- **The question number: 1**
  What is the total number of orders placed by each customer? Only the customer id and total orders per customer should show up in the output, and the column names should be the same with the ones showed in the sample below.
- **The SQL query that you created to answer the question**

```
select customerid, count(orderid) as totalorders from orders
group by customerid;
```

- **A screenshot of the output that your query produces.**

| | A-Z customerid | 123 totalorders |
|---|---|---|
| 1 | TOMSP | 6 |
| 2 | LONEP | 8 |
| 3 | OLDWO | 10 |
| 4 | WARTH | 15 |
| 5 | MAGAA | 10 |
| 6 | QUEEN | 13 |
| 7 | VINET | 5 |
| 8 | ANTON | 7 |
| 9 | MORGK | 5 |
| 10 | GOURL | 9 |
| 11 | WOLZA | 7 |
| 12 | GALED | 5 |
| 13 | RATTC | 18 |
| 14 | WELLI | 9 |
| 15 | WILMK | 7 |

- **The question number: 2**
  Write a query to display the total quantity and the average price of products ordered for each order. The output should only display the order id, the total quantity ordered, and the average unit price (simple average, not weighted average) in each order. The column names should be the same with the ones showed in the sample below.

- **The SQL query that you created to answer the question**
  **select** orderid, **sum**(quantity) **as** *totalquantity*, **avg**(unitprice) **from** orderdetails **group by** orderid;
- **A screenshot of the output that your query produces.**

| | 123 orderid | 123 totalquantity | 123 avg |
|---|---|---|---|
| 1 | 11,038 | 37 | 15.6333332062 |
| 2 | 10,782 | 1 | 12.5 |
| 3 | 10,725 | 22 | 13.5499998728 |
| 4 | 10,423 | 34 | 27 |
| 5 | 10,518 | 29 | 95.816666921 |
| 6 | 10,356 | 62 | 19.3333333333 |
| 7 | 10,963 | 2 | 34 |
| 8 | 10,596 | 59 | 29.883333842 |
| 9 | 10,282 | 8 | 18.1500005722 |
| 10 | 10,658 | 255 | 18.8499999046 |
| 11 | 10,283 | 76 | 18.6749999523 |
| 12 | 10,579 | 31 | 11.625 |
| 13 | 10,693 | 111 | 38.8624999523 |
| 14 | 10,896 | 31 | 23.75 |
| 15 | 10,660 | 21 | 81 |

- **The question number: 3**
  Find the top 5 customers with the highest number of orders. Only the customer id and total orders per customer should show up in the output, and the column names should be the same with the ones showed in the sample below.
- **The SQL query that you created to answer the question**
  **select** customerid, **count**(orderid) **as** *totalorders* **from** orders

```
group by customerid
order by count(orderid) desc
limit 5;
```

- **A screenshot of the output that your query produces.**

| | customerid | totalorders |
|---|---|---|
| 1 | SAVEA | 31 |
| 2 | ERNSH | 30 |
| 3 | QUICK | 28 |
| 4 | HUNGO | 19 |
| 5 | FOLKO | 19 |

- **The question number: 4**
  Find the customers who have placed more than 10 orders. In your output, you should only display the customer ID and the total number of orders for each of those customers. The column names should be the same with the ones showed in the sample below.
- **The SQL query that you created to answer the question**

```
select customerid, count(orderid) as totalorders from orders
group by customerid
having count(orderid) > 10;
```

- **A screenshot of the output that your query produces.**

| | customerid | totalorders |
|---|---|---|
| 1 | WARTH | 15 |
| 2 | QUEEN | 13 |
| 3 | RATTC | 18 |
| 4 | FRANK | 15 |
| 5 | LEHMS | 15 |
| 6 | RICAR | 11 |
| 7 | LINOD | 12 |
| 8 | QUICK | 28 |
| 9 | HUNGO | 19 |
| 10 | AROUT | 13 |
| 11 | KOENE | 14 |
| 12 | MEREP | 13 |
| 13 | BONAP | 17 |
| 14 | HANAR | 14 |
| 15 | BERGS | 18 |

- **The question number: 5**

Revenue is defined as [units sold * unit price]. The column names should be the same with the ones showed in the sample below.

- **The SQL query that you created to answer the question**

```
select productid, sum(quantity * unitprice) as revenue from orderdetails
group by productid
```

- **A screenshot of the output that your query produces.**

| | productid | revenue |
|---|---|---|
| 1 | 74 | 2,566 |
| 2 | 54 | 5,120.9999489784 |
| 3 | 29 | 87,736.4005126953 |
| 4 | 71 | 20,876.500328064 |
| 5 | 4 | 9,424.8000469208 |
| 6 | 68 | 9,362.5 |
| 7 | 34 | 6,677.9999723434 |
| 8 | 51 | 44,742.6003189087 |
| 9 | 52 | 3,383.7999920845 |
| 10 | 70 | 11,472 |
| 11 | 67 | 2,561.9999990463 |
| 12 | 63 | 17,696.3000411987 |
| 13 | 10 | 22,140.1998939514 |
| 14 | 35 | 14,536.7998561859 |
| 15 | 45 | 4,740.4999957085 |

- **The question number: 6**

  Which products have average unit price greater than $50? Only display the product ids and their average price. The column names should be the same with the ones showed in the sample below and the price column should have integer values.

- **The SQL query that you created to answer the question**

```
select productid, round(avg(unitprice)) as avgprice from orderdetails
group by productid
having avg(unitprice) > 50 ;
```

- **A screenshot of the output that your query produces.**

| | 123 productid | 123 avgprice |
|---|---|---|
| 1 | 29 | 116 |
| 2 | 51 | 51 |
| 3 | 59 | 51 |
| 4 | 9 | 93 |
| 5 | 38 | 246 |
| 6 | 20 | 76 |
| 7 | 18 | 60 |

- **The question number: 7**
  What is the highest unit price for each product? Only display the product ids and their highest price. The column names should be the same with the ones showed in the sample below.
- **The SQL query that you created to answer the question**
  ```
  select productid, max(unitprice) as maxprice from orderdetails
  group by productid;
  ```
- **A screenshot of the output that your query produces.**

| | 123 productid | 123 maxprice |
|---|---|---|
| 1 | 74 | 10 |
| 2 | 54 | 7.45 |
| 3 | 29 | 123.79 |
| 4 | 71 | 21.5 |
| 5 | 4 | 22 |
| 6 | 68 | 12.5 |
| 7 | 34 | 14 |
| 8 | 51 | 53 |
| 9 | 52 | 7 |
| 10 | 70 | 15 |
| 11 | 67 | 14 |
| 12 | 63 | 43.9 |
| 13 | 10 | 31 |
| 14 | 35 | 18 |
| 15 | 45 | 9.5 |

- **The question number: 8**
  How many different customers did each Northwind employee work with in 1997? The output should only include the employee ID (in an increasing order) and the number of customers each employee worked with in 1997. For dates, use the format 'yyyy-mm-dd'. The column names should be the same with the ones showed in the sample below.
- **The SQL query that you created to answer the question**

```
select employeeid, count(distinct customerid) as number_of_customers_in_97
from orders
where orderdate >= '1997-01-01' and orderdate < '1998-01-01'
group by employeeid
order by employeeid
```

- **A screenshot of the output that your query produces.**

| | 123 employeeid | 123 number_of_customers_in_97 |
|---|---|---|
| 1 | 1 | 40 |
| 2 | 2 | 35 |
| 3 | 3 | 46 |
| 4 | 4 | 57 |
| 5 | 5 | 13 |
| 6 | 6 | 24 |
| 7 | 7 | 30 |
| 8 | 8 | 36 |
| 9 | 9 | 16 |