Customer Goods Ad_Hoc Insights

- Provide details to 10 ad_hoc query requests

- Provide insights supporting the results

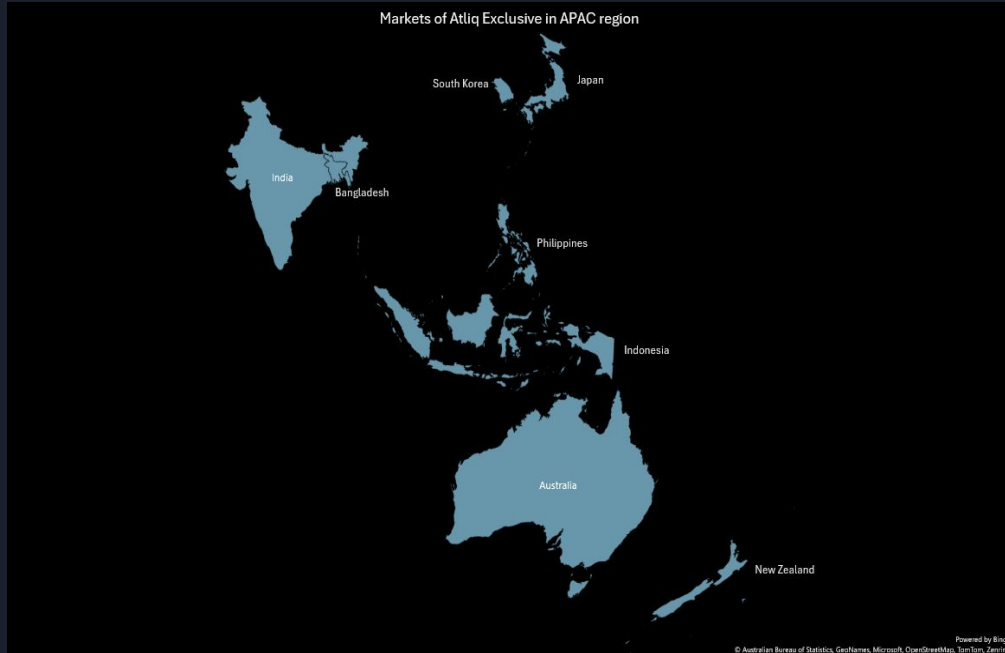Provide the list of markets in which customer "Atliq Exclusive" operates its business in the APAC region.

QUERY RESULT:

market
India
Indonesia
Japan
Philiphines
South Korea
Australia
Newzealand
Bangladesh

Markets of Atliq Exclusive in APAC region

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

INSIGHTS:

● The domain of Atliq Hardwares is widely spread over the APAC region

SQL Query:

```
SELECT DISTINCT market FROM dim_customer
WHERE region='APAC' AND customer='Atliq Exclusive';
```
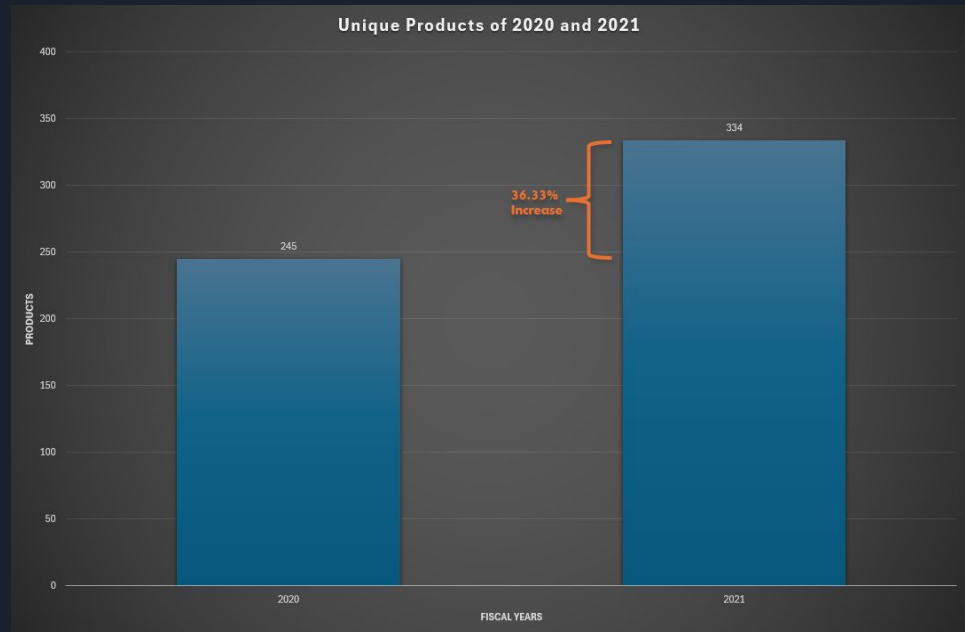
What is the percentage of unique product increase in 2021 vs. 2020?

QUERY RESULT:

product_count_2020	product_count_2021	increase_pct
245	334	36.33

Unique Products of 2020 and 2021

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

INSIGHTS:

- With the overall product increase of 36.33%, the company is showing impressive growth

SQL Query:

```
SET @product_count_2020 = (
    SELECT COUNT(DISTINCT product_code)
    FROM fact_gross_price
    WHERE fiscal_year = 2020
);
SET @product_count_2021 = (
    SELECT COUNT(DISTINCT product_code)
    FROM fact_gross_price
    WHERE fiscal_year = 2021
);
SELECT
    @product_count_2020 AS product_count_2020,
    @product_count_2021 AS product_count_2021,
    ROUND(((@product_count_2021 - @product_count_2020)/ @product_count_2020)*100,2) AS increase_pct;
```
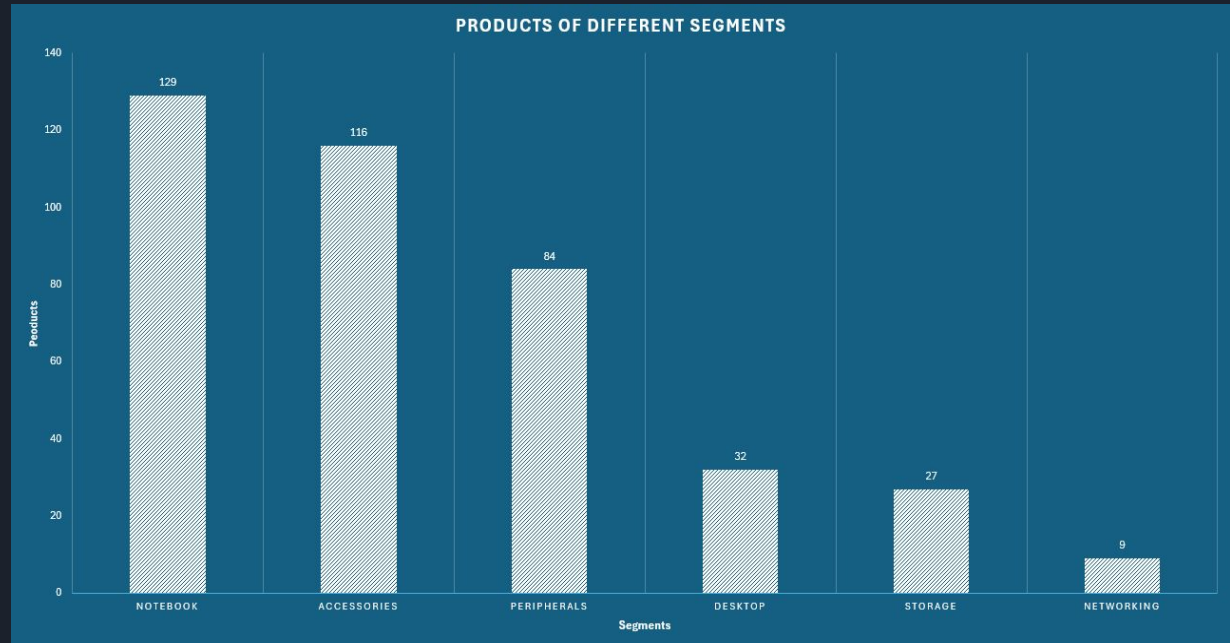
Provide a report with all the unique product counts for each segment and sort them in descending order of product counts.

QUERY RESULT:

segment	product_count
Notebook	129
Accessories	116
Peripherals	84
Desktop	32
Storage	27
Networking	9

PRODUCTS OF DIFFERENT SEGMENTS

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

INSIGHTS:

- Desktop, Storage, Networking segment hardwares only comprise only 17.12% of total hardwares

SQL Query:

SELECT segment, COUNT(DISTINCT product_code) as product_count FROM dim_product GROUP BY segment ORDER by COUNT(DISTINCT product_code) DESC;
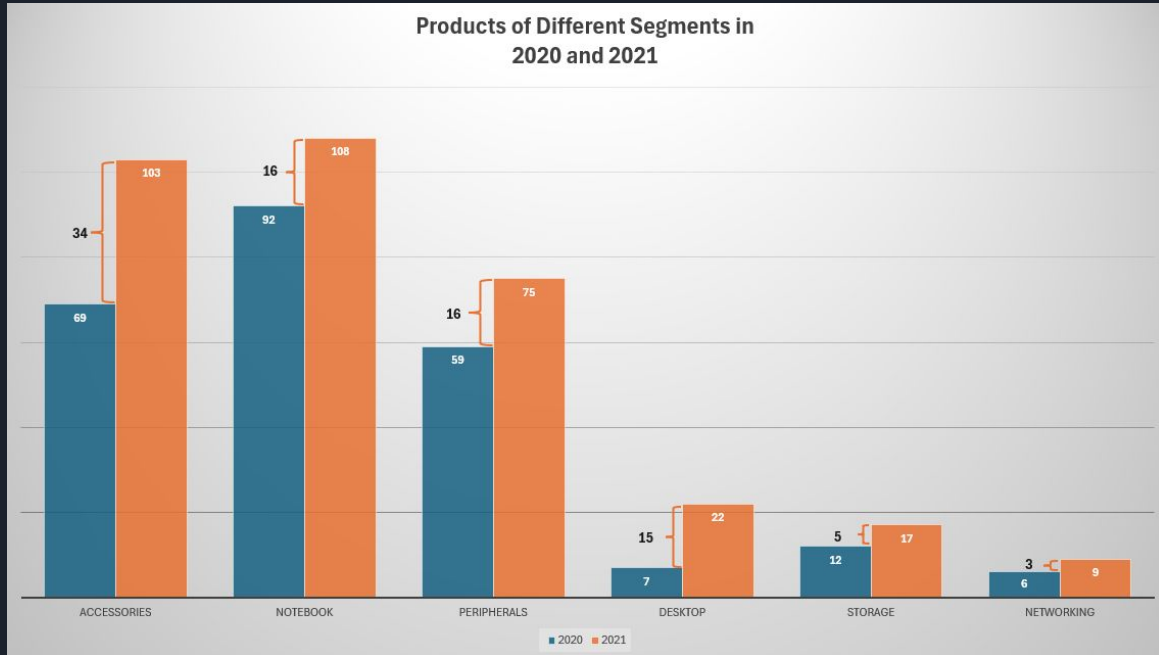
Which segment had the most increase in unique products in 2021 vs 2020?

QUERY RESULT:

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

Products of Different Segments in 2020 and 2021

	ACCESSORIES	NOTEBOOK	PERIPHERALS	DESKTOP	STORAGE	NETWORKING
2020	69	92	59	7	12	6
2021	103	108	75	22	17	9
increase	34	16	16	15	5	3

■ 2020 ■ 2021

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

INSIGHTS:

- For Storage and Networking segment hardwares the increase is minimal

SQL Query:

```
SELECT
a.segment,
COUNT(DISTINCT CASE WHEN b.fiscal_year=2020 THEN b.product_code END) as product_count_2020,
COUNT(DISTINCT CASE WHEN b.fiscal_year=2021 THEN b.product_code END) as product_count_2021,
COUNT(DISTINCT CASE WHEN b.fiscal_year=2021 THEN b.product_code END)-COUNT(DISTINCT CASE WHEN b.fiscal_year=2020
THEN b.product_code END) as increase
FROM dim_product a
JOIN fact_gross_price b
ON a.product_code=b.product_code
GROUP BY a.segment
ORDER BY increase DESC;
```

CODE
BASICS

Get the products that have the highest and lowest manufacturing costs

QUERY RESULT:

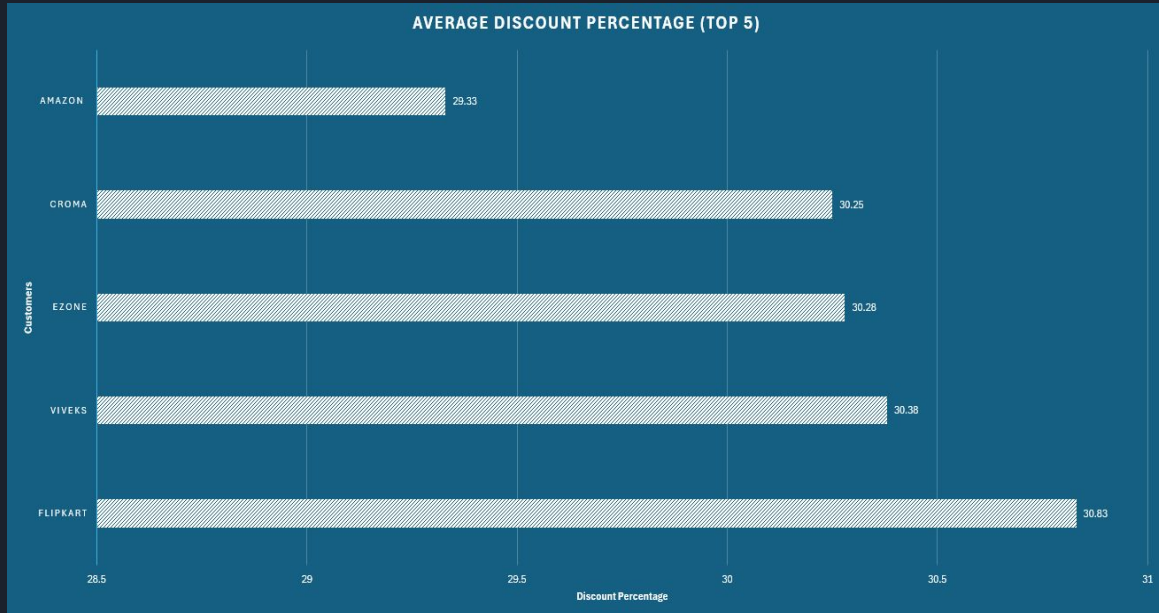| product_code	product	manufacturing_cost
A2118150101	AQ Master wired x1 Ms	0.8920
A6120110206	AQ HOME Allin1 Gen 2	240.5364

SQL Query:

```
(SELECT a.product_code, a.product, b.manufacturing_cost
FROM dim_product a
JOIN fact_manufacturing_cost b
ON a.product_code=b.product_code
ORDER BY b.manufacturing_cost
LIMIT 1)
UNION ALL
(SELECT a.product_code, a.product, b.manufacturing_cost
FROM dim_product a
JOIN fact_manufacturing_cost b
ON a.product_code=b.product_code
ORDER BY b.manufacturing_cost DESC
LIMIT 1)
```

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

QUERY RESULT:

customer_code	customer	avg_discount_pct
90002009	Flipkart	30.83
90002006	Viveks	30.38
90002003	Ezone	30.28
90002002	Croma	30.25
90002016	Amazon	29.33

AVERAGE DISCOUNT PERCENTAGE (TOP 5)

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

INSIGHTS:

- Noticeable competition between top 5 customers over average
  discount percentage which is a positive sign
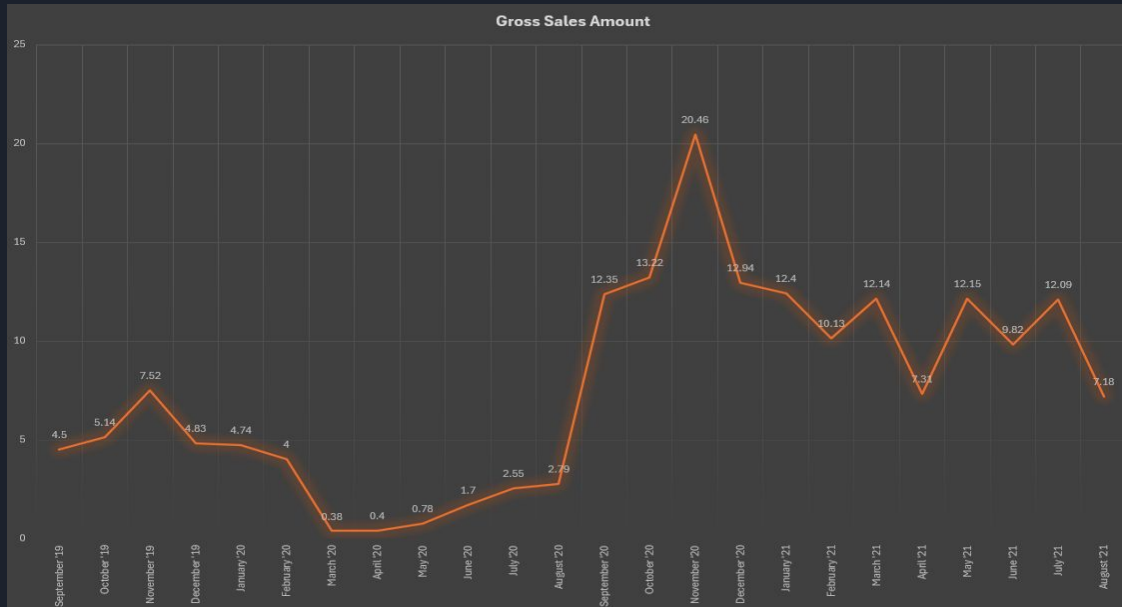
SQL Query:

```
SELECT a.customer_code, b.customer, ROUND(AVG(a.pre_invoice_discount_pct)*100,2) as avg_discount_pct
FROM fact_pre_invoice_deductions a
JOIN dim_customer b
ON a.customer_code=b.customer_code
WHERE b.sub_zone='INDIA' AND a.fiscal_year=2021
GROUP BY a.customer_code, b.customer
ORDER BY avg_discount_pct DESC
LIMIT 5;
```

CODE
BASICS

Get the complete report of the Gross sales amount for the customer "Atliq Exclusive" for each month

QUERY RESULT:

Gross Sales Amount

month_name	year	gross_sales_amount
September	2019	4.50
October	2019	5.14
November	2019	7.52
December	2019	4.83
January	2020	4.74
February	2020	4.00
March	2020	0.38
April	2020	0.40
May	2020	0.78
June	2020	1.70
July	2020	2.55
August	2020	2.79
September	2020	12.35
October	2020	13.22
November	2020	20.46
December	2020	12.94
January	2021	12.40
February	2021	10.13
March	2021	12.14
April	2021	7.31
May	2021	12.15
June	2021	9.82
July	2021	12.09
August	2021	7.18

Get the complete report of the Gross sales amount for the customer "Atliq Exclusive"
for each month

INSIGHTS:

- COVID pandemic and Silicon chip shortage in 2019-2020 severely affected the market

- Sales started recovering the pace from late 2020

SQL Query:

```
SELECT
    DATE_FORMAT(a.date, '%M') AS month_name,  YEAR(a.date) AS year,  ROUND(SUM(a.sold_quantity * c.gross_price) / 1000000, 2) AS gross_sales_amount
FROM
    fact_sales_monthly a
JOIN
    dim_customer b
ON
    a.customer_code = b.customer_code
JOIN
    fact_gross_price c
ON
    a.product_code = c.product_code
    AND a.fiscal_year = c.fiscal_year
WHERE
    b.customer = 'Atliq Exclusive'
GROUP BY
    month_name, month(a.date), year
ORDER BY
    year, month(a.date), month_name;
```
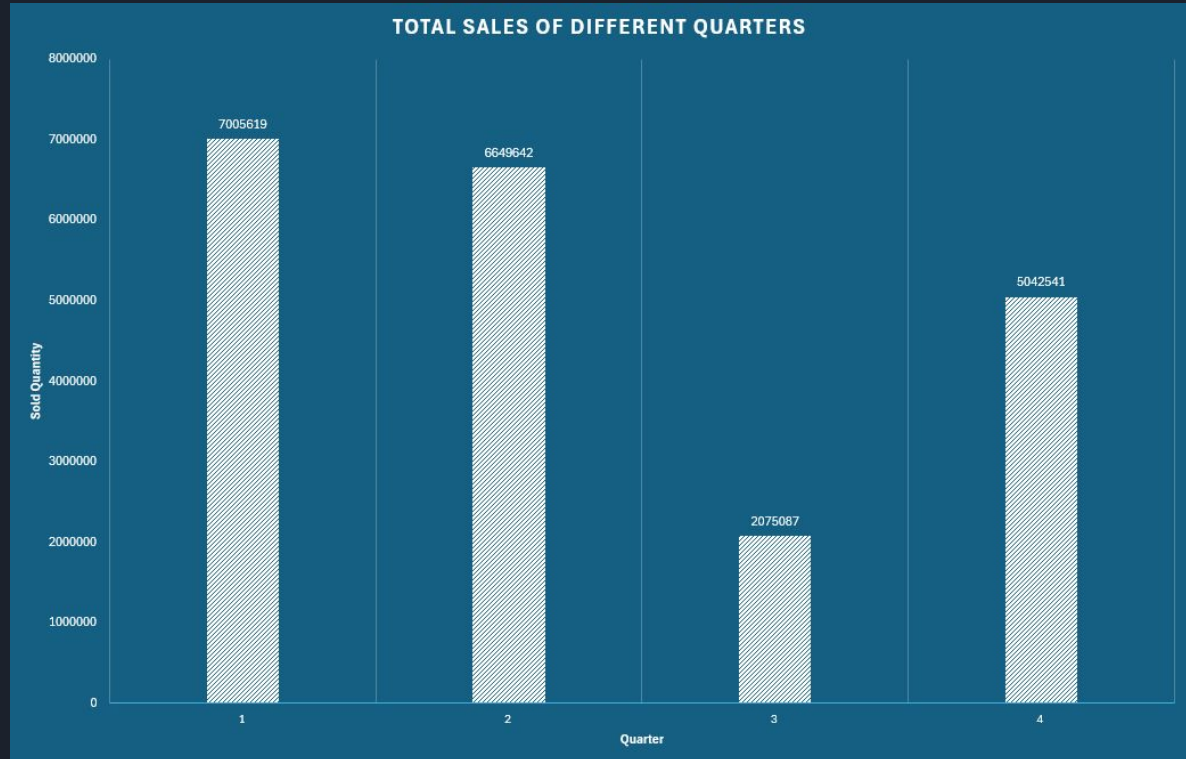
CODE
BASICS

In which quarter of 2020, got the maximum total_sold_quantity?

QUERY RESULT:

Quarters	total_sold_quantity
1	7005619
2	6649642
4	5042541
3	2075087

TOTAL SALES OF DIFFERENT QUARTERS

In which quarter of 2020, got the maximum total_sold_quantity?

INSIGHTS:

- Due to COVID pandemic and Silicon chip shortage the total sold quantity in 3rd Quarter of 2020 fiscal year (March 2020-May 2020) hit the lowest mark

SQL Query:

```
SELECT
        CASE
                WHEN month(a.date)  between 09 and 11 THEN 1
                WHEN month(a.date) = 12 OR month(a.date) between 01 and 02 THEN 2
                WHEN month(a.date)  between 03 and 05 THEN 3
                ELSE 4
        END AS Quarters,
        SUM(sold_quantity) as total_sold_quantity
FROM fact_sales_monthly a
WHERE fiscal_year=2020
GROUP BY Quarters
ORDER BY total_sold_quantity DESC;
```
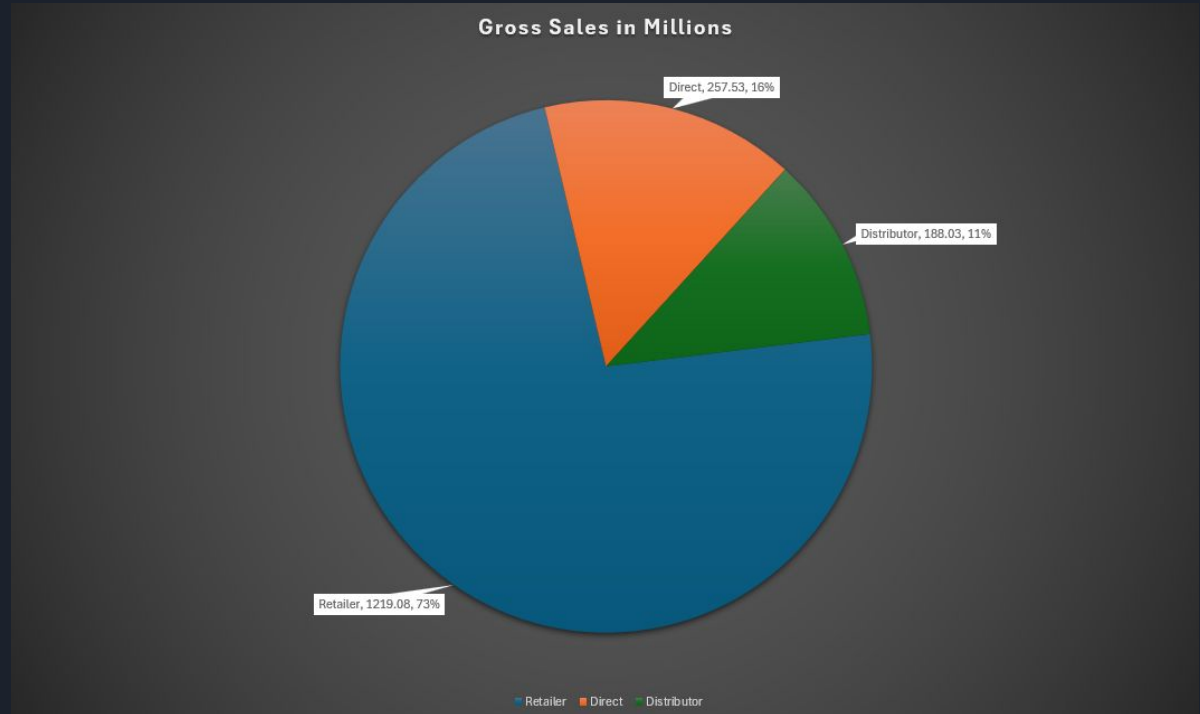
CODE
BASICS

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

QUERY RESULT:

channel	gross_sales	pct
Retailer	1219.08	73.23
Direct	257.53	15.47
Distributor	188.03	11.30

Gross Sales in Millions

Direct, 257.53, 16%
Distributor, 188.03, 11%
Retailer, 1219.08, 73%

Retailer Direct Distributor

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

INSIGHTS:

- Retailers are the most dominant channel for sales currently

- The company shouldn't rely heavily on one channel, they need to be equally reliant on other channels

SQL Query:

```
SET @total=(
SELECT
SUM(a.sold_quantity*c.gross_price) as gross_sales
FROM fact_sales_monthly a
JOIN dim_customer b
ON a.customer_code=b.customer_code
JOIN fact_gross_price c
ON a.product_code=c.product_code AND a.fiscal_year=c.fiscal_year
WHERE a.fiscal_year=2021
);
```

```
SELECT b.channel,
ROUND((SUM(a.sold_quantity*c.gross_price))/1000000,2) as gross_sales,
ROUND((SUM(a.sold_quantity*c.gross_price)/@total)*100,2) as pct
FROM fact_sales_monthly a
JOIN dim_customer b
ON a.customer_code=b.customer_code
JOIN fact_gross_price c
ON a.product_code=c.product_code AND a.fiscal_year=c.fiscal_year
WHERE a.fiscal_year=2021
GROUP BY b.channel
ORDER BY gross_sales DESC;
```
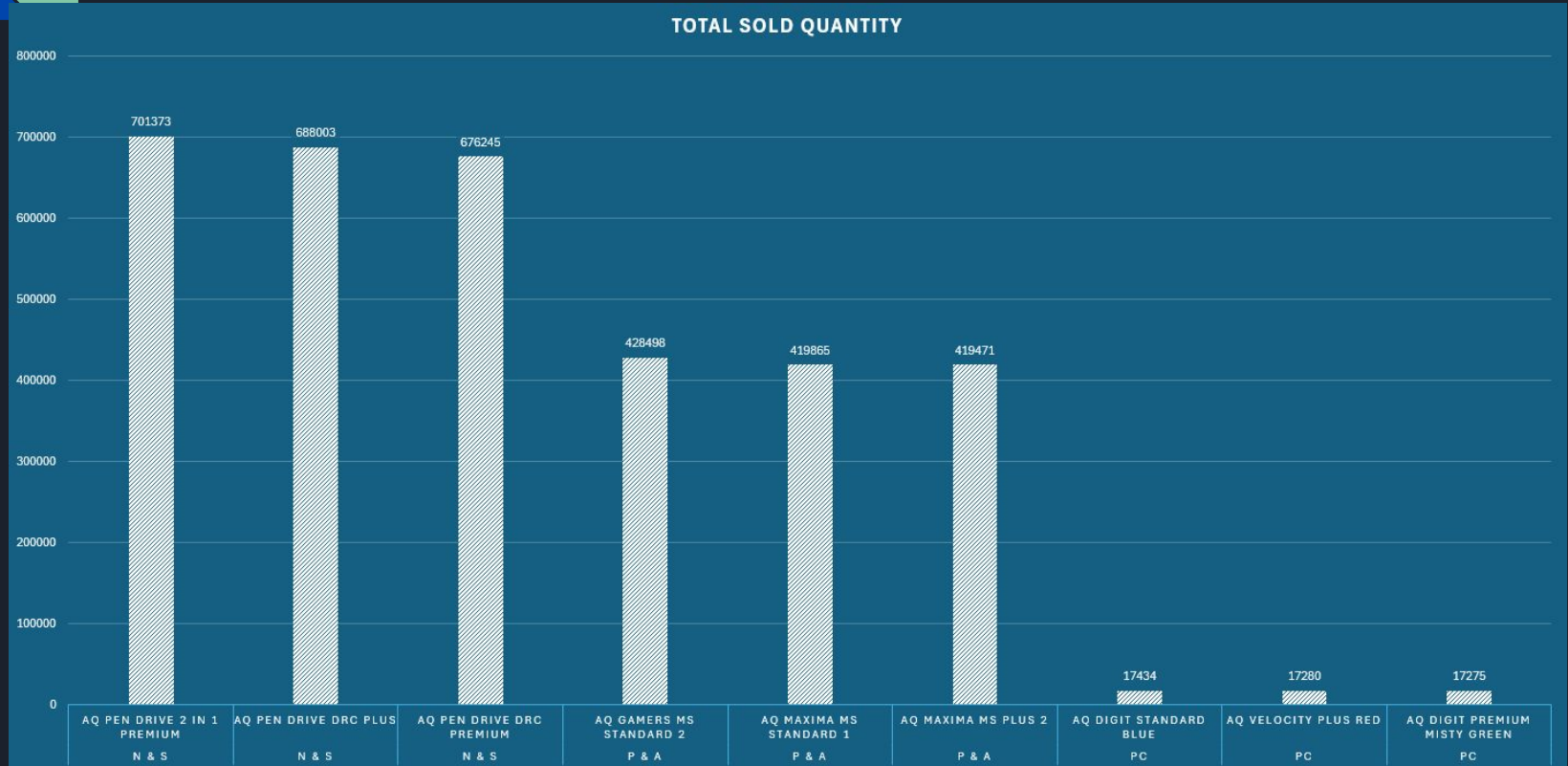
Get the Top 3 products in each division that have a high total_sold_quantity in the fiscal_year 2021?

QUERY RESULT:

division	product_code	product	variant	total_sold_quantity	product_rank
N & S	A6720160103	AQ Pen Drive 2 IN 1	Premium	701373	1
N & S	A6818160202	AQ Pen Drive DRC	Plus	688003	2
N & S	A6819160203	AQ Pen Drive DRC	Premium	676245	3
P & A	A2319150302	AQ Gamers Ms	Standard 2	428498	1
P & A	A2520150501	AQ Maxima Ms	Standard 1	419865	2
P & A	A2520150504	AQ Maxima Ms	Plus 2	419471	3
PC	A4218110202	AQ Digit	Standard Blue	17434	1
PC	A4319110306	AQ Velocity	Plus Red	17280	2
PC	A4218110208	AQ Digit	Premium Misty Green	17275	3

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

INSIGHTS:

- PC division product sales are the lowest because of their high average price and opposite for the N&S division products

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

SQL Query

```
(SELECT a.division, a.product_code, a.product, a.variant, SUM(b.sold_quantity)
astotal_sold_quantity,
ROW_NUMBER() OVER (ORDER BY SUM(b.sold_quantity) DESC) as product_rank
FROM dim_product a
JOIN fact_sales_monthly b
ON a.product_code=b.product_code
WHERE b.fiscal_year=2021 AND a.division='N & S'
GROUP BY a.division, a.product_code, a.product, a.variant
ORDER BY total_sold_quantity DESC
LIMIT 3)


UNION ALL
(SELECT a.division, a.product_code, a.product, a.variant, SUM(b.sold_quantity) as
total_sold_quantity,
ROW_NUMBER() OVER (ORDER BY SUM(b.sold_quantity) DESC) as product_rank
FROM dim_product a
JOIN fact_sales_monthly b
ON a.product_code=b.product_code
WHERE b.fiscal_year=2021 AND a.division='P & A'
GROUP BY a.division, a.product_code, a.product, a.variant
ORDER BY total_sold_quantity DESC
LIMIT 3)
```

```
UNION ALL
(
SELECT
a.division,
a.product_code,
a.product,
a.variant,
SUM(b.sold_quantity) as total_sold_quantity,
ROW_NUMBER() OVER (ORDER BY SUM(b.sold_quantity) DESC) as product_rank
FROM dim_product a
JOIN fact_sales_monthly b
ON a.product_code=b.product_code
WHERE b.fiscal_year=2021 AND a.division='PC'
GROUP BY a.division, a.product_code, a.product, a.variant
ORDER BY total_sold_quantity DESC
LIMIT 3
);
```

THANK YOU