

```

1-SELECT  distinct region
from sales
Group by region
Having count(distinct itemname)>2;

2-SELECT  sum(netsales)/sum(qty)  price
from sales
group by itemname
order by count(itemname)    desc
limit 2;

3-select region , avg(actiondate - lag_orderdate) as avg_time_between_orders
from (
    select region , actiondate , lag(actiondate) over (partition by region
order by actiondate asc) as lag_orderdate
    from sales ) as foo
GROUP BY region

4-create table Japan
as
select region,extract (month from actiondate),sum(netsales) as japan_cof
from sales
where itemname='Coffee Japan'
group by region,extract (month from actiondate);

select* from Japan;

create table allsum
as
select region,extract (month from actiondate),sum(netsales) as overall from
sales
group by region,extract (month from actiondate);
select * from allsum;
create table results as
select allsum.region ,allsum.date_part, japan_cof/overall as gmv
from allsum left join Japan on allsum.region=Japan.region and
allsum.date_part=Japan.date_part

update results
set gmv =0
where gmv is NULL;

select*from results;

5-select actiondate,avg(netsales) over(order by actiondate rows between 2
preceding and current row ) as moving_average
from sales
limit 5;

6-select actiondate,medium,sum from
(SELECT actiondate,medium,sum(netsales) ,rank() OVER (partition by
actiondate order by sum(netsales) desc)
FROM   sales
group by actiondate, medium) ranked scores
where rank <=1;

7-create table marginality as

```

```
select medium, sum(profit)/sum(netsales) as marginal from sales  
group by medium  
order by marginal
```

```
select medium from marginality  
limit 1;
```

2.1

Đoàn 3/4 Nghi Đỗ Đặng Đỗ Mùa

2.2

2172.28266935484
1301.75407407407

2.3

ДœЂ¾Ñ□Д°Д²Д° Д'Д¾Ñ□Ñ,Д¾Д°	6.875
ДœЂ¾Ñ□Д°Д²Д° Д—Д°Д¿Д°Д'	2.19230769230769
ДœЂ¾Ñ□Д°Д²Д° Д¡ДµД²ДµÑ€	2.42857142857143
ДœЂ¾Ñ□Д°Д²Д° Д!ДµД½Ñ,Ñ€	9.33333333333333

ДœЂ¾Ñ□Д°Д²Д° ДјДµД²ДµÑ€	6	1
ДœЂ¾Ñ□Д°Д²Д° ДјДµД²ДµÑ€	7	0.033926292313543
ДœЂ¾Ñ□Д°Д²Д° Д®Д³	6	0.151925996708844
ДœЂ¾Ñ□Д°Д²Д° Д—Д°Д¿Д°Д‘	6	0.173378215656186
ДœЂ¾Ñ□Д°Д²Д° Д'Д¾Ñ□Ñ,Д¾Д°	6	0.1515863671964
ДœЂ¾Ñ□Д°Д²Д° Д—Д°Д¿Д°Д‘	7	0.119016467214604
ДœЂ¾Ñ□Д°Д²Д° Д!ДµД½Ñ,Ñ€	7	0.405147759771211
ДœЂ¾Ñ□Д°Д²Д° Д!ДµД½Ñ,Ñ€	8	0
ДœЂ¾Ñ□Д°Д²Д° Д'Д¾Ñ□Ñ,Д¾Д°	7	0
ДœЂ¾Ñ□Д°Д²Д° Д®Д³	7	0

2.5

2022-06-01	1290
2022-06-02	1290
2022-06-02	1290
2022-06-03	1720
2022-06-04	5332.22226666667

2022-06-01	Organic	1290
2022-06-02	Organic	2580
2022-06-03	Advertising	2580
2022-06-04	Advertising	13416.6668
2022-06-05	Advertising	3031.6667
2022-06-06	Organic	2580
2022-06-07	Advertising	1090
2022-06-08	Advertising	3031.6667
2022-06-10	Organic	1290
2022-06-20	Advertising	2563.6
2022-06-21	Advertising	1281.8
2022-06-23	Advertising	9095.0001
2022-06-26	Advertising	6103.3334
2022-06-27	Advertising	2580
2022-06-28	Organic	4813.3334
2022-06-28	Referral	4813.3334
2022-06-29	Referral	7220.0001
2022-06-30	Advertising	11375
2022-07-02	Advertising	6932.4999
2022-07-03	Advertising	6932.4999
2022-07-04	Advertising	4621.6666
2022-07-05	Advertising	6932.4999
2022-07-06	Referral	4621.6666
2022-07-07	Advertising	2250.7917
2022-07-08	Advertising	2250.7917
2022-07-09	Advertising	4526.625
2022-07-10	Advertising	6897.4999
2022-07-11	Referral	5196.6667
2022-07-12	Referral	5847.0833
2022-07-13	Advertising	8663.3332
2022-07-14	Advertising	10974.1665
2022-07-15	Advertising	5265.8134
2022-07-16	Advertising	3998.3334
2022-07-17	Referral	3998.3334
2022-07-18	Advertising	7996.6668
2022-07-19	Advertising	9995.8335
2022-07-20	Advertising	9995.8335
2022-07-21	Organic	3289.1667
2022-07-22	Advertising	9995.8335
2022-07-23	Advertising	11995.0002
2022-07-24	Referral	1836.6167
2022-07-26	Advertising	3998.3334
2022-07-26	Organic	3998.3334
2022-07-27	Organic	1999.1667
2022-07-31	Organic	7370
2022-08-20	Referral	3120
2022-08-28	Referral	3120

2.7

Referral

The screenshot shows the DataGrip IDE interface with the following details:

- Top Bar:** File, Edit, View, Navigate, Code, Refactor, Run, Tools, Git, Window, Help, SQL - C:\Users\astas\2.1.sql
- Database Explorer:** Shows a connection to `prodana@rc1b-107ggp76qjsy65v.yandexcloud.net` with the database `prodana`. The `public` schema is expanded, showing tables: `allsum`, `gmvs`, `japan`, `marginality`, `results`, and `sales`.
- Code Editor:** A SQL query is being typed:

```
SELECT distinct region
from sales
Group by region
Having count(distinct itemname)>2;
```
- Output Tab:** Shows the results of the query:

region
Москва Центр
- Bottom Status Bar:** prodana@rc1b-107ggp76qjsy65v.yandexcloud.net: 2 rows saved from pricenumeric to 2.2.csv (12 minutes ago)
- Bottom Right:** 6:1 CRLF UTF-8 4 spaces

The screenshot shows a SQL development environment with the following interface elements:

- Top Bar:** File, Edit, View, Navigate, Code, Refactor, Run, Tools, Git, Window, Help, SQL - C:\Users\astas\2.2.sql
- Database Explorer:** Shows a connection to `prodana@rc1b-l87ggp76qjsy65v.yandexcloud.net` with the schema `prodana` selected. Under `prodana`, there are tables: `public`, `allsum`, `gmvs`, `japan`, `marginality`, `results`, and `sales`. There are also `Database Objects` and `Server Objects`.
- Query Editor:** Displays the following SQL query:

```
SELECT sum(netsales)/sum(qty) price
FROM sales
GROUP BY itemname
ORDER BY count(itemname) DESC
LIMIT 2;
```
- Services:** Shows a transaction history with the following details:

TX	Duration	Statement
prodana@rc1b-l87ggp76qjsy65v.yandexcloud.net	248 ms	default
prodana@rc1b-l87ggp76qjsy65v.yandexcloud.net	579 ms	console
prodana@rc1b-l87ggp76qjsy65v.yandexcloud.net	579 ms	2.1.sql
prodana@rc1b-l87ggp76qjsy65v.yandexcloud.net	579 ms	2.2.sql
prodana@rc1b-l87ggp76qjsy65v.yandexcloud.net	1 055 ms	2.3.sql
prodana@rc1b-l87ggp76qjsy65v.yandexcloud.net	1 055 ms	2.4.sql

- Bottom Status Bar:** Version Control, TODO, Problems, Services, Database Changes, prodana@rc1b-l87ggp76qjsy65v.yandexcloud.net: 2 rows saved from pricenumeric to 2.2.csv (14 minutes ago), 1:1 ('109 chars, 5 line breaks) CRLF UTF-8 4 spaces.

The screenshot shows the DataGrip IDE interface. The top navigation bar includes File, Edit, View, Navigate, Code, Refactor, Run, Tools, Git, Window, Help, and a SQL tab. The left sidebar displays the Database Explorer, showing a connection to prodana@rc1b-l87ggp7s6qjsy65v.mdb.yandexcloud.net with tables like sales, results, and gmvs. The bottom left corner shows the Services and Bookmarks toolbars. The main workspace contains a code editor with a SQL query and a results viewer displaying the execution of the query.

```
File Edit View Navigate Code Refactor Run Tools Git Window Help SQL - C:\Users\astas\2.3.sql  
C:\Users\astas> 2.3.sql  
Database Explorer  
prodana@rc1b-l87ggp7s6qjsy65v.mdb.yandexcloud.net  
prodana [1 of 3]  
public  
tables  
sales  
results  
gmvs  
japan  
marginality  
alism  
/5.3о каждый день вывести канал в  
GROUP BY region  
Tx Output Result 1  
region : avg_time_between_orders :  
1 Москва Восток 6.875  
2 Москва Запад 2.1923076923070923  
3 Москва Север 2.4285714285714286  
4 Москва Центр 9.3333333333333333  
5 Москва Юг 2.375
```

File Edit View Navigate Code Refactor Run Tools Git Window Help SQL - C:\Users\astas\24.sql Add Configuration...

Database Explorer

prodana@rc1b-l87ggp7s6qsy65v.yandexcloud.net prodana public

```
select * from allsum;
create table results as
select allsum.region ,allsum.date_part, japan_cof/overall as gmv
```

Services

Tx

prodana@rc1b-l87ggp7s6qsy65v.yandexcloud.net

- default 248 ms
 - console 579 ms
 - 2.1.sql
 - 2.2.sql
 - 2.5.sql 579 ms
 - 1 555 ms
 - 2.3.sql
 - 2.4.sql 555 ms
 - 2.1.sql
 - 2.2.sql
 - 2.5.sql
 - sales 4 s 656 ms
 - sales 4 s
 - console_2 397 ms
 - console_2 397 ms
 - 2 357 ms
 - 2 357 ms

Output prodana.public.results

region	date_part	gmv
Москва Север	6	1
Москва Север	7	0.03392629231354245
Москва Юг	6	0.15192599670884407
Москва Запад	6	0.17337821565618589
Москва Восток	6	0.1515863671903999
Москва Запад	7	0.1190164672146043
Москва Центр	7	0.14051477597712107
Москва Центр	8	0
Москва Восток	7	0
Москва Юг	7	0

Version Control TODO Problems Services Database Changes

10 rows retrieved starting from 1 in 187 ms (execution: 53 ms, fetching: 134 ms)

22:13 CRLF UTF-8 4 spaces

The screenshot shows a SQL development environment with the following details:

- File Bar:** File, Edit, View, Navigate, Code, Refactor, Run, Tools, Git, Window, Help.
- Current File:** SQL - C:\Users\astas\2.5.sql
- Database Explorer:** prodana@rc1b-l07ggp7s6qjsy65v.yandexcloud.net, prodana, public, tables: allsum, gmvs, japan, marginality.
- Code Editor:** SQL query:

```
select actiondate,avg(netsales) over(order by actiondate rows between 2 preceding and current row ) as moving
from sales
limit 5;
```
- Services:** prodana@rc1b-l07ggp7s6qjsy65v.yandexcloud.net, default 248 ms, console 579 ms, 2.1.sql, 2.2.sql, 2.5.sql (selected), 1 555 ms, 2.3.sql, 2.4.sql 555 ms, 2.6.sql, sales 4 s, sales 4 s, console_2 397 ms, console_2 397 ms, 2 357 ms.
- Result:** A table titled "moving_average" showing the following data:

actiondate	moving_average
2022-06-01	1290
2022-06-02	1290
2022-06-02	1290
2022-06-03	1720
2022-06-04	5332.222266666667
- Bottom Status:** Version Control, TODO, Problems, Services, Database Changes, prodana@rc1b-l07ggp7s6qjsy65v.yandexcloud.net: 2 rows saved from pricenumeric to 2.2.csv (16 minutes ago), 1:1 (137 chars, 2 line breaks) CRLF UTF-8 4 spaces.

The screenshot shows a SQL IDE interface with the following details:

- File Menu:** New, Open..., Save As..., Open Recent, Close Project, Rename Project, Attach Directory to Project..., Settings..., Data Sources..., File Properties, Local History, Save All, Reload All from Disk, Repair IDE, Invalidate Caches..., Manage IDE Settings, New Projects Setup, Save File as Template..., Export, Print..., Power Save Mode, Exit.
- Database Explorer:** A tree view showing connections to 'yandexcloud.net' and 'ndb.yandexcloud.net'. Under 'yandexcloud.net', there are nodes for 'sales' (4 rows, 658 ms), 'console_2' (397 ms), and '2' (357 ms). Under 'ndb.yandexcloud.net', there are nodes for '2.1.sql' (555 ms), '2.2.sql', '2.3.sql', '2.4.sql', '2.5.sql', '2.6.sql', 'sales' (4 rows, 658 ms), 'console_2' (397 ms), and '2' (357 ms).
- SQL Editor:** The current file is '2.6.sql'. The code is:

```
1 select actiondate,medium,sum from
2 (SELECT actiondate,medium,sum(netsales) ,rank() OVER (partition by actiondate order by sum(netsales) desc)
3 FROM sales
4 group by actiondate, medium) ranked_scores
5 where rank <=1;
```
- Result Panel:** Shows the output of the query. The table has columns: actiondate, medium, sum. The data is:

	actiondate	medium	sum
1	2022-06-01	Organic	1290
2	2022-06-02	Organic	2580
3	2022-06-03	Advertising	2580
4	2022-06-04	Advertising	13416.6668
5	2022-06-05	Advertising	3031.6667
6	2022-06-06	Organic	2580
7	2022-06-07	Advertising	1090
8	2022-06-08	Advertising	3851.6667
9	2022-06-10	Organic	1290
10	2022-06-20	Advertising	2563.6
11	2022-06-21	Advertising	1281.8
12	2022-06-23	Advertising	9095.0001
13	2022-06-26	Advertising	6103.3334
14	2022-06-27	Advertising	2580
- Status Bar:** Shows the connection information: prodana@rc1b-107ggi76qjy65v.ndb.yandexcloud.net: 2 rows saved from price|numeric to 2.2.csv (17 minutes ago). It also shows file statistics: 7/1 CRLF, UTF-8, 4 spaces.

File Edit View Navigate Code Refactor Run Tools Git Window Help SQL - C:\Users\astas\2.6.sql

C:\Users\astas\2.6.sql Add Configuration...

Database Explorer

prodana@rc1b-l87ggp7s6qjsy65v.yandexcloud.net

prodana (1 of 3)

public

tables

allsum

gmvs

japan

marginality

```
1  select actiondate,medium,sum from
2  (SELECT actiondate,medium,sum(netsales) ,rank() OVER (partition by actiondate order by sum(netsales) desc)
3   FROM sales
4   group by actiondate, medium) ranked_scores
5   where rank <=1;
```

Services

Tx

prodana@rc1b-l87ggp7s6qjsy65v.yandexcloud.net

default 248 ms

console 579 ms

2.1.sql

2.2.sql

2.5.sql 579 ms

1 555 ms

2.3.sql

2.4.sql 555 ms

2.6.sql

sales 4 658 ms

sales 4 s

console_2 397 ms

console_2 397 ms

2.357 ms

2.357 ms

output Result 1

actiondate	medium	sum
2022-07-20	Advertising	9995.8335
2022-07-21	Organic	3289.1666999999998
2022-07-22	Advertising	9995.8335
2022-07-23	Advertising	11995.0002
2022-07-24	Referral	1836.6167
2022-07-26	Advertising	3998.3334
2022-07-26	Organic	3998.3334
2022-07-27	Organic	1999.1067
2022-07-31	Organic	7370
2022-08-20	Referral	3120
2022-08-28	Referral	3120

Version Control TODO Problems Services Database Changes

prodana@rc1b-l87ggp7s6qjsy65v.yandexcloud.net: 2 rows saved from pricenumeric to 2.2.csv (17 minutes ago)

7/1 CRLF UTF-8 4 spaces

The screenshot shows a SQL development environment with multiple panes. The top navigation bar includes File, Edit, View, Navigate, Code, Refactor, Run, Tools, Git, Window, Help, and a tab for SQL - C:\Users\astas\2.7.sql. The Database Explorer pane on the left lists a database named prodana, which contains a public schema with tables like allsum, gmvs, japan, marginality, results, and sales. The main code editor pane displays a script (2.7.sql) with the following SQL:

```
1  create table marginality as
2  select medium,sum(profit)/sum(netsales) as marginal from sales
3  group by medium
4  order by marginal
5
6  select medium from marginality
7  limit 1
```

The Services pane at the bottom shows a transaction (Tx) for prodana@rc1b-187ggp7shqsy65v.yandexcloud.net with a duration of 248 ms. The Output pane shows the result of the last query:

medium
Referral

At the bottom, the status bar indicates "1 row retrieved starting from 1 in 98 ms (execution: 41 ms, fetching: 57 ms)".