



# AD HOC ANALYSIS CONSUMER GOODS DOMAIN

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# OVERVIEW

- About Atliq Hardwares
- Project Objectives
- Ad Hoc Analysis & Insights

# ATLIQ HARDWARES

- Atliq Hardwares (a fictitious company), a prominent computer hardware manufacturer based in India, has also successfully expanded its reach to numerous other countries.
- However, the management realized that they lack sufficient insights to make swift and intelligent decisions based on data.



# PROJECT OBJECTIVES



## Aim

Atliq Hardwares aim to grow their data analytics team by recruiting several junior data analysts.

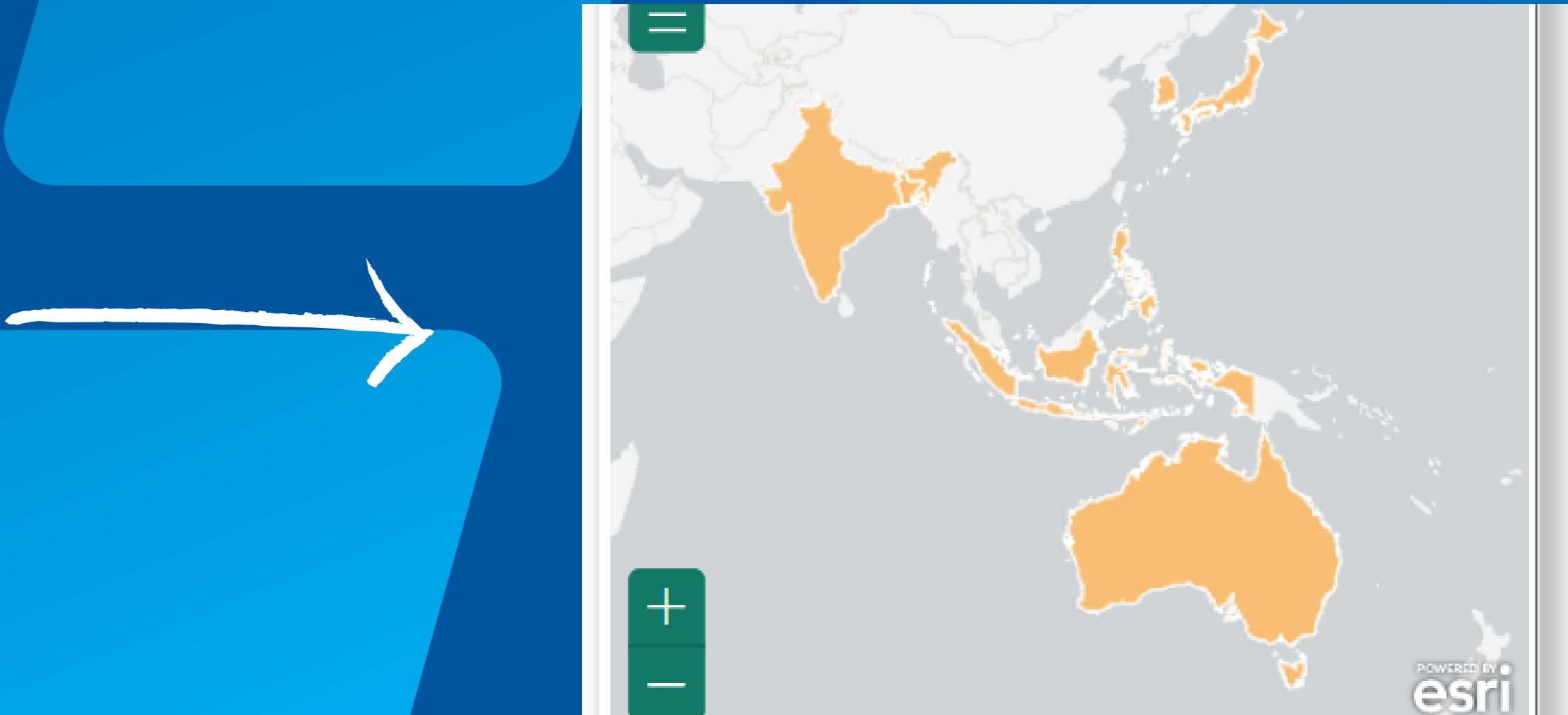


## Objective

Tony Sharma, the data analytics director, seeks candidates proficient in both technical and soft skills. To assess these abilities, he decided to organize a SQL challenge.

# AD HOC ANALYSIS INSIGHTS

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

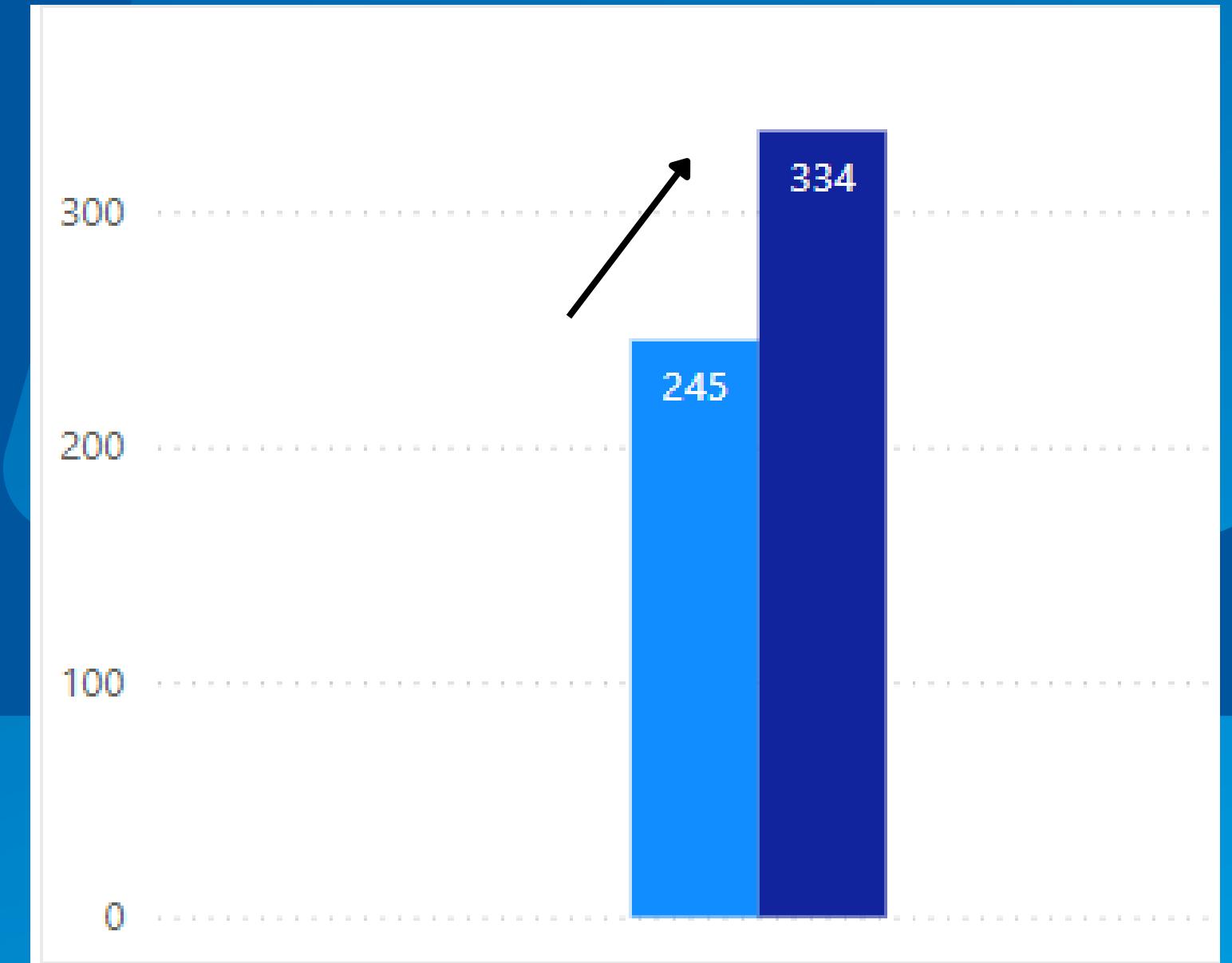


**INSIGHTS:**  
AtliQ Exclusive operates its business in various South east Asian and Australian markets

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

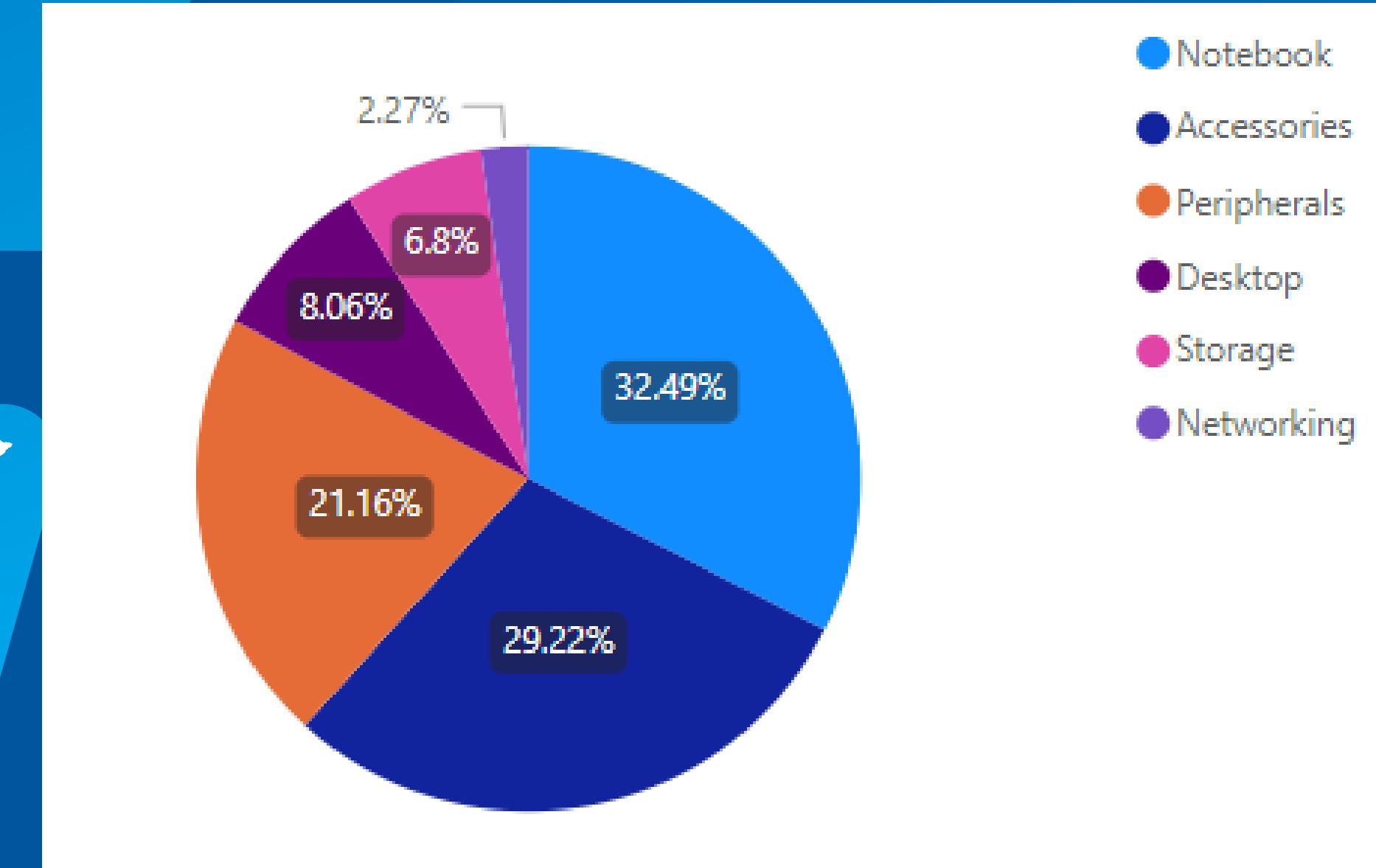
unique_products_2020	unique_products_2021	percentage_chg
245	334	36.33

**INSIGHTS:**  
Increase in unique products  
indicates growth in innovation &  
Increase in demand



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

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

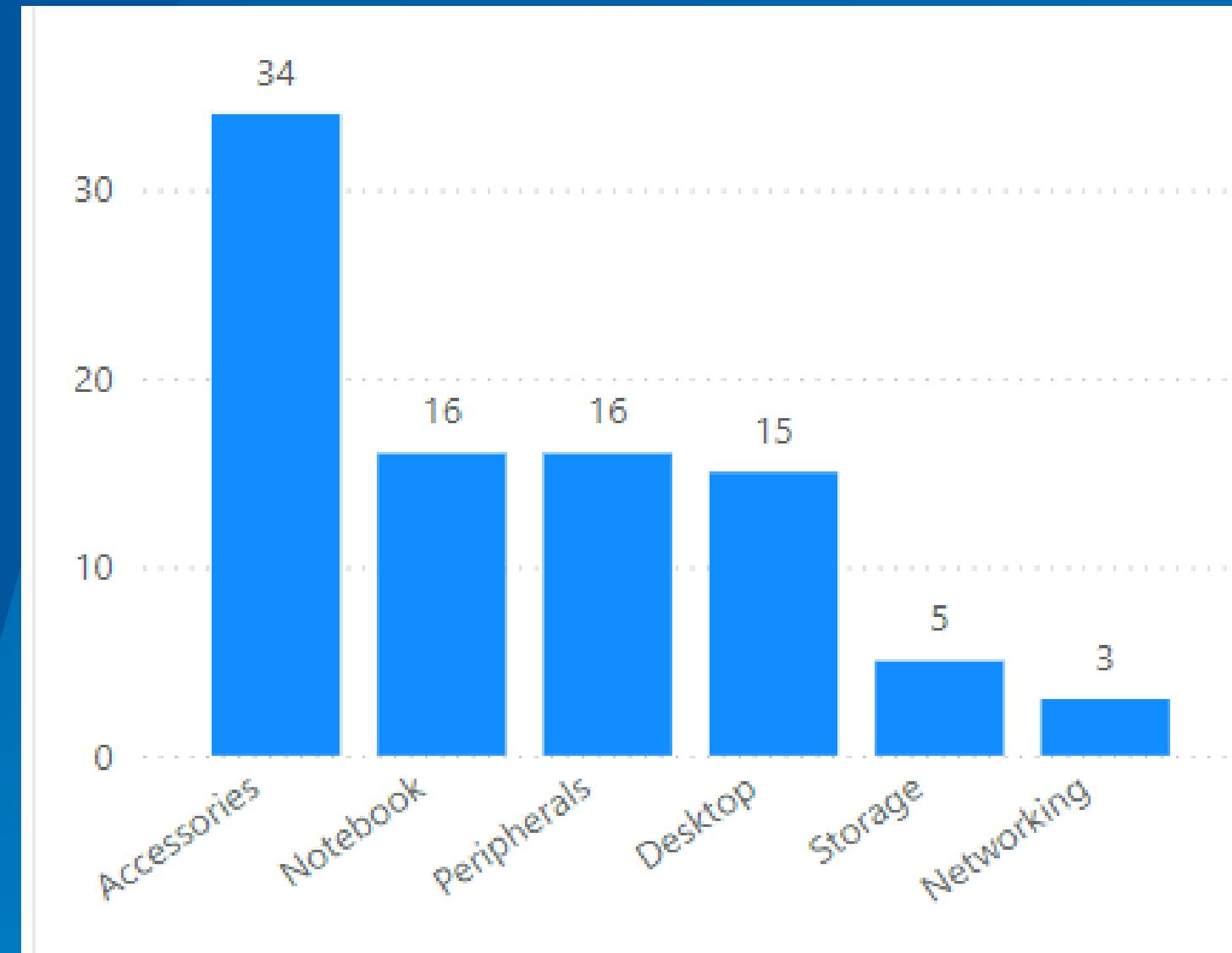


## INSIGHTS:

- Notebook, Accessories, Peripherals form 83% of the AtliQ Hardware products.
- There should be higher focus on Storage & Networking segments - they form just 9% of the total products

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

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



## INSIGHTS:

- Accessories segment had the highest difference, implying highest production growth
- Storage & Networking segments - they are slow-growing segments

Get the products that have the highest and lowest manufacturing costs. The final output should contain these fields: product\_code, product, manufacturing\_cost

### Highest Manufacturing Cost

product_code	product	manufacturing_cost
A6120110206	AQ HOME Allin1 Gen 2	240.5364

### Lowest Manufacturing Cost

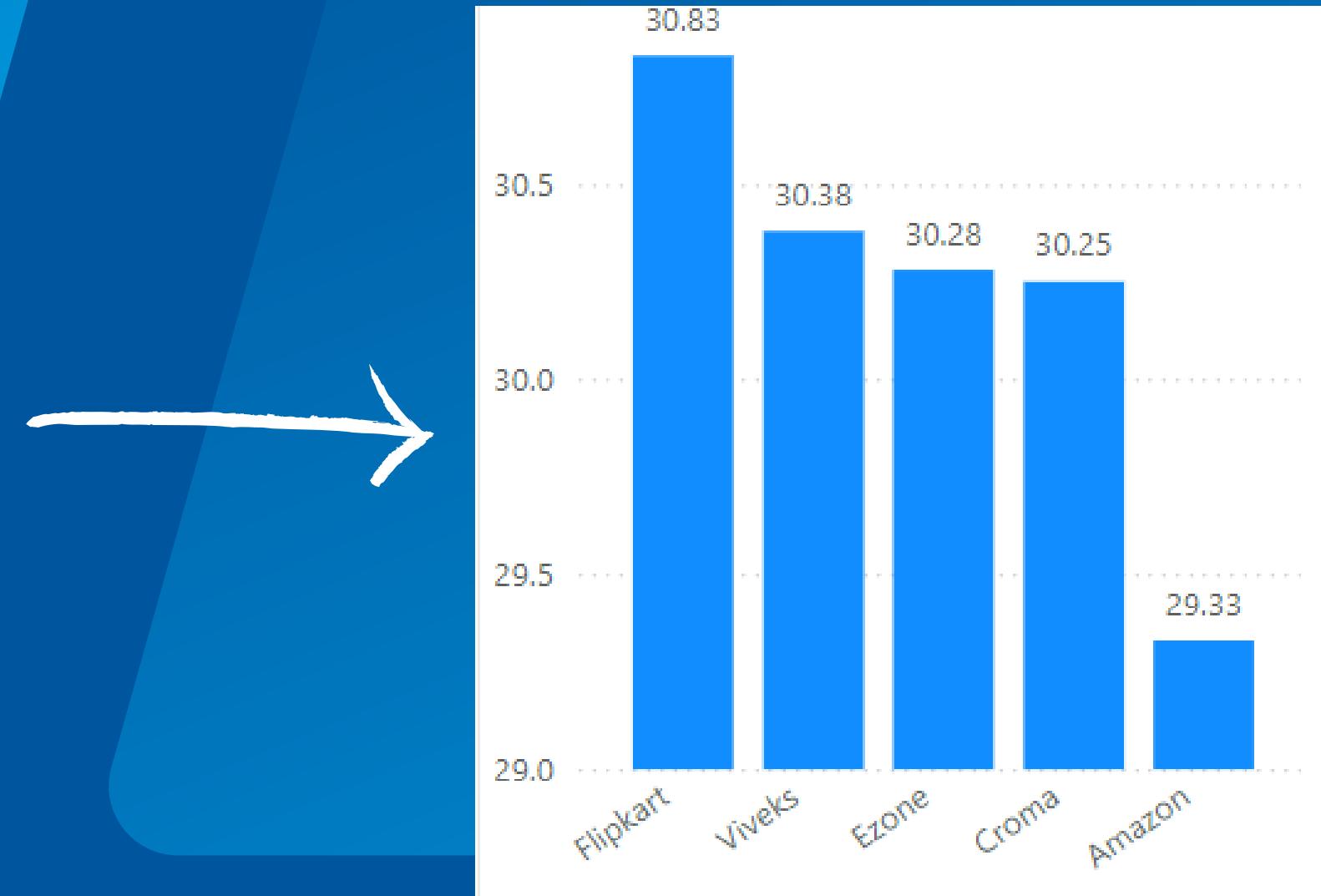
product_code	product	manufacturing_cost
A2118150101	AQ Master wired x1 Ms	0.8920

### INSIGHTS:

- AQ HOME Allin1 Gen2 (Personal desktop) had the highest manufacturing cost
- AQ Master wired mouse had the least

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

customer_code	customer	average_discount_percentage
90002009	Flipkart	0.3083
90002006	Viveks	0.3038
90002003	Ezone	0.3028
90002002	Croma	0.3025
90002016	Amazon	0.2933



## INSIGHTS:

- Flipkart has received highest average discount percentage of 30.83%, indicating the most important customer for AtliQ Hardwares

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

Calendar_Month	Fiscal_Month	Fiscal_Year	Gross_sales_amount
September	1	2020	4496259.67
October	2	2020	5135902.35
November	3	2020	7522892.56
December	4	2020	4830404.73
January	5	2020	4740600.16
February	6	2020	3996227.77
March	7	2020	378770.97
April	8	2020	395035.35
May	9	2020	783813.42
June	10	2020	1695216.60
July	11	2020	2551159.16
August	12	2020	2786648.26

**Fiscal Year 2020**

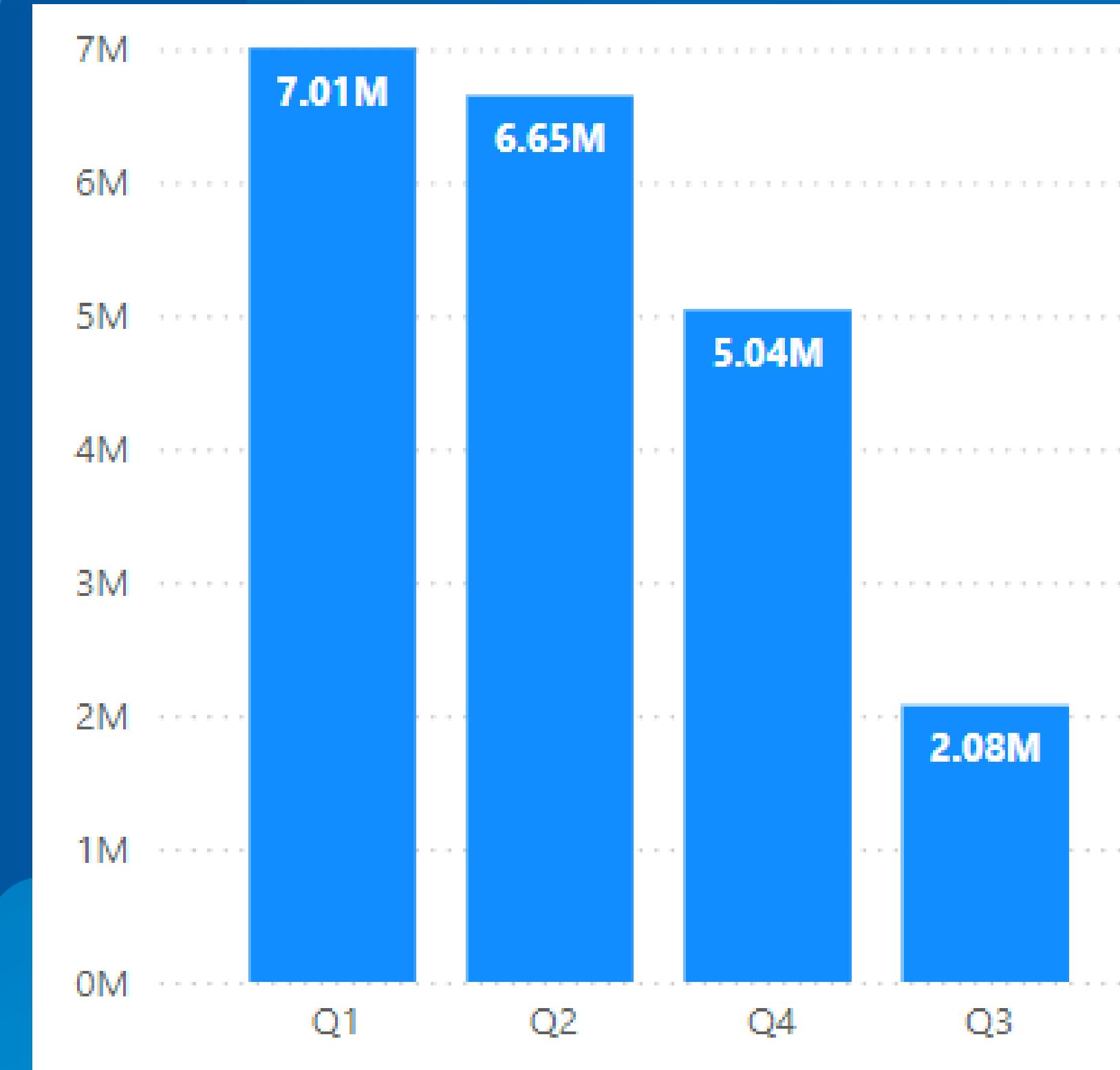
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## Fiscal Year 2021

Month	Year	Gross Sales Amount
September	2021	12353509.79
October	2021	13218636.20
November	2021	20464999.10
December	2021	12944659.65
January	2021	12399392.98
February	2021	10129735.57
March	2021	12144061.25
April	2021	7311999.95
May	2021	12150225.01
June	2021	9824521.01
July	2021	12092346.32
August	2021	7178707.59

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

Quarter	Total_Sold_Quantity
Q1	7005619
Q2	6649642
Q4	5042541
Q3	2075087

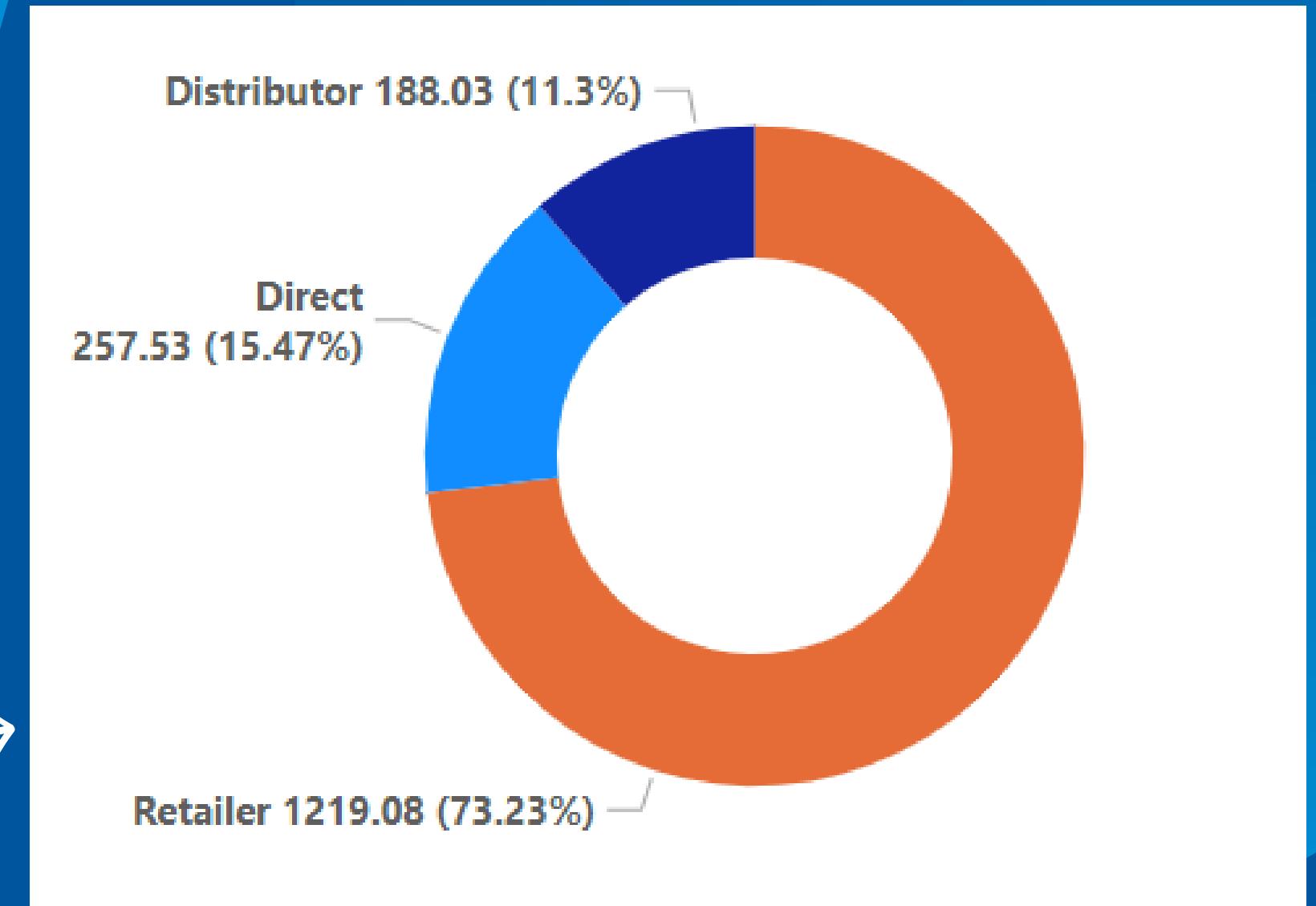


## INSIGHTS:

- Q1 has recorded the highest number of units sold overall
- Q3 has the least number of units sold in FY 2020

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

channel	Gross_Sales_MLN	percentage
Retailer	1219.08	73.23
Direct	257.53	15.47
Distributor	188.03	11.30



## INSIGHTS:

- Retailer channel has huge contribution i.e., 73% towards AtliQ Hardwares' gross sales
- There's scope for improvement in case of Distributor channel

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

division	product_code	product	Total_Sold_Quantity	rank_order
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

## INSIGHTS:

- AQ Pen Drive is the leading product in terms of total sold quantity in N & S division
- In case of P & A division AQ Gamers mouse is the leading product
- AQ Digit is the highest sold product in PC division

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