1) Find the fourth and fifth cities with the most posts

```
select city, count(*) as number_of_posts
from fact_daily_posts
join dim_publishers
using (publisher_id)
group by city
order by number_of_posts desc
limit 3 , 2;
```

city	number_of_posts
Virginia	318
Florida	310

2) Find the name and the content of the last post published by the top publisher (who has the most posts)

```
with posts_rankings as
(SELECT
    name, content,
    ROW_NUMBER() OVER (
      PARTITION BY publisher_id ORDER BY creation_date) AS row_num
  FROM fact_daily_posts
  join dim_publishers
using (publisher_id))
select name, content, row_num as last_post_rank
from posts_rankings
where row_num = (select max(row_num) from posts_rankings);
```

name	content	last_post_rank
Amber Dunn	Well choose side trial interview recognize everyt…	10
Claudia Graham	White room especially. Standard media finally c…	10
Daniel Rivers	American really level similar. Position high could…	10
Tiffany Cline	Instead fish mother stuff where rich. Explain skill…	10

3) Find the name of the publisher who has at least 5 posts and with an increasing score over time (the score of any post is strictly superior to the last post's score)

```
with time_and_score_rank as
(SELECT
    name, creation_date, score,
    Rank() over (
      PARTITION BY publisher_id ORDER BY score) AS score_rank,
    ROW_NUMBER() OVER (
      PARTITION BY publisher_id ORDER BY creation_date) AS time_rank
  FROM fact_daily_posts
  join dim_publishers
using (publisher_id))

select name
from time_and_score_rank
where time_rank > 4
except
select name
from time_and_score_rank
where score_rank <> time_rank;
```

name
Teresa Good

4) Find the number of publishers that have at least 3 posts where every two consecutive posts are separated by at least one week

```
with posts_days as
(SELECT
    publisher_id, name, creation_date,
    lag(creation_date) over (
      PARTITION BY publisher_id ORDER BY creation_date) AS last_date,
    creation_date - lag(creation_date) over (
      PARTITION BY publisher_id ORDER BY creation_date) AS
day_difference
  FROM fact_daily_posts
  join dim_publishers
using (publisher_id))

select count(distinct publisher_id) as number_of_publishers
from posts_days
where publisher_id in (
select publisher_id
from posts_days
group by publisher_id
having min(day_difference) > 6 and count(*) > 2)
```

number_of_publishers
37