1.

```
[dvdrental=# select rental_rate, rating, count(film_id) as number_of_films
[dvdrental—# from film
[dvdrental-# group by grouping sets((rental_rate), (rating));
 rental_rate | rating | number_of_films
        2.99
                                     323
        4.99
                                     336
        0.99
                                     341
               G
                                     178
               PG-13
                                     223
               NC-17
                                     210
               PG
                                     194
               R
                                     195
(8 rows)
```

2.

```
1 | Animation
1 | Children
1 | Classics
1 | Comedy
1 | Documentar
1 | Family
                                             1
1
2
1
1
2
1
2
3
               Documentary
               Family
Foreign
               Games
               Horror
               Music
          11111222222222222222
                                             1
2
1
               New
Sci-Fi
                                            1
19
               Sports
               Action
                                             1
1
2
2
1
               Animation
               Children
               Classics
               Comedy
Documentary
               Drama
               Family
                                             4
2
1
               Foreign
               Games
               Music
                                             1
               New
Sci-Fi
                                            2
2
25
1
2
2
4
               Travel
               Action
Animation
               Children
               Classics
               Comedy
                                             3
2
1
               Documentary
               Drama
               Family
                                             6 3 3 2 6 3 1 2
               Foreign
               Games
               Horror
               Music
               New
Sci-Fi
               Sports
               Travel
                                            44
 (46 rows)
```

3.

```
🛅 choijaewon — more 🗸 runpsql.sh — 95×28
dvdrental=# select y, m, d, sum(amount) as amount
dvdrental-# from (select rental_id, extract(year from rental_date) y,
dvdrental(# extract(month from rental_date) m, extract(day from rental_date) d from rental)
dvdrental—# as rental_info natural join payment
dvdrental-# group by rollup(y, m, d);
      | m | d | amount
 2005
        6
             14
                      41.89
 2005
                    1179.97
        6
             15
 2005
           16
                    1191.11
        6
 2005
        6
           | 17
                    1158.19
 2005
        6
            18
                    1284.99
        6
            19
                    1283.92
 2005
             20
 2005
        6
                    1223.09
 2005
        6
                     986.69
             21
 2005
        6
                    8349.85
        7
7
              5
 2005
                    128.73
 2005
                   2131.96
              6
        7
7
7
7
7
 2005
              7
                    1943.39
              8
                    2219.84
 2005
              9
                    2075.87
 2005
 2005
             10
                    1939.20
 2005
             11
                    1938.39
                    2105.05
 2005
             12
            26
                    160.67
 2005
2005
        7
             27
                    2726.51
```

4.

```
choijaewon — more - runpsql.sh — 118×61
dvdrental=# with ranking as (select category_id, rank() over(partition by category_id order by A desc), customer_id |
dvdrental(# from (select customer_id, category_id, count(film_id) as A from rental natural join inventory natural join
film natural join film_category group by customer_id, category_id) as rental)
dvdrental-# select category_id, rank, customer_id
dvdrental-# from ranking where rank = 1 or rank =2;
category_id | rank | customer_id
                                                                                     506
                                                                                     323
                               1 2 2 3 3 3 4 4 5 5 5
                                                                                     526
                                                                                     196
                                                   1221212212
                                                                                       38
                                                                                     408
                                                                                     574
                                                                                         5
                                                                                         1
                                                                                     197
                                                                                     584
                                                                                     244
```

.

15	2	594
15	2	16
15	2	494
16	1	375
16	2	323
16	2	473
16	2	216
16	2	148
16	2	567
16	2	381
16	2	414
(65 rows)		

5.

dvdrental=# with total_amount as(select customer_id, country, sum(amount) as sum_amount
from customer natural join payment natural join address natural join city natural join country group by (customer_id, country)) [select customer_id, country, sum_amount, c_amount, dense_rank() over(partition by country order by sum_amount) from (s) elect customer_id, country, sum_amount, sum(sum_amount) over (partition by country) as c_amount from total_amount) as total_amount; customer_id | | sum_amount | c_amount | dense_rank 67.82 349.18 349.18 349.18 218 Afghanistan 67.82 69 441 Algeria Algeria 89.77 1 107.73 151.68 2 3 1 Algeria 176 320 American Samoa 47.85 47.85 383 Angola 93.75 187.55 1 2 1 528 Angola 93.80 187.55 381 Anguilla 99.68 99.68 530 Argentina 75.78 1298.80 1 2 3 4 5 243 77.77 81.81 Argentina 1298.80 1298.80 322 Argentina 1298.80 1298.80 85.77 24 Argentina 359 Argentina 85.78 445 96.76 1298.80 6 7 8 9 Argentina 100.75 219 1298.80 Argentina 405 Argentina 101.70 1298.80 331 Argentina 105.78 1298.80 107 Argentina 114.72 1298.80 10 11 12 13 1298.80 1298.80 585 Argentina 117.76 89 Argentina 124.71 Argentina 129.71 560 1298.80 41 118.75 Armenia 118.75 1 159 Austria 58.83 284.30 12312112312 111.73 284.30 173 Austria 266 Austria 113.74 284.30 333 Azerbaijan 89.78 198.53 334 Azerbaijan 108.75 198.53 590 Bahrain 108.76 108.76 353.19 329 Bangladesh 98.77 Bangladesh 332 107.74 353.19 21 Bangladesh 146.68 353.19

81.76

189.60

85.78

92.78

68.87

72.82

73.85

75.78

271.36

271.36

178.56

178.56

2919.19

2919.19 2919.19

2919.19

1 2 3

527

144

455

431

310

325

398

183

Belarus

Belarus

Bolivia

Bolivia

Brazil

Brazil

Brazil

Brazil

2017320114_최재원

526	United States	208.58	3085.31	30
568	Venezuela	66.79	632.43	1
290	Venezuela	80.78	632.43	2
174	Venezuela	81.81	632.43	3
539	Venezuela	84.80	632.43	4
111	Venezuela	94.75	632.43	5
113	Venezuela	111.73	632.43	6
453	Venezuela	111.77	632.43	7
340	Vietnam	83.77	676.45	1
523	Vietnam	87.80	676.45	2
199	Vietnam	95.76	676.45	3
520	Vietnam	127.69	676.45	4
472	Vietnam	131.74	676.45	5
532	Vietnam	149.69	676.45	6
406	Virgin Islands, U.S.	121.69	121.69	1
303	Yemen	70.81	473.93	1
213	Yemen	110.73	473.93	2
210	Yemen	134.70	473.93	3
470	Yemen	157.69	473.93	4
553	Yugoslavia	102.77	233.49	1
7	Yugoslavia	130.72	233.49	2
438	Zambia	121.70	121.70	1
(599 rows)				