1)Provide the list of markets in which customer "Atliq Exclusive" operates its business in the APAC region.

```
select  market,customer,region
from gdb023.dim_customer where customer = "Atliq Exclusive" and region ="APAC";
```

2.What is the percentage of unique product increase in 2021 vs. 2020?

```
WITH products_join AS(
 SELECT *
 FROM dim_product p
    INNER JOIN fact_gross_price g
    USING (product_code)
),
product_counts AS(
 SELECT
 SUM(CASE WHEN fiscal_year="2020" THEN 1 ELSE 0 END) AS unique_products_2020,
  SUM(CASE WHEN fiscal_year="2021" THEN 1 ELSE 0 END) AS unique_products_2021
 FROM products_join
)
SELECT
 unique_products_2020,
    unique_products_2021,
 ROUND(100*(unique_products_2021-unique_products_2020)/unique_products_2020,2) AS
percentage_chg
FROM product_counts;
```

3) Provide a report with all the unique product counts for each segment and sort them in descending order of product counts.

```
SELECT segment, count(product) as product_count
FROM dim_product group by segment order by product_count desc;
```

4)Which segment had the most increase in unique products in 2021 vs 2020?

```
WITH products AS(
 SELECT *
 FROM dim_product p
    INNER JOIN fact_gross_price g
    USING (product_code)
),
segment_product AS(
 SELECT
  segment,
  SUM(IF(fiscal_year="2020", 1,0)) AS unique_products_2020,
  SUM(IF(fiscal_year="2021", 1,0)) AS unique_products_2021
 FROM products
    GROUP BY segment
)
SELECT *,
 unique_products_2021 - unique_products_2020 AS difference
FROM segment_product;
```

5)Get the products that have the highest and lowest manufacturing costs.

```
select p.product_code,product,manufacturing_cost
 from dim_product p
join  fact_manufacturing_cost f
on p.product_code = f.product_code
where
     manufacturing_cost =(SELECT MAX(manufacturing_cost) FROM fact_manufacturing_cost)
        OR manufacturing_cost = (SELECT MIN(manufacturing_cost) FROM fact_manufacturing_cost)
order by manufacturing_cost desc;
```

6) Generate a report which contains the top 5 customers who received an average high pre_invoice_discount_pct for the fiscal year 2021 and in the Indian market.

```
WITH customercode_average AS
(
	SELECT
		customer_code,
		AVG(pre_invoice_discount_pct) AS average_discount_percentage
	FROM fact_pre_invoice_deductions
	WHERE fiscal_year = 2021
	GROUP BY customer_code
)
SELECT
	ca.customer_code,
   customer,
   ROUND(cca.average_discount_percentage, 3) AS average_discount_percentage
FROM customercode_average ca
JOIN dim_customer c ON c.customer_code = ca.customer_code
where market LIKE 'India'
ORDER BY average_discount_percentage desc
LIMIT 5;
```

7. Get the complete report of the Gross sales amount for the customer “Atliq Exclusive” for each month.

```
Select
 monthname(s.date) as month,
s.fiscal_year,c.customer,    SUM(s.sold_quantity) AS total_sold_quantity,
   ROUND(SUM(s.sold_quantity * g.gross_price)/1000000, 2) AS 'Gross Sales Amount'
from  fact_gross_price g
join  fact_sales_monthly s on g.product_code = s.product_code
```

```
join dim_customer c on s.customer_code = c.customer_code
where customer ="Atliq Exclusive"  and s.fiscal_year = 2021
group by month(date),year(date)
order by month;
```

8) In which quarter of 2020, got the maximum total_sold_quantity?

```
select
case
 when month(date) in (9,10,11) Then "Q1"
  when month(date) in (12,1,2) Then "Q2"
  when month(date) in (3,4,5) Then "Q3"
  ELSE "Q4"
  End as Quaters,
 sum(sold_quantity) as total_sold_quantity,fiscal_year from fact_sales_monthly where fiscal_year= 2020
group by Quaters
order by total_sold_quantity desc;
```

9. Which channel helped to bring more gross sales in the fiscal year 2021 and the percentage of contribution?

```
WITH percentage AS
(
        SELECT
                c.channel,
                ROUND(SUM(s.sold_quantity * g.gross_price)/1000000, 2) AS gross_sales_mln
        FROM fact_sales_monthly s
        JOIN fact_gross_price g ON g.product_code = s.product_code AND g.fiscal_year = s.fiscal_year
        JOIN dim_customer c ON c.customer_code = s.customer_code
        WHERE s.fiscal_year = 2021
        GROUP BY c.channel
```

```
)
SELECT
        *,
   (gross_sales_mln*100)/SUM(gross_sales_mln) OVER() AS percentage
FROM percentage
ORDER BY percentage DESC;
```

10. Get the Top 3 products in each division that have a high total_sold_quantity in the fiscal_year 2021?

```
WITH cte1 as (
select
p.division,p.product,s.product_code,sum(sold_quantity) as total_qty,
rank() over(partition by p.division order by sum(sold_quantity) desc) as 'rank_order'
from
fact_sales_monthly s
join dim_product p
on p.product_code = s.product_code
where s.fiscal_year = 2021
group by p.division,p.product,s.product_code)

select * from cte1 WHERE rank_order in (1,2,3) order by division,rank_order;
```