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

```
SELECT
        DISTINCT market
FROM
        dim_customer
WHERE
         customer="Atliq Exclusive" AND region="APAC"
```

2. What is the percentage of unique product increase in 2021vs. 2020? The final output contains these fields,

- **unique_products_2020**
- **unique_products_2021**
- **percentage_chg**

```
WITH unique_2020 AS
(
SELECT
        COUNT(DISTINCT product_code) AS unique_product_2020
FROM
        fact_sales_monthly
WHERE fiscal_year = 2020
),
unique_2021 AS
(SELECT
        COUNT(DISTINCT product_code) AS unique_product_2021
FROM
        fact_sales_monthly
WHERE fiscal_year = 2021
),
pct_difference AS
( SELECT
         ROUND((unique_product_2021 - unique_product_2020) / unique_product_2020 * 100,2) AS
percentage_change
FROM
```

```
        unique_2020, unique_2021
)
SELECT
        unique_product_2020, unique_product_2021, percentage_change
FROM
         unique_2020, unique_2021, pct_difference;
```

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

The final output contains 2 fields:

- **segment**
- **product_count**

```
SELECT
   segment, COUNT(DISTINCT product_code) 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? The final output contains these fields:

- **segment**
- **product_count_2020**
- **product_count_2021**
- **difference**

```
WITH x AS
(
SELECT
   segment, COUNT(DISTINCT product_code) AS unique_product_2020
FROM
   fact_sales_monthly
     JOIN
   dim_product USING (product_code)
```

```
WHERE
    fiscal_year = 2020
GROUP BY segment),
y AS
(
SELECT
    segment, COUNT(DISTINCT product_code) AS unique_product_2021
FROM
    fact_sales_monthly
        JOIN
    dim_product USING (product_code)
WHERE
    fiscal_year = 2021
GROUP BY segment
)

SELECT x.segment, unique_product_2020, unique_product_2021, (unique_product_2021 - unique_product_2020)
AS difference
FROM x
JOIN y ON x.segment = y.segment
ORDER BY difference DESC;
```

5. Get the products that have the highest and lowest manufacturing costs. The final output should contain these fields:

- **product_code**
- **product manufacturing_cost**

```
SELECT
    product_code, product, manufacturing_cost
FROM
    dim_product
        JOIN
    fact_manufacturing_cost USING (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.

The final output contains these fields:

- **customer_code**
- **customer**
- **average_discount_percentage**

```
SELECT
    customer_code,
    customer,
    ROUND(AVG(pre_invoice_discount_pct) * 100, 2) AS discount_pct
FROM
    dim_customer
        JOIN
    fact_pre_invoice_deductions USING (customer_code)
WHERE
    fiscal_year = 2021 AND market = 'india'
GROUP BY customer_code , customer
ORDER BY discount_pct DESC
LIMIT 5;
```

7. Get the complete report of the Gross sales amount for the customer “Atliq Exclusive” for each month. This analysis helps to get an idea of low and high-performing months and take strategic decisions.

The final report contains these columns:

- **Month**
- **Year**
- **Gross sales Amount**

```
SELECT
    MONTHNAME(s.date) AS month_name,
    s.fiscal_year,
    ROUND(SUM(g.gross_price * s.sold_quantity), 2) AS gross_sales
FROM
    fact_gross_price g
        JOIN
    dim_product p ON g.product_code = p.product_code
        JOIN
    fact_sales_monthly s ON p.product_code = s.product_code
        JOIN
    dim_customer c ON s.customer_code = c.customer_code
WHERE
    customer = 'Atliq Exclusive'
GROUP BY month_name , s.fiscal_year
ORDER BY s.fiscal_year;
```

8. In which quarter of 2020, got the maximum total_sold_quantity? The final output contains these fields sorted by the

- **total_sold_quantity,**
- **Quarter**
- **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 Quarters,
```

```
    SUM(sold_quantity) AS quantity_sold
FROM
    fact_sales_monthly
GROUP BY quarters;
```

9. Which channel helped to bring more gross sales in the fiscal year 2021 and the percentage of contribu on? The final output contains these fields

- **channel**
- **gross_sales**
- **percentage**

```
WITH channel_sales AS
(
SELECT
    c.channel,
    ROUND(SUM(g.gross_price * s.sold_quantity),2) AS gross_sales
FROM
    dim_customer c
        JOIN
    fact_sales_monthly s ON c.customer_code = s.customer_code
        JOIN
    dim_product p ON s.product_code = p.product_code
        JOIN
    fact_gross_price g ON p.product_code = g.product_code
WHERE
    s.fiscal_year = 2021
GROUP BY channel
)
SELECT
        channel, gross_sales,
        ROUND((gross_sales / (SELECT SUM(gross_sales)
        FROM channel_sales)) * 100,2) AS pct
FROM
```

```
    channel_sales
ORDER BY pct desc;
```

10.Get the Top 3 products in each division that have a high total_sold_quan ty in the fiscal_year 2021? The final output contains these fields

- **division**
- **product_code**

```
WITH x AS
(
SELECT division, product_code, product, SUM(sold_quantity) AS quantity_sold,
DENSE_RANK() OVER (PARTITION BY division ORDER BY SUM(sold_quantity) DESC) AS rank_order
FROM
    dim_product
JOIN fact_sales_monthly USING (product_code)
WHERE
    fiscal_year = 2021
GROUP BY division, product_code, product
)
SELECT division, product_code, product, quantity_sold, rank_order
FROM x
WHERE rank_order in (1,2,3)
ORDER BY division,rank_order ASC;
```