SQL Questions

1. Display Full_MFG_Name in Table B without the MFG Code (Example: 'Amphenol')

```
SELECT RIGHT(Full_MFG_Name, LEN(Full_MFG_Name) - CHARINDEX('| ',Full_MFG_Name))
from manufacturer
```

	(No column name)
1	Ampheno
2	AVX
3	KEMET
4	KOA Speer
5	TE Connectivity/Raychem Tubing

2. Calculate Total Revenue from Table B

```
SELECT Quantity, Unit_Price, Quantity * Unit_Price AS "total revenue"
FROM sales
```

	Quantity	Unit_Price	total revenue
1	100	18.43	1843
2	100	18.43	1843
3	16	3.31	52.96
4	1700	0.545	926.5
5	150	0.8	120
6	5	15.49	77.45
7	5	16.33	81.65
8	3	19.67	59.01
9	5	15.2	76
10	1	895.6	895.6
11	14	46.47	650.58
12	10	23.23	232.3
13	1000	0.99	990
14	14	53.34	746.76
15	425	10.76	4573
16	410	10.76	4411.6
17	4000	0.29	1160
18	4000	0.29	1160
19	4000	0.29	1160
20	5	112.35	561.75
21	6	112.36	674.16
22	5000	0.03	150
23	5000	0.03	150

3. Display the top 10 Products from Table B which made highest profit

profit = total revenue – total cost profit = Quantity(Unit_price – Unit_Cost)

```
SELECT TOP (10) Product, Quantity * (Unit_Price - Unit_Cost) AS "total profit"
FROM sales
ORDER BY [total profit] DESC
```

	Product	total profit
1	L	544
2	D	541
3	N	541
4	L	524.8
5	I	331.02
6	C	283.8
7	O	250
8	C	186.76
9	K	178.5
10	E	160

4. Display total cost, total Price and Margins grouped by Parent_MFG in table A

margin = (unit price – unit cost)/unit price

Total cost = unit_cost * Quantity

Total price = unit_price * quantity

```
SELECT manufacturer.Parent_MFG ,
SUM(sales.Quantity * sales.Unit_Cost) AS "total cost",
SUM(sales.Quantity * (sales.Unit_Price - sales.Unit_Cost)) AS "total profit",
SUM((sales.Unit_Price - sales.Unit_Cost)/sales.Unit_Price) AS "margin"
FROM sales
INNER JOIN manufacturer ON sales.MFG_Code = manufacturer.MFG_Code
GROUP BY manufacturer.Parent_MFG
```

	Parent_MFG	total cost	total profit	margin
1	ACG | Amphenol Connector Group	1881.8514	190.7386	0.851132913628186
2	AVC | AVX Corporation	9215.8	1505.56	0.74053720642135
3	KCC | KOA Corporation	3000	480	0.413793103448276
4	KCO | Kemet Corporation	3422.7	1362.76	1.77706555395853
5	TEG | TE Connectivity Group	793.09	742.82	1.84955131187931

5. Display the highest selling product and the second highest selling product

```
SELECT TOP (2) Product, SUM(Unit_Price * Quantity) AS "total sales"
FROM sales
GROUP BY Product
ORDER BY [total sales] DESC
```

	Product	total sales
1	L	8984.6
2	K	2236.5

6. Display the Total Cost and Total Revenue based on Type from Table C and order it in a descending order

```
SELECT products.TYPE ,
SUM(sales.Quantity * sales.Unit_Price) AS "total revenue",
SUM(sales.Quantity * sales.Unit_Cost) AS "total cost"
FROM sales
INNER JOIN products ON sales.Product = products.Product
GROUP BY products.TYPE
ORDER BY [total revenue] DESC
```

	TYPE	total revenue	total cost
1	EREL	16737.77	14190.2294
2	COMM	4141.51	2879.95

7. Find which Quarter sold highest number of products

First quarter of 2017

```
SELECT SUM(Quantity) AS "number of sold products",
CASE WHEN Date >= '2016-01-01' AND Date <='2016-03-31' THEN 'first Quarter of 2016'
```

```
            WHEN Date >= '2016-04-01' AND Date <= '2016-06-30' THEN 'second Quarter of
2016'
            WHEN Date >= '2016-07-01' AND Date <= '2016-09-30' THEN 'third Quarter of
2016'
            WHEN Date >= '2016-10-01' AND Date <= '2016-12-31' THEN 'forth Quarter of
2016'
            WHEN Date >= '2017-01-01' AND Date <= '2017-03-31' THEN 'first Quarter of
2017'
            WHEN Date >= '2017-04-01' AND Date <= '2017-06-30' THEN 'second Quarter of
2017'
            WHEN Date >= '2017-07-01' AND Date <= '2017-09-30' THEN 'third Quarter of
2017'
            WHEN Date >= '2017-10-01' AND Date <= '2017-12-31' THEN 'forth Quarter of
2017'
            END AS bucket
FROM sales
GROUP BY
      CASE WHEN Date >= '2016-01-01' AND Date <='2016-03-31' THEN 'first Quarter of
2016'
            WHEN Date >= '2016-04-01' AND Date <= '2016-06-30' THEN 'second Quarter of
2016'
            WHEN Date >= '2016-07-01' AND Date <= '2016-09-30' THEN 'third Quarter of
2016'
            WHEN Date >= '2016-10-01' AND Date <= '2016-12-31' THEN 'forth Quarter of
2016'
            WHEN Date >= '2017-01-01' AND Date <= '2017-03-31' THEN 'first Quarter of
2017'
            WHEN Date >= '2017-04-01' AND Date <= '2017-06-30' THEN 'second Quarter of
2017'
            WHEN Date >= '2017-07-01' AND Date <= '2017-09-30' THEN 'third Quarter of
2017'
            WHEN Date >= '2017-10-01' AND Date <= '2017-12-31' THEN 'forth Quarter of
2017'
            end
ORDER BY SUM(Quantity) DESC
```

	number of sold products	bucket
1	5015	first Quarter of 2017
2	5014	first Quarter of 2016
3	4530	second Quarter of 2017
4	4100	second Quarter of 2016
5	4016	third Quarter of 2016
6	2726	third Quarter of 2017
7	568	forth Quarter of 2017

8. Find which quarter made the highest sale in 'AUTOMOTIVE' category In the last year

We didn't have any sale in automotive category in the last year (2016), the only sales in Automotive category belongs to 2017.

	total sales	bucket
1	1843	second Quarter of 2017
2	990	third Quarter of 2017

9. Find the Products in table C that haven't sold anything ever

Product P

```
SELECT products.Product
       FROM products
       LEFT JOIN sales ON products.Product = sales.Product
       WHERE sales.Product IS NULL
```

	Product
1	P