName AS "Sales Person Name", SUM(ps.SalesPrice * ps.Quantity) AS
"Total Revenue"
FROM Fact_ProductSales ps
LEFT JOIN Dim_SalesPerson sp ON ps.SalesPersonID = sp.SalesPersonID
GROUP BY sp.SalesPersonName
ORDER BY SUM(ps.SalesPrice * ps.Quantity) DESC
LIMIT 1;
```

Sales Person Name	Total Revenue
Julian Brand	21164.50

11. Display the Top 3 Product Name by their HIGHEST Total Profit. Display product name as well as total profit.

```
SELECT p.ProductName, (SUM(ps.SalesPrice * ps.Quantity) - SUM(ps.ProductCost)) AS "Total
Profit"
FROM Fact_ProductSales ps
LEFT JOIN Dim_Product p ON ps.ProductID = p.ProductKey
GROUP BY p.ProductName
ORDER BY (SUM(ps.SalesPrice * ps.Quantity) - SUM(ps.ProductCost)) DESC
LIMIT 3;
```

ProductName	Total Profit
SunFlower Oil 1 ltr	16436.50
Tide Laundry Detergent 1kg case	16109.00
Jasmine Rice 5kg	8561.50

12. Display Year, MonthName and Total Revenue for the 1st 3 months (i.e. January, February and March) of 2017.

```
SELECT YEAR(d.Date) AS Years, MONTHNAME(d.Date) AS MonthsName, SUM(ps.Quantity *
ps.SalesPrice) AS TotalRevenue
FROM Fact_ProductSales ps
INNER JOIN Dim_Date d ON ps.SalesDateKey = d.DateKey
WHERE YEAR(d.Date) = 2017 AND MONTH(d.Date) IN (1, 2, 3)
GROUP BY Years, MonthsName
ORDER BY TotalRevenue;
```

Years	MonthsName	TotalRevenue
2017	January	1417.50
2017	February	1595.50
2017	March	1954.00

13. Display Product Name, average product cost and average sales price for the products sold in 2017. Show averages rounded to 2 decimal places.

```
SELECT p.ProductName, ROUND(AVG(ps.ProductCost), 2) AS AvgProductCost,
ROUND(AVG(ps.SalesPrice), 2) AS AvgSalesPrice
FROM Fact_ProductSales ps
INNER JOIN Dim_Product p ON ps.ProductID = p.ProductKey
INNER JOIN Dim_Date d ON ps.SalesDateKey = d.DateKey
WHERE YEAR(d.Date) = 2017
GROUP BY p.ProductName;
```

ProductName	AvgProductCost	AvgSalesPrice
Wheat Flour 1kg	5.50	6.50
Jasmine Rice 5kg	22.50	24.00
SunFlower Oil 1 ltr	42.00	43.50
Dawn Dish Soap, case	18.00	20.00
Tide Laundry Detergent 1kg case	135.00	139.00

14. Display Customer Name, average sales price and average quantity for all items purchased by customer Melinda Gates. Show averages rounded to 2 decimal places.

```
SELECT c.CustomerName, ROUND(AVG(ps.SalesPrice), 2) AS AvgSalesPrice,
ROUND(AVG(ps.Quantity), 2) AS AvgQuantity
FROM Fact_ProductSales ps
INNER JOIN Dim_Customer c ON ps.CustomerID = c.CustomerID
WHERE c.CustomerName = 'Melinda Gates'
GROUP BY c.CustomerName;
```

CustomerName	AvgSalesPrice	AvgQuantity
Melinda Gates	26.02	4.98

15. Display Store Name, Maximum sales price and Minimum sales price for store located in 'Boulder' city. Show MIN / MAX rounded to 2 decimal places.

```
SELECT s.StoreName, ROUND(MAX(ps.SalesPrice), 2) AS MaxSalesPrice,
ROUND(MIN(ps.SalesPrice), 2) AS MinSalesPrice
FROM Fact_ProductSales ps
INNER JOIN Dim_Store s ON ps.StoreID = s.StoreID
WHERE s.City = 'Boulder'
GROUP BY s.StoreName;
```

StoreName	MaxSalesPrice	MinSalesPrice
ValueMart Boulder	139.00	6.50