

SQL

AD - HOC ANALYSIS

DOMAIN : CONSUMER GOODS



SUBRATHAZRA

```
DatabaseName;  
  
CREATE PROCEDURE ProcedureName  
    @FirstName  
    @LastName  
  
AS  
    .....  
    //Your SQL  
    Select FirstName, LastName  
    FROM Employee  
    WHERE FirstName = @FirstName  
  
    @ContactCode INT
```


Company Overview

Imagine a leading global computer hardware giant, AtliQ Hardwares, striving to make smarter, data-informed decisions. They recognized a need to bolster their data analytics team and tasked potential junior data analysts with a real-world challenge: deciphering ten ad-hoc business requests through the power of SQL. I stepped up to the challenge, embarking on a data-driven journey to extract actionable insights.

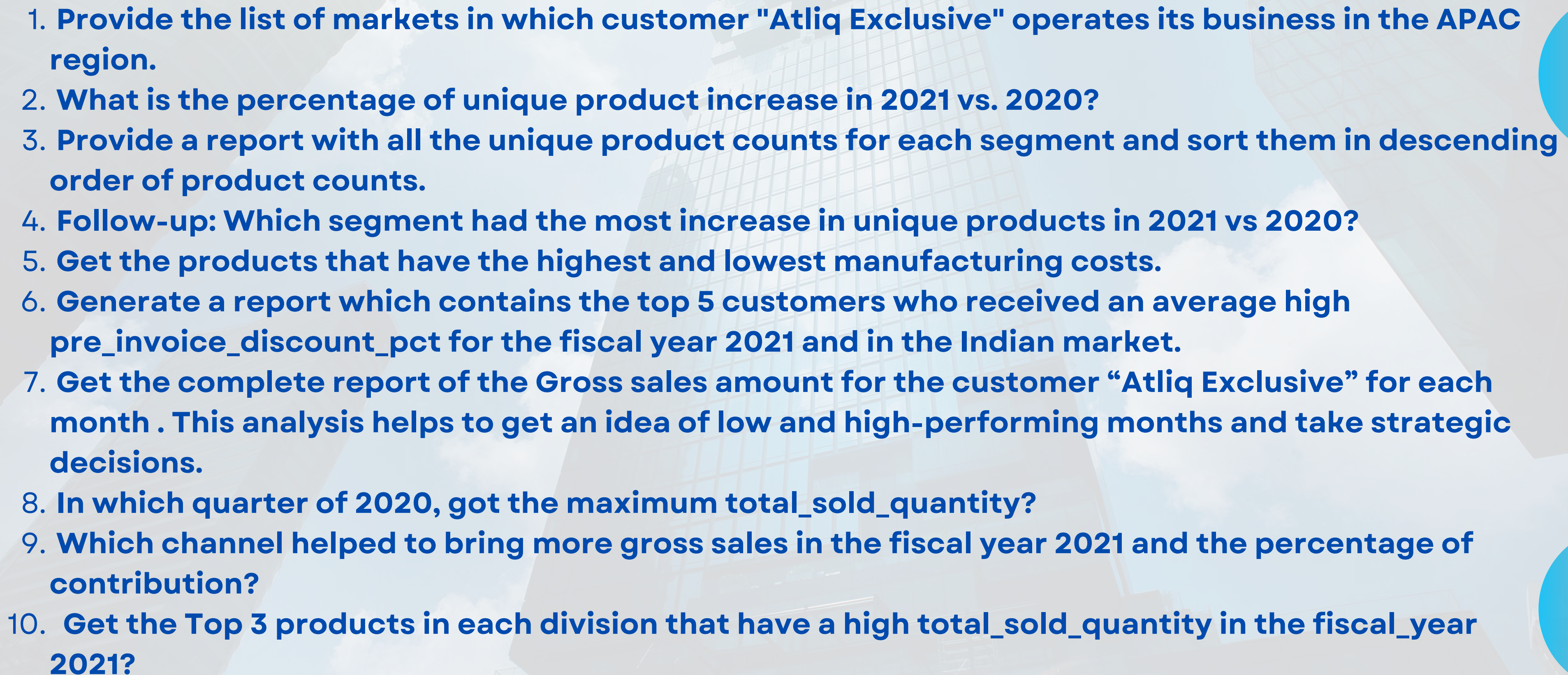




Problem Statement

- **Lack of Data-Driven Decision Making**
- **Need for Expanded Data Analytics Team**
- **Emphasis on Both Technical and Soft Skills**
- **SQL Challenge as Evaluation Method**

AD-HOC REQUESTS

- 
1. **Provide the list of markets in which customer "Atliq Exclusive" operates its business in the APAC region.**
 2. **What is the percentage of unique product increase in 2021 vs. 2020?**
 3. **Provide a report with all the unique product counts for each segment and sort them in descending order of product counts.**
 4. **Follow-up: Which segment had the most increase in unique products in 2021 vs 2020?**
 5. **Get the products that have the highest and lowest manufacturing costs.**
 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.**
 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.**
 8. **In which quarter of 2020, got the maximum total_sold_quantity?**
 9. **Which channel helped to bring more gross sales in the fiscal year 2021 and the percentage of contribution?**
 10. **Get the Top 3 products in each division that have a high total_sold_quantity in the fiscal_year 2021?**

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

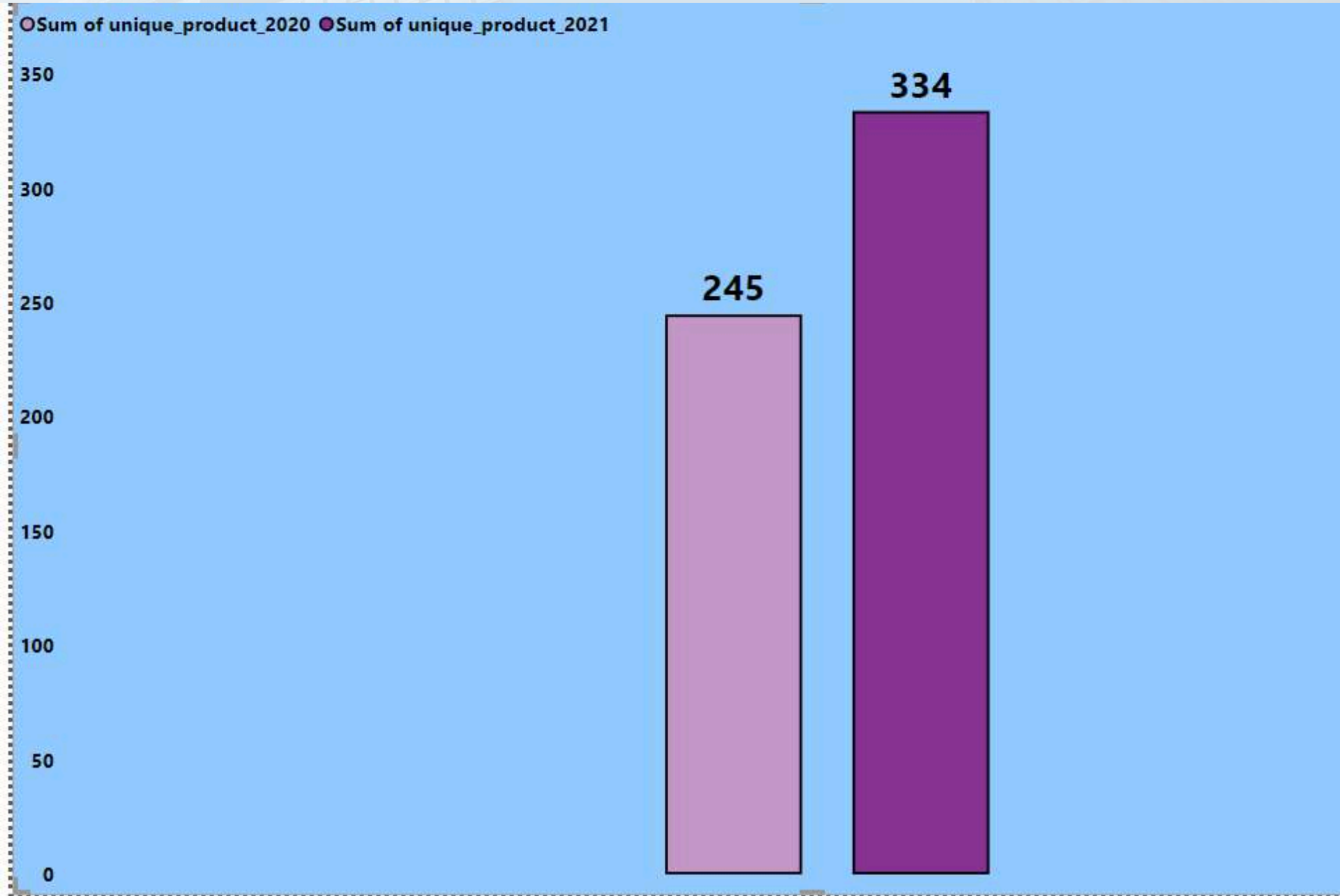
market	customer	region
India	Atliq Exclusive	APAC
Indonesia	Atliq Exclusive	APAC
Japan	Atliq Exclusive	APAC
Philiphines	Atliq Exclusive	APAC
South Korea	Atliq Exclusive	APAC
Australia	Atliq Exclusive	APAC
Newzealand	Atliq Exclusive	APAC
Bangladesh	Atliq Exclusive	APAC



Insights: Broad market presence in APAC region in 8 countries

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

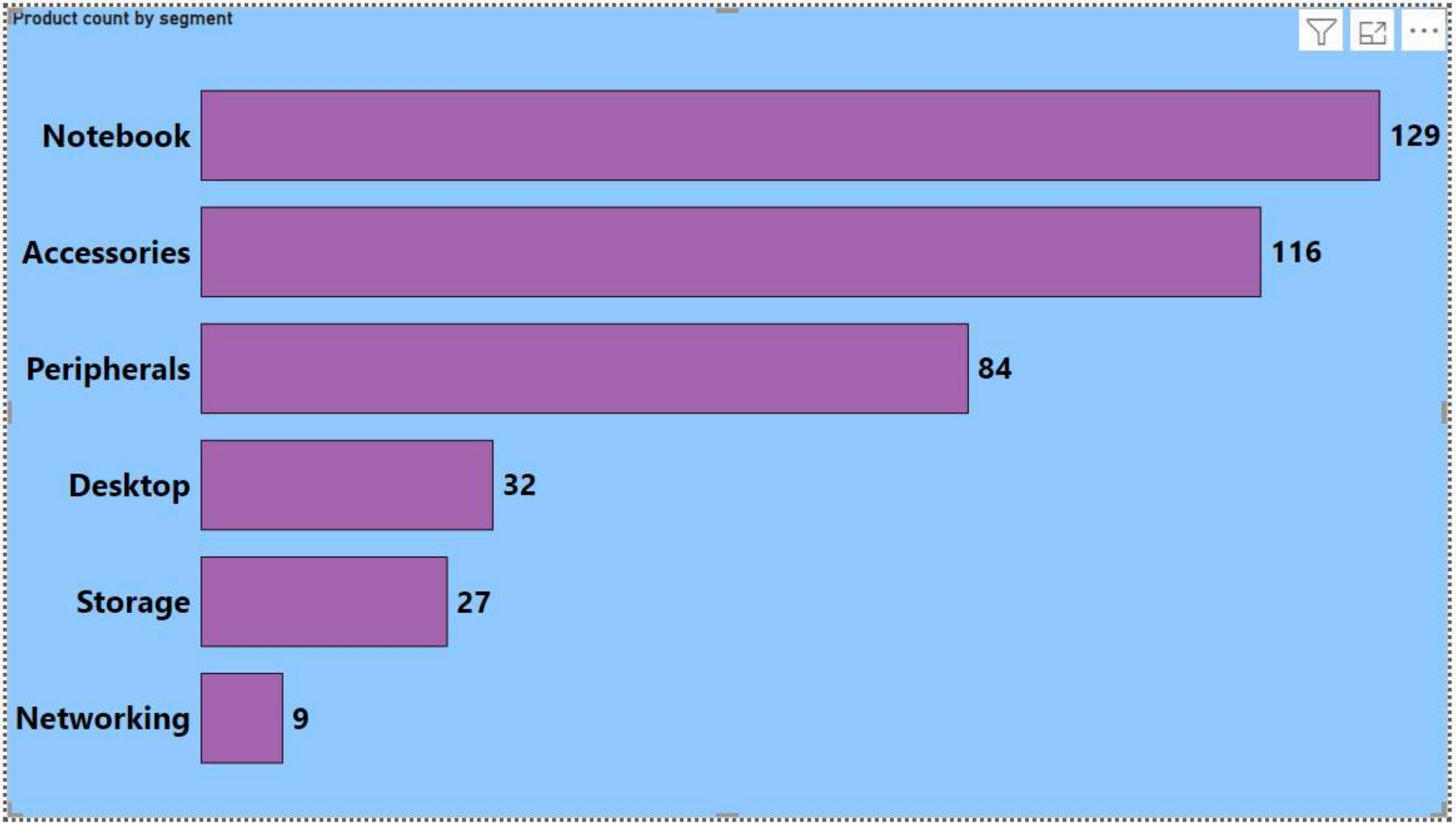
unique_products_2020	unique_products_2021	percentage_chg
245	334	36.3265



Insights: Atliq’s product count increases by 36.32 % from 245 in the FY 2020 to 334 in the FY 2021

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

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

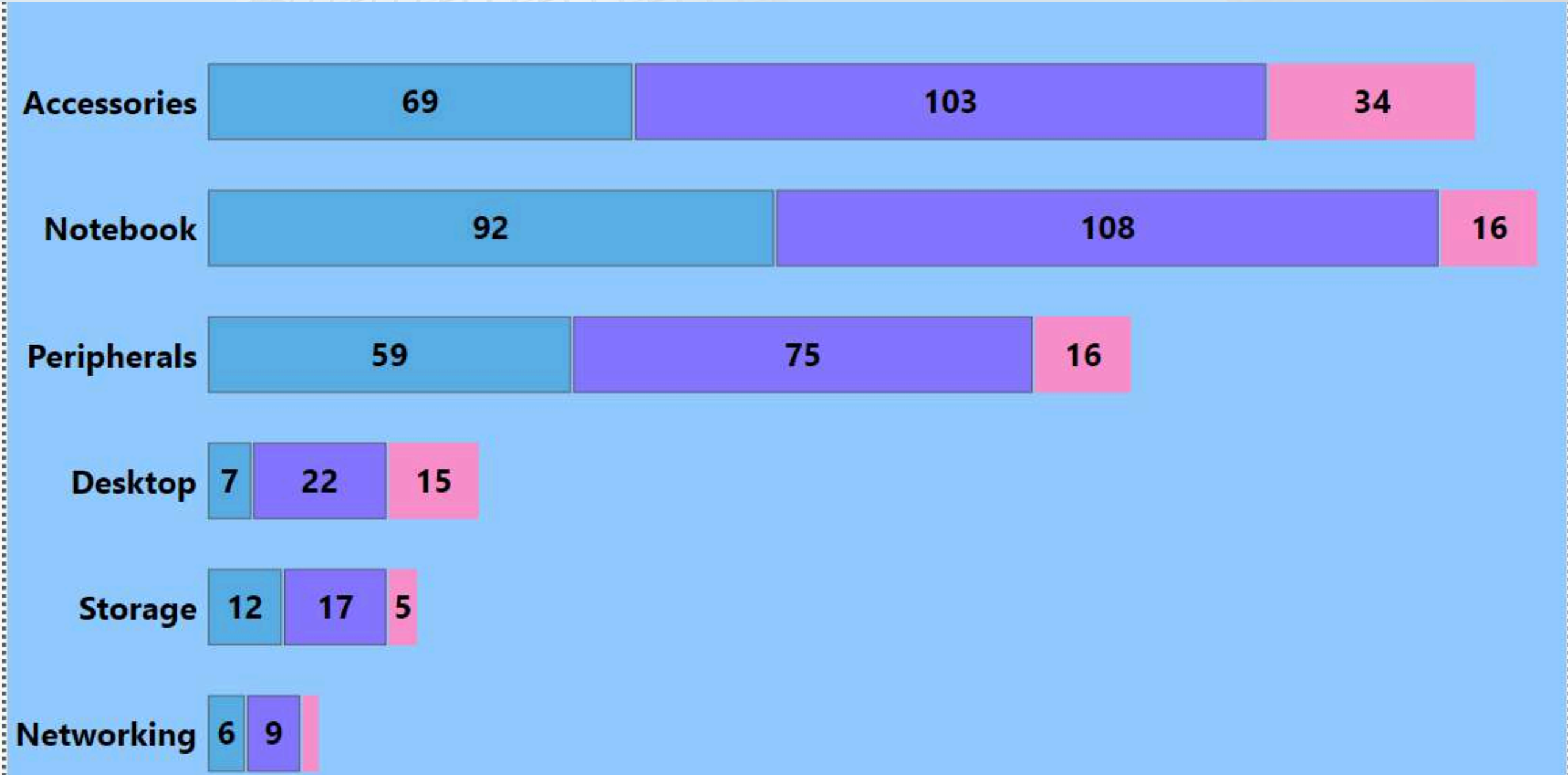


Insights: Notebooks and accessories have the highest product counts, suggesting greater market demand for these categories.

Follow-up: Which segment had the most increase in unique products in 2021 vs 2020?

Insights:
Strong growth in accessories, coupled with consistent demand for notebooks and peripherals, identifies these segments as prime investment opportunities.

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.

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



Insights:

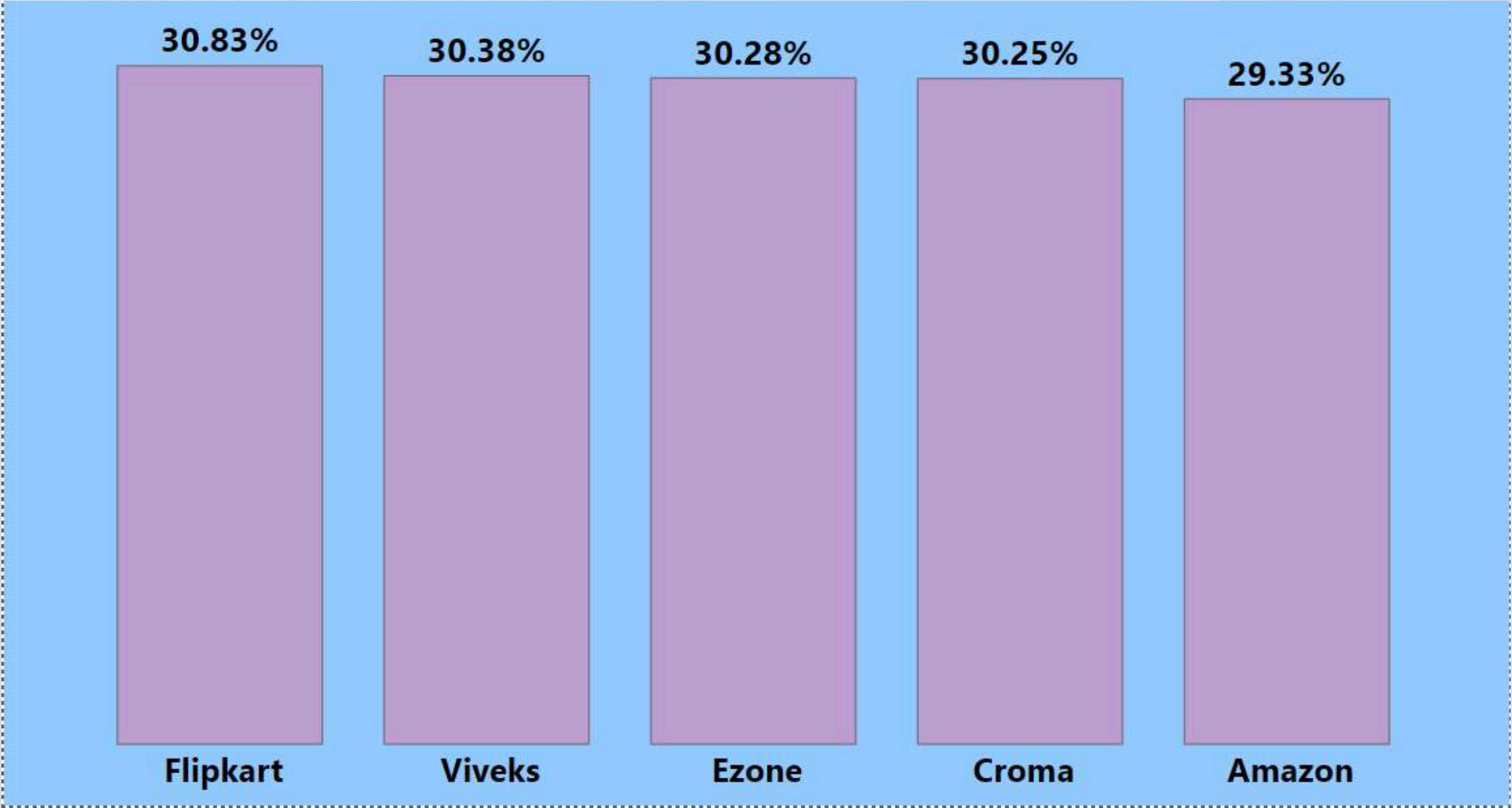
Investigate manufacturing cost reduction opportunities for high-cost products, such as the AQ HOME All-in-1 Gen 2.

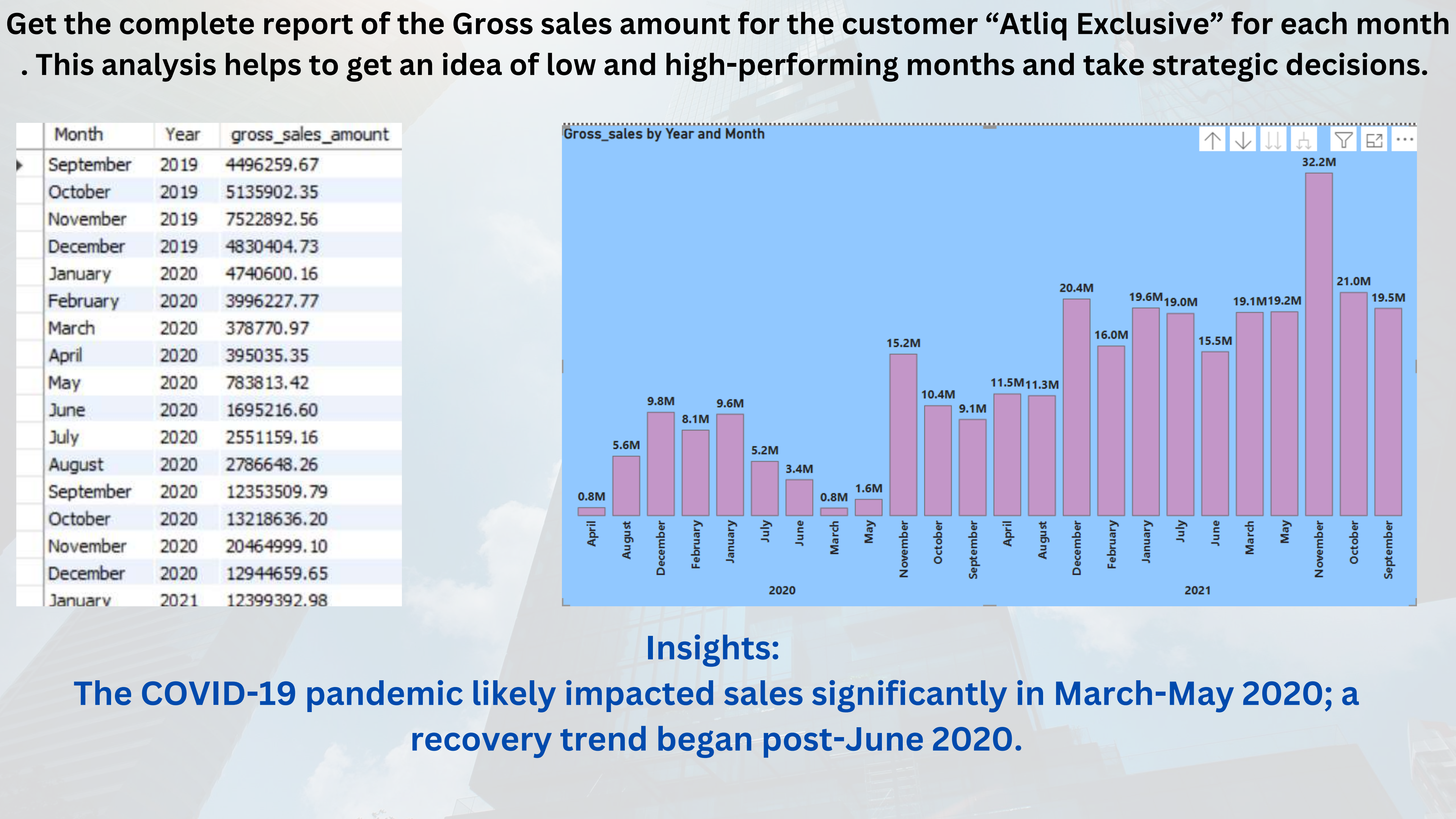
Generate a report which contains the top 5 customers who received an average high pre_invoice_discount_pct for the fiscal year 2021 and in the Indian market.

Insights:

High discounts (over 30%) for major customers like Flipkart, Viveks, and Ezone drive sales volume, but careful margin management is crucial.

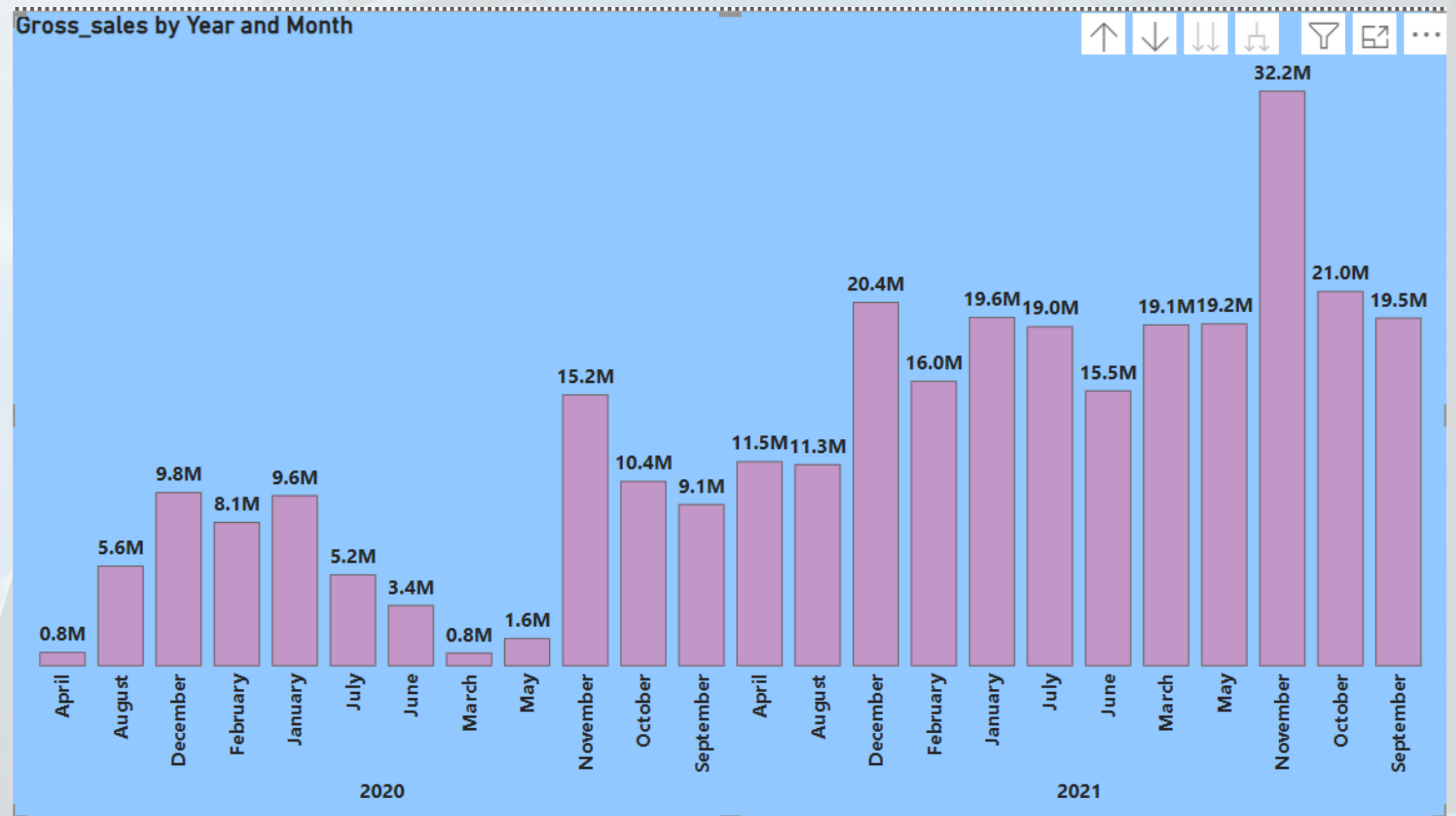
customer_code	customer	avg_discount_pct
90002009	Flipkart	30.83%
90002006	Viveks	30.38%
90002003	Ezone	30.28%





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.

	Month	Year	gross_sales_amount
▶	September	2019	4496259.67
	October	2019	5135902.35
	November	2019	7522892.56
	December	2019	4830404.73
	January	2020	4740600.16
	February	2020	3996227.77
	March	2020	378770.97
	April	2020	395035.35
	May	2020	783813.42
	June	2020	1695216.60
	July	2020	2551159.16
	August	2020	2786648.26
	September	2020	12353509.79
	October	2020	13218636.20
	November	2020	20464999.10
	December	2020	12944659.65
	January	2021	12399392.98

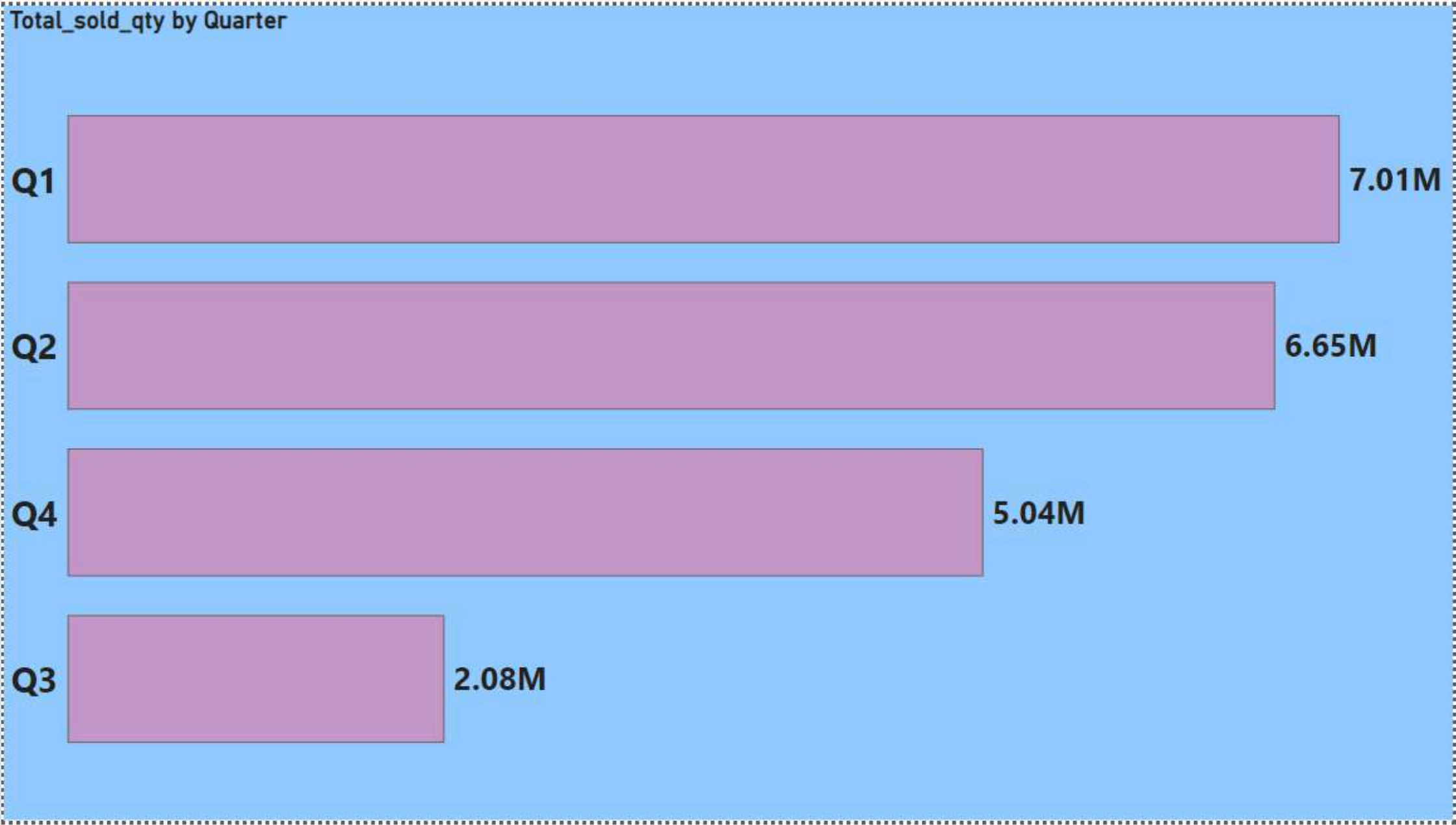


Insights:

The COVID-19 pandemic likely impacted sales significantly in March-May 2020; a recovery trend began post-June 2020.

In which quarter of 2020, got the maximum total_sold_quantity?

Quarter	total_sold_qty
Q1	7005619
Q2	6649642
Q4	5042541
Q3	2075087

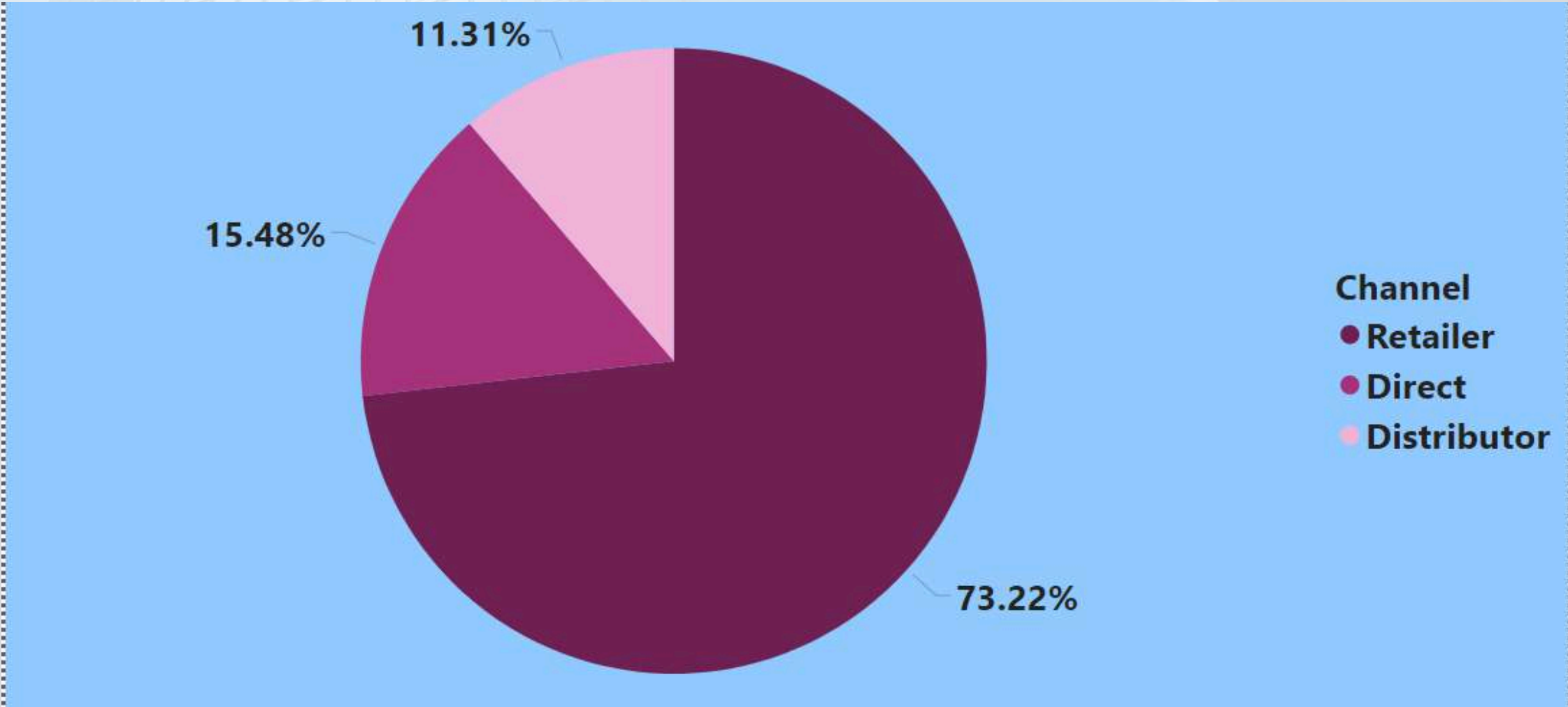


Insights: Q1 achieved peak sales volume at approximately 7 million units, demonstrating strong early-year performance.

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

Insights:
Atliq's sales are primarily driven by the retail channel, which contributes a significant 73.22% of total gross sales.

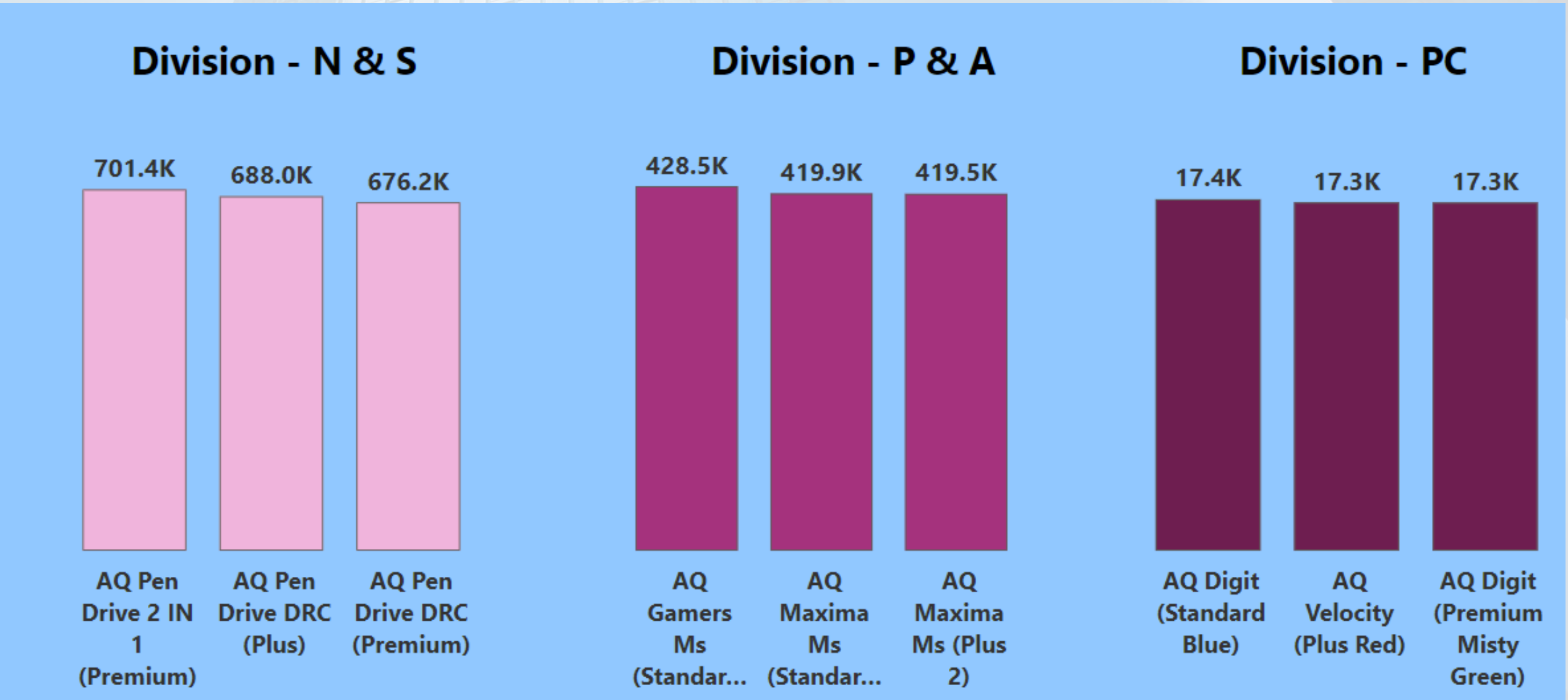
channel	gross_sales_mln	pct_contribution
Retailer	1924.17	73.22 %
Direct	406.69	15.48 %
Distributor	297.18	11.31 %



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

Insights:
Pendrives led sales in Divisions N & S, while Gamers MS and Digit were the top performers in Divisions P & A and PC, respectively.

division	product_code	product_name	total_sold_quantity	rank_order
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	AO Velocity Plus Red	17280	2





CERTIFICATE *of Completion*



Subrat Hazra

Learned SQL from beginner to advanced level by working on real-time business analytics requirements from a dataset with more than 1.5 million records and passed the final exam with more than 70% score

Course Name

SQL Beginner to Advanced For Data Professionals

Lecture Hours: **11:12**

Estimated Practice Hours: **17**

Date : **Dec 25, 2024**

GUID: **CB-50-417442**

The background is a deep blue gradient. It features several overlapping, semi-transparent geometric patterns. These include a grid of small squares and a pattern of parallel lines, both of which are tilted at various angles. In the top right corner, there is a solid light blue circle. In the bottom left corner, there is a semi-transparent circle that shows the underlying grid pattern. The text "Thank You!" is centered in the middle of the image in a white, sans-serif font.

Thank You!