

Consumer Goods Ad Hoc Insights

The background of the slide is an abstract geometric pattern composed of numerous overlapping triangles. The color palette transitions from warm orange and yellow tones on the left side to cool blue and teal tones on the right side, with a neutral white and light grey area at the top center where the text is located.

Consumer Goods Domain

6 tables - highlighted relationship for easy reference

<u>C</u>	<u>P</u>	<u>G</u>	<u>M</u>	<u>I</u>	<u>S</u>
<u>dim_customer</u>	<u>dim_product</u>	<u>fact_gross_price</u>	<u>fact_manufacturing_cost</u>	<u>fact_pre_invoice_deductions</u>	<u>fact_sales_monthly</u>
customer_code	product_code	product_code	product_code	customer_code	date
customer	division	fiscal_year	cost_year	fiscal_year	product_code
platform	segment	gross_price	manufacturing_cost	pre_invoice_discount_pct	customer_code
channel	category				sold_quantity
market	product				fiscal_year
sub_zone	variant				
region					

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

```
SELECT DISTINCT market FROM gdb023.dim_customer C
WHERE region = 'APAC' AND customer = 'Atliq Exclusive';
```

<u>market</u>
India
Indonesia
Japan
Philippines
South Korea
Australia
Newzealand
Bangladesh

What is the percentage of unique product increase in 2021 vs. 2020? The final output contains these fields: unique_products_2020, unique_products_2021, percentage_chg

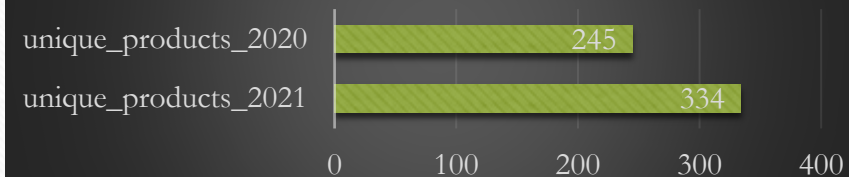
```
with cte1 as (SELECT COUNT(DISTINCT(S.product_code)) as 'unique_products_2020'
FROM gdb023.fact_sales_monthly S
WHERE S.fiscal_year = '2020'),

cte2 as (SELECT COUNT(DISTINCT(S.product_code)) as 'unique_products_2021'
FROM gdb023.fact_sales_monthly S
WHERE S.fiscal_year = '2021')

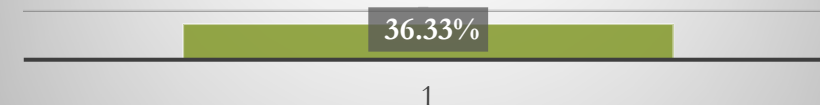
SELECT *,
        ROUND((unique_products_2021/unique_products_2020 -1)*100,2) AS percentage_chg
FROM cte2
JOIN cte1;
```

<u>unique_products_2021</u>	<u>unique_products_2020</u>	<u>percentage_chg</u>
334	245	36.33%

Unique product count



percentage_chg from 2021 vs 2020

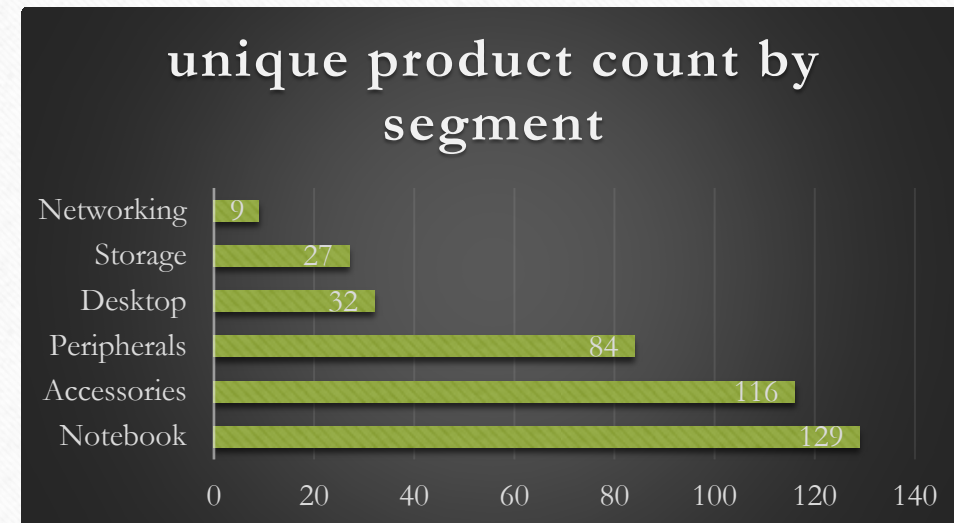


Provide a report with all the unique product counts for each segment and sort them in descending order of product counts. The final output contains 2 fields: segment product_count

```
SELECT count(distinct product_code)
FROM gdb023.dim_product;

SELECT segment,
       count(distinct product_code) as product_count
FROM gdb023.dim_product
GROUP BY segment
ORDER BY product_count DESC;
```

<u>segment</u>	<u>product count</u>
Notebook	129
Accessories	116
Peripherals	84
Desktop	32
Storage	27
Networking	9



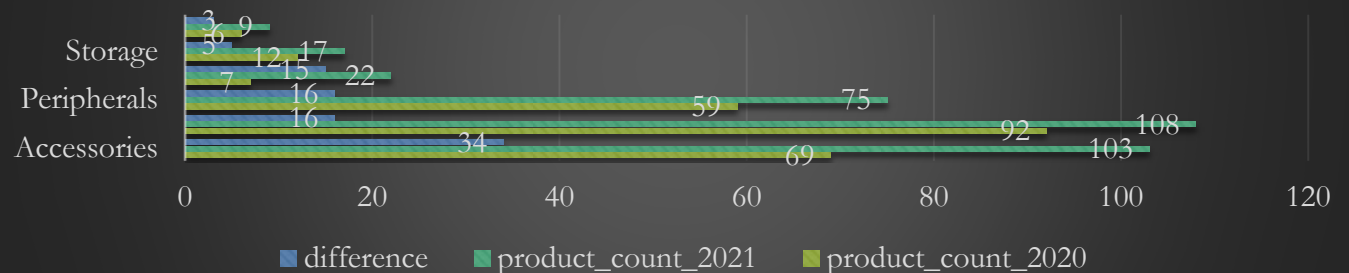
Follow-up: Which segment had the most increase in unique products in 2021 vs 2020? The final output contains these fields, segment product_count_2020 product_count_2021 difference

```
with cte1 as (SELECT distinct P.segment,
                        COUNT(DISTINCT(S.product_code)) as 'product_count_2020'
FROM gdb023.fact_sales_monthly S
LEFT JOIN gdb023.dim_product P
ON S.product_code = P.product_code
WHERE S.fiscal_year = '2020'
GROUP BY P.segment),

cte2 as (SELECT distinct P.segment,
                        COUNT(DISTINCT(S.product_code)) as 'product_count_2021'
FROM gdb023.fact_sales_monthly S
LEFT JOIN gdb023.dim_product P
ON S.product_code = P.product_code
WHERE S.fiscal_year = '2021'
GROUP BY P.segment)

SELECT cte2.segment,
       cte1.product_count_2020,
       cte2.product_count_2021,
       abs(cte2.product_count_2021 - cte1.product_count_2020) as difference
FROM cte2
INNER JOIN cte1
ON cte2.segment = cte1.segment
ORDER BY difference DESC;
```

Product count comparison (2020 vs 2021) by segment



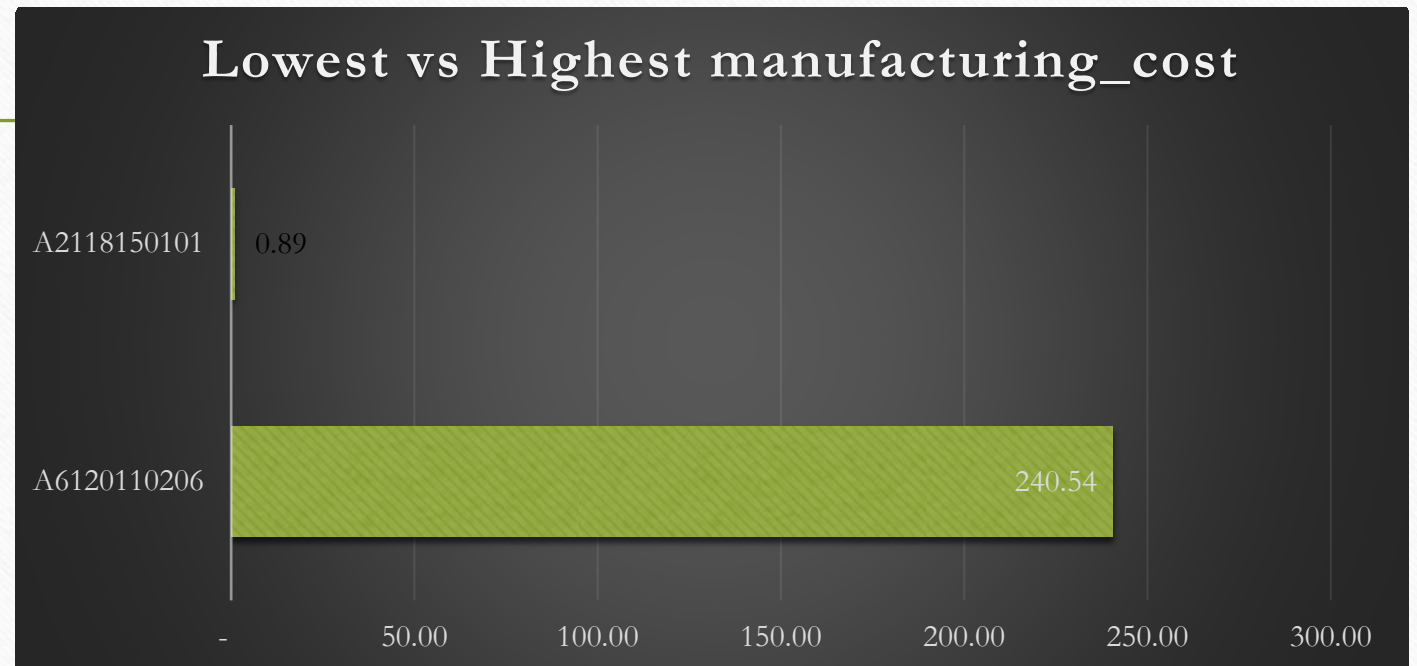
segment	product_count_2020	product_count_2021	difference
Accessories	69	103	34
Notebook	92	108	16
Peripherals	59	75	16
Desktop	7	22	15
Storage	12	17	5
Networking	6	9	3

**Get the products that have the highest and lowest manufacturing costs.
The final output should contain these fields: product_code product
manufacturing_cost**

```
-- Products with highest manufacturing costs
with cte1 as (SELECT M.product_code,
                    P.product,
                    M.manufacturing_cost
FROM gdb023.fact_manufacturing_cost M
LEFT JOIN gdb023.dim_product P
ON M.product_code = P.product_code
ORDER BY M.manufacturing_cost DESC
LIMIT 1),

-- Products with lowest manufacturing costs
cte2 as (SELECT M.product_code,
                P.product,
                M.manufacturing_cost
FROM gdb023.fact_manufacturing_cost M
LEFT JOIN gdb023.dim_product P
ON M.product_code = P.product_code
ORDER BY M.manufacturing_cost ASC
LIMIT 1)

SELECT *
FROM cte1
UNION
SELECT *
FROM cte2;
```

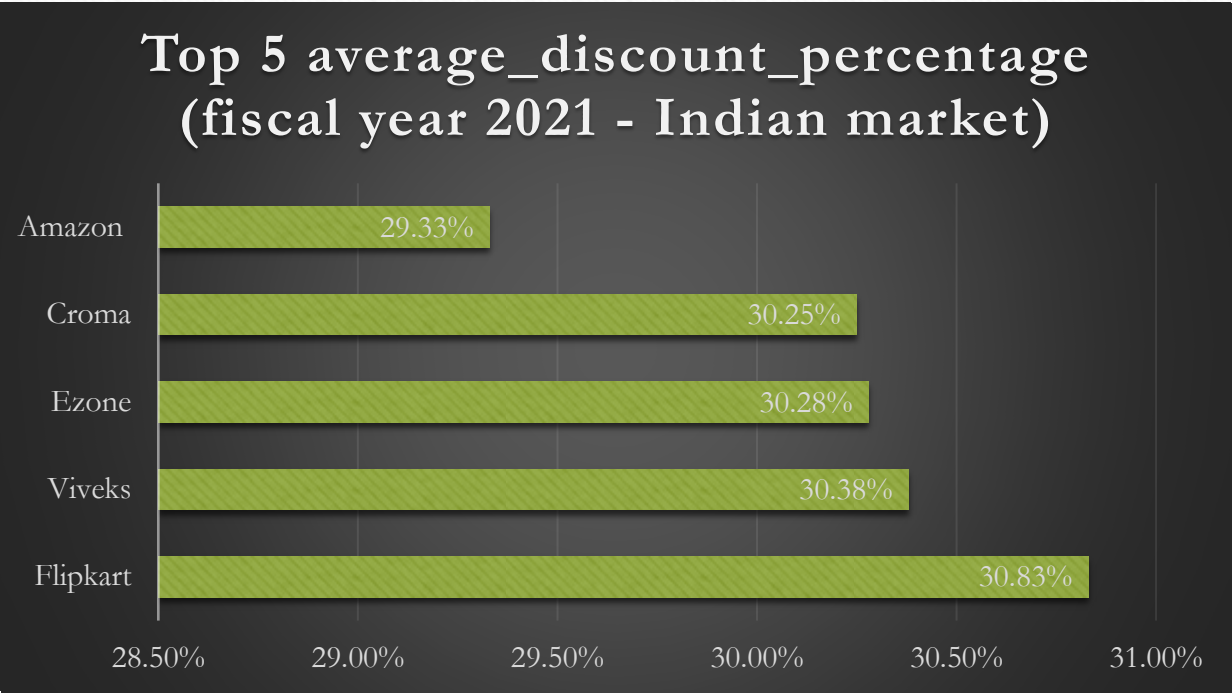


product_code	product	manufacturing_cost
A6120110206	AQ HOME Allin1 Gen 2	240.54
A2118150101	AQ Master wired x1 Ms	0.89

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 C.customer_code,
       C.customer,
       AVG(I.pre_invoice_discount_pct) as average_discount_percentage
FROM gdb023.fact_pre_invoice_deductions I
LEFT JOIN gdb023.dim_customer C
ON I.customer_code = C.customer_code
WHERE I.fiscal_year = '2021' AND C.market = 'India'
GROUP BY C.customer_code, C.customer
ORDER BY average_discount_percentage DESC
LIMIT 5;
```

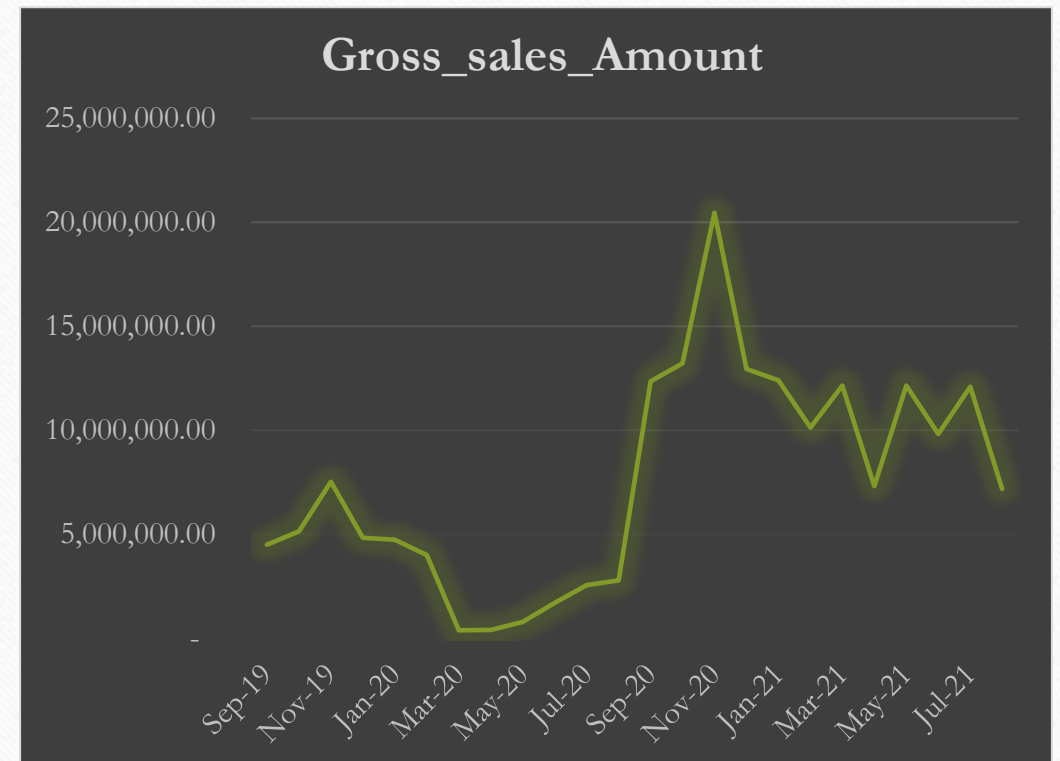
customer code	customer	average discount percentage
90002009	Flipkart	30.83%
90002006	Viveks	30.38%
90002003	Ezone	30.28%
90002002	Croma	30.25%
90002016	Amazon	29.33%



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',
       year(S.date) as 'Year',
       ROUND(SUM(S.sold_quantity * G.gross_price),2) as Gross_sales_Amount
FROM gdb023.fact_sales_monthly S
LEFT JOIN gdb023.fact_gross_price G
ON S.product_code = G.product_code
AND S.fiscal_year = G.fiscal_year
LEFT JOIN gdb023.dim_customer C
ON S.customer_code = C.customer_code
WHERE C.customer = 'Atliq Exclusive'
GROUP BY C.customer, Month, Year
ORDER BY Year ASC;
```

Month	Year	Gross sales Amount
September	2019	4,496,259.67
October	2019	5,135,902.35
November	2019	7,522,892.56
December	2019	4,830,404.73
January	2020	4,740,600.16
February	2020	3,996,227.77
March	2020	378,770.97
April	2020	395,035.35
May	2020	783,813.42
June	2020	1,695,216.60
July	2020	2,551,159.16
August	2020	2,786,648.26
September	2020	12,353,509.79
October	2020	13,218,636.20
November	2020	20,464,999.10
December	2020	12,944,659.65
January	2021	12,399,392.98
February	2021	10,129,735.57
March	2021	12,144,061.25
April	2021	7,311,999.95
May	2021	12,150,225.01
June	2021	9,824,521.01
July	2021	12,092,346.32
August	2021	7,178,707.59



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

```
with cte as (SELECT *,
               MONTH(date) as Month,
               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 fiscal_quarter
               FROM gdb023.fact_sales_monthly
               WHERE fiscal_year = 2020)

SELECT fiscal_quarter as Quarter,
       sum(sold_quantity) as total_sold_quantity
FROM cte
GROUP BY Quarter
ORDER BY total_sold_quantity DESC;
```

Quarter	total sold quantity
Q1	7005619
Q2	6649642
Q4	5042541
Q3	2075087

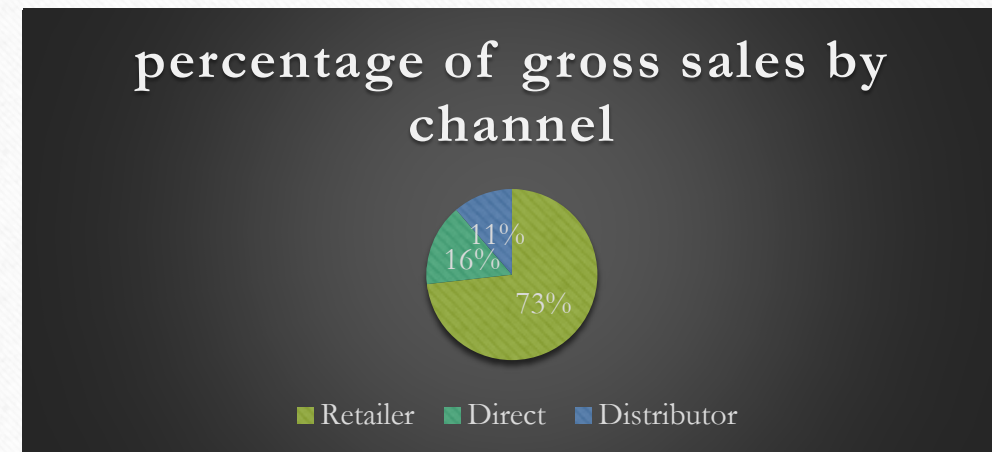
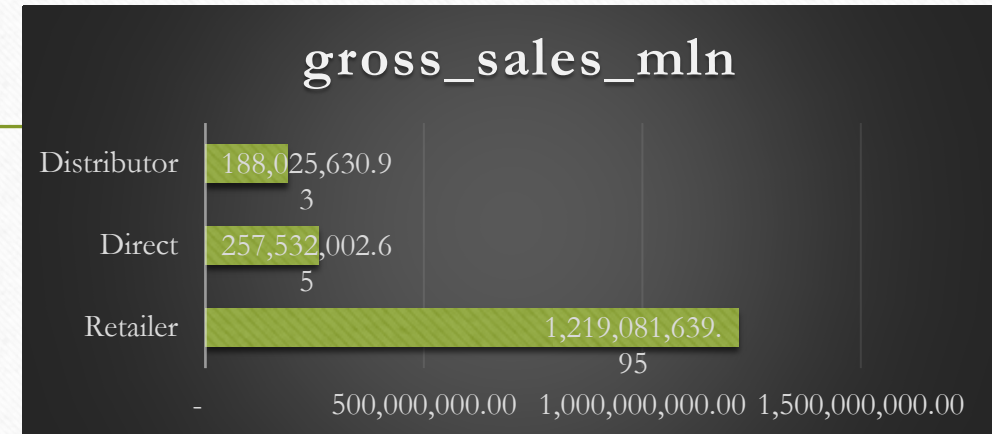


Which channel helped to bring more gross sales in the fiscal year 2021 and the percentage of contribution? The final output contains these fields:
channel gross_sales_mln percentage

```
with cte1 as (SELECT channel,
                    SUM(S.sold_quantity * G.gross_price) as gross_sales_mln
                FROM gdb023.fact_sales_monthly S
                LEFT JOIN gdb023.fact_gross_price G
                ON S.product_code = G.product_code AND S.fiscal_year = G.fiscal_year
                LEFT JOIN gdb023.dim_customer C
                ON S.customer_code = C.customer_code
                WHERE S.fiscal_year = 2021
                GROUP BY channel)

SELECT *,
       ROUND(gross_sales_mln / sum(gross_sales_mln) over()*100,2) as percentage
FROM cte1
GROUP BY channel
ORDER BY percentage DESC;
```

channel	gross sales mln	percentage
Retailer	1,219,081,639.95	73.23%
Direct	257,532,002.65	15.47%
Distributor	188,025,630.93	11.30%



Get the Top 3 products in each division that have a high total_sold_quantity in the fiscal_year 2021? The final output contains these fields: division, product_code, product, total_sold_quantity rank_order

```
with cte as (SELECT P.division,
P.product_code,
P.product,
sum(S.sold_quantity) as total_sold_quantity,
RANK()OVER(PARTITION BY P.division ORDER BY sum(S.sold_quantity) DESC) as rank_order
FROM gdb023.fact_sales_monthly S
LEFT JOIN gdb023.fact_gross_price G
ON S.product_code = G.product_code AND S.fiscal_year = G.fiscal_year
LEFT JOIN gdb023.dim_product P
ON S.product_code = P.product_code
WHERE S.fiscal_year = 2021
GROUP BY P.division,P.product_code,P.product
ORDER BY P.division, rank_order)

SELECT *
FROM cte
WHERE rank_order <= 3
```

<u>division</u>	<u>product_code</u>	<u>product</u>	<u>total_sold_quantity</u>	<u>rank_order</u>
N & S	A6720160103	AQ Pen Drive 2 IN 1	701373	1
N & S	A6818160202	AQ Pen Drive DRC	688003	2
N & S	A6819160203	AQ Pen Drive DRC	676245	3
P & A	A2319150302	AQ Gamers Ms	428498	1
P & A	A2520150501	AQ Maxima Ms	419865	2
P & A	A2520150504	AQ Maxima Ms	419471	3
PC	A4218110202	AQ Digit	17434	1
PC	A4319110306	AQ Velocity	17280	2
PC	A4218110208	AQ Digit	17275	3

Top 3 total_sold_quantity in fiscal year 2021 by division

