```sql
--select * from df_order

--find the top 10 highest revenue generating products

select product_id,sum(sales_price) as sales
from df_orders group by product_id
order by sales desc limit 10;

--find top 5 highest selling products in each region

with cte as (
select region ,product_id ,sum(sales_price) as sales from df_orders
group by region, product_id )
select * from (
select *
, row_number() over(partition by region order by sales desc) as rn
from cte ) A
where rn<=5;

--find month over month growth comparison for 2022 and 2023 sales
--eg: jan 2022 vs jan 2023

with cte as (
select Extract (year from order_date)as year,Extract(month from order_date) as month
,sum(sales_price)as sales
from df_orders
```

group by year, month

)

select month ,

sum(case when year =2022 then sales else 0 end) as sales_2k22

, sum(case when year =2023 then sales else 0 end) as sales_2k23

from cte

group by month

order by month;

--for each category which month had highest sales

WITH cte AS (

SELECT category, EXTRACT(MONTH FROM order_date) AS month,

SUM(sales_price) AS sales

FROM df_orders

GROUP BY category, EXTRACT(MONTH FROM order_date)

)

SELECT *

FROM (

SELECT category, month, sales,

ROW_NUMBER() OVER (PARTITION BY category ORDER BY sales DESC) AS rn

FROM cte

) subquery

WHERE rn = 1;

--which sub category highest growth by profit in 2023 compare to 2022.

```sql
WITH cte AS (

SELECT

sub_category,

EXTRACT(YEAR FROM order_date) AS year,SUM(sales_price) AS sales

FROM df_orders

GROUP BY sub_category, EXTRACT(YEAR FROM order_date)

),

cte2 AS (

SELECT

sub_category,SUM(CASE WHEN year = 2022 THEN sales ELSE 0 END) AS sales_2k22,

SUM(CASE WHEN year = 2023 THEN sales ELSE 0 END) AS sales_2k23

FROM cte

GROUP BY sub_category

)

SELECT  sub_category,sales_2k22,sales_2k23,

CASE

WHEN sales_2k22 = 0 THEN NULL  -- Avoid division by zero

ELSE ((sales_2k23 - sales_2k22) * 100.0 / sales_2k22)

END AS growth_percentage

FROM cte2

ORDER BY growth_percentage DESC;
```