



ATLIQ HARDWARE

Consumer Goods Ad Hoc Insights

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In this Presentation

Overview

- Objective
- Company's Detail and Market
- Data, Request, and Tools
- Ad-hoc requests along with queries, results, and insights

Objective

- **Atliq Hardware** (imaginary company) is one of the leading computer hardware producers in India.
- However, the management noticed that they **do not get enough insights** to make quick and smart data-informed decisions.
- They want to expand their **data analytics team** by adding several junior data analysts.
- **Tony Sharma**, their **data analytics director** wanted to hire someone who is good at both tech and soft skills.
- There are **10 ad-hoc requests** for which the company needs insights.



Company's Detail and Market

Atliq Hardware is a manufacturer of computer hardware and accessories.

Fiscal Year

September 2019 - August 2020

FY 2020

September 2020 - August 2021 FY 2021



Atliq Hardware

Data, Requests, and Tools

Codebasics SQL Challenge

Requests:

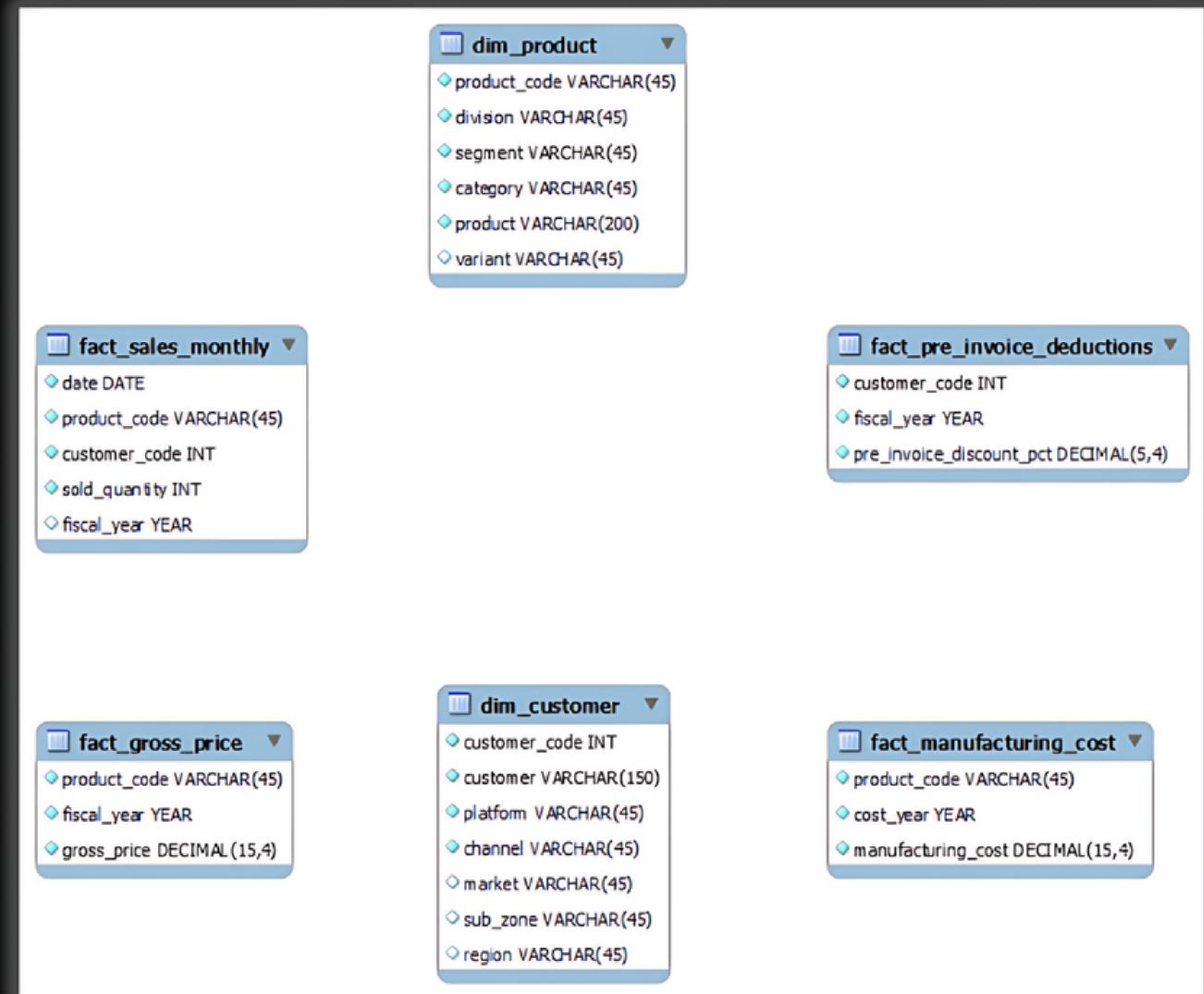
- Provide the list of markets in which customer "Atliq Exclusive" operates its business in the APAC region.
- What is the percentage of unique product increase in 2021 vs. 2020? The final output contains these fields,
unique_products_2020
unique_products_2021
percentage_chg
- Provide a report with all 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
- 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
- Get the products that have the highest and lowest manufacturing costs. The final output should contain these fields,
product_code
product
manufacturing_cost

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CODE BASICS

- 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
- 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
- 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
- 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
- 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

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For Analysis and Visualization



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

market
Australia
Bangladesh
India
Indonesia
Japan
Newzealand
Philiphines
South Korea



2. 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

vs

Unique Products 2021

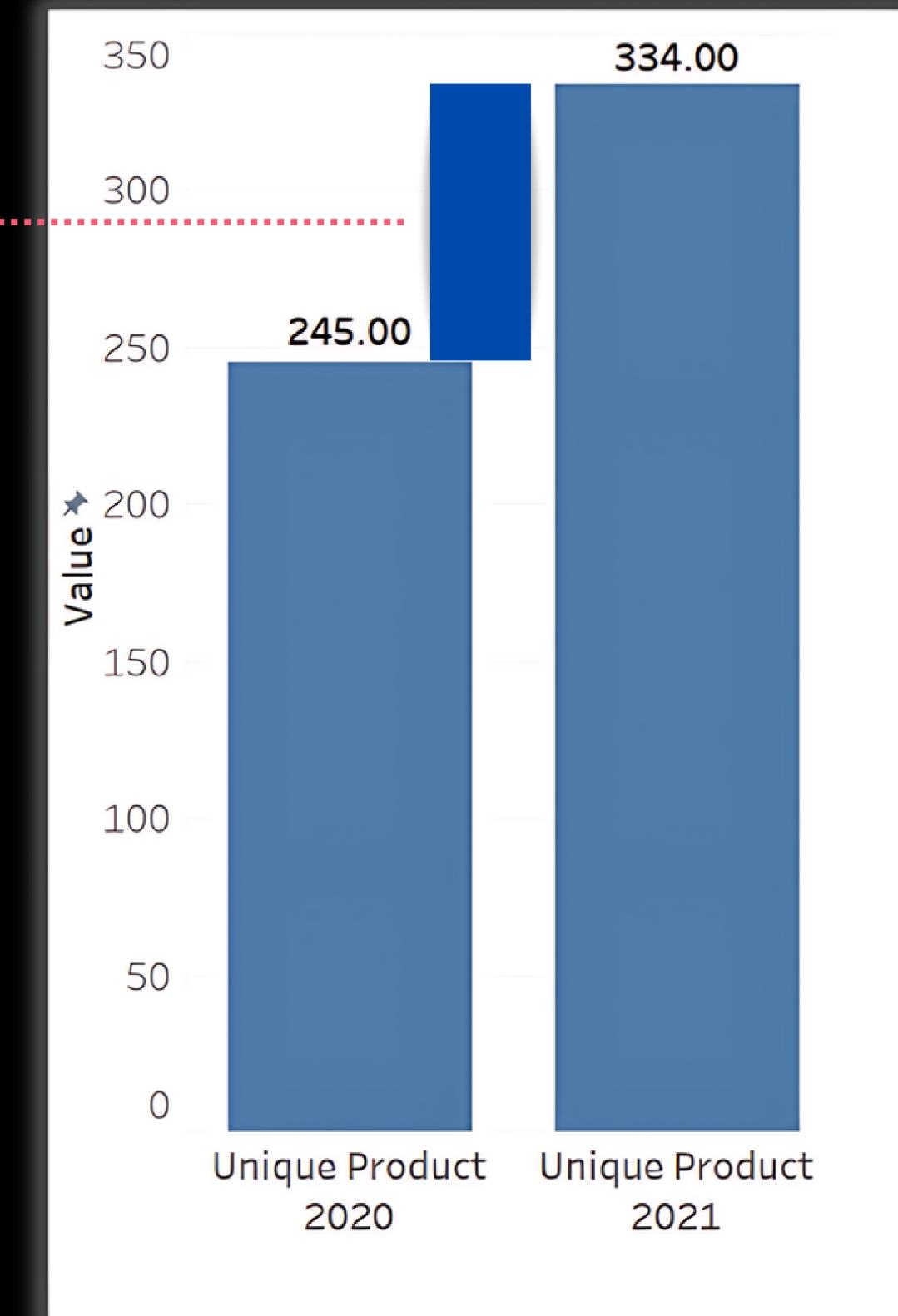
<code>unique_product_2020</code>	<code>unique_product_2021</code>	<code>percentage_chg</code>
245	334	36.33

Percentage Change
36.33%



Insight:

- Demand and production increased from 2020 to 2021.



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

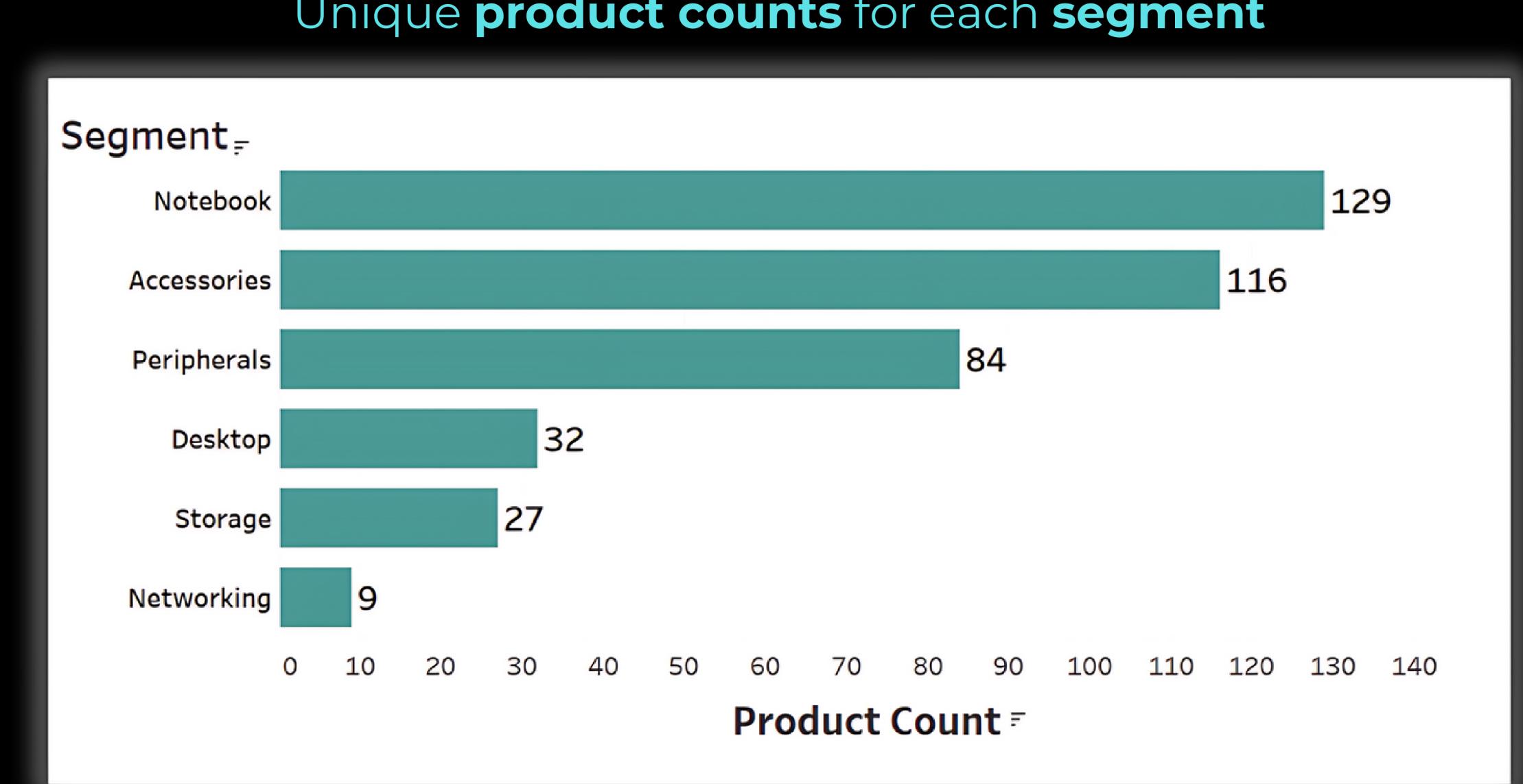
The final output contains 2 fields,

segment

product_count



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



Insight:

- Segments: **notebooks**, **accessories**, and **peripherals** are showing significant manufacturing growth as compared to desktops, storage, and networking.
- **Notebooks**, **accessories**, and **peripherals** constitute **83%** of the total manufactured product.

4. 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

Unique product difference per **segment** from 2020 to 2021



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

Segment	Product Count 2020	Product Count 2021	Difference
Accessories	69.0	103.0	34.0
Peripherals	59.0	75.0	16.0
Notebook	92.0	108.0	16.0
Desktop	7.0	22.0	15.0
Storage	12.0	17.0	5.0
Networking	6.0	9.0	3.0

Insight:

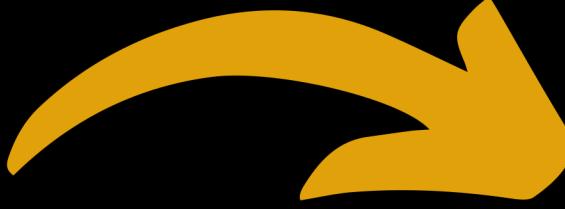
- **Accessories** had the **largest increase** in production.
- **Storage** and **networking** had **slower production growth** than the other segments.

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

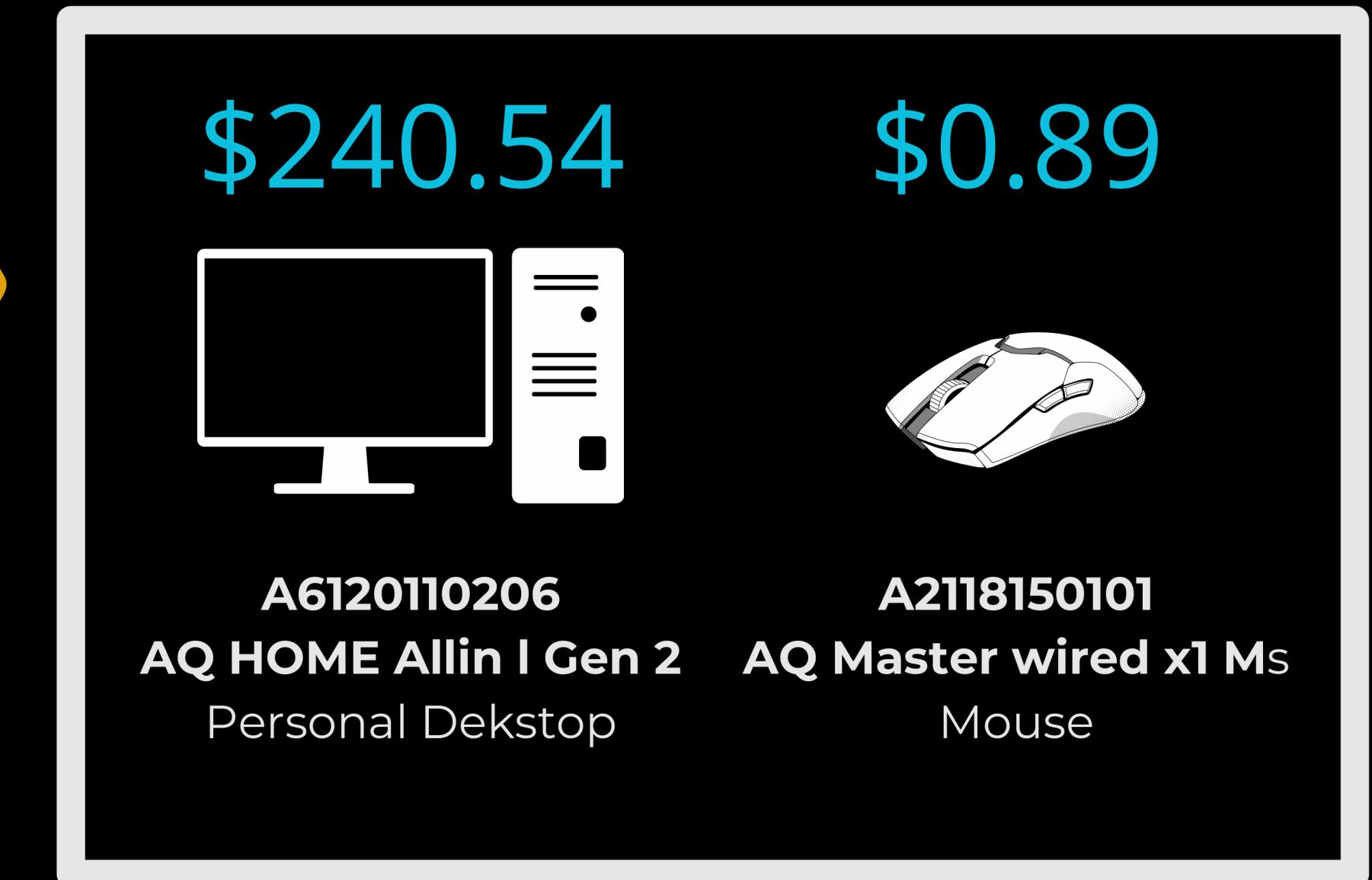
product_code

product

manufacturing_cost



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



Insight:

- Personal Desktop: AQ Home Allin1 Gen2 (**Variant: Plus 3**) has the highest manufacturing cost.
- Mouse: AQ Master wired x1 Ms (**Variant: Standard 1**) has the lowest manufacturing cost.

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,

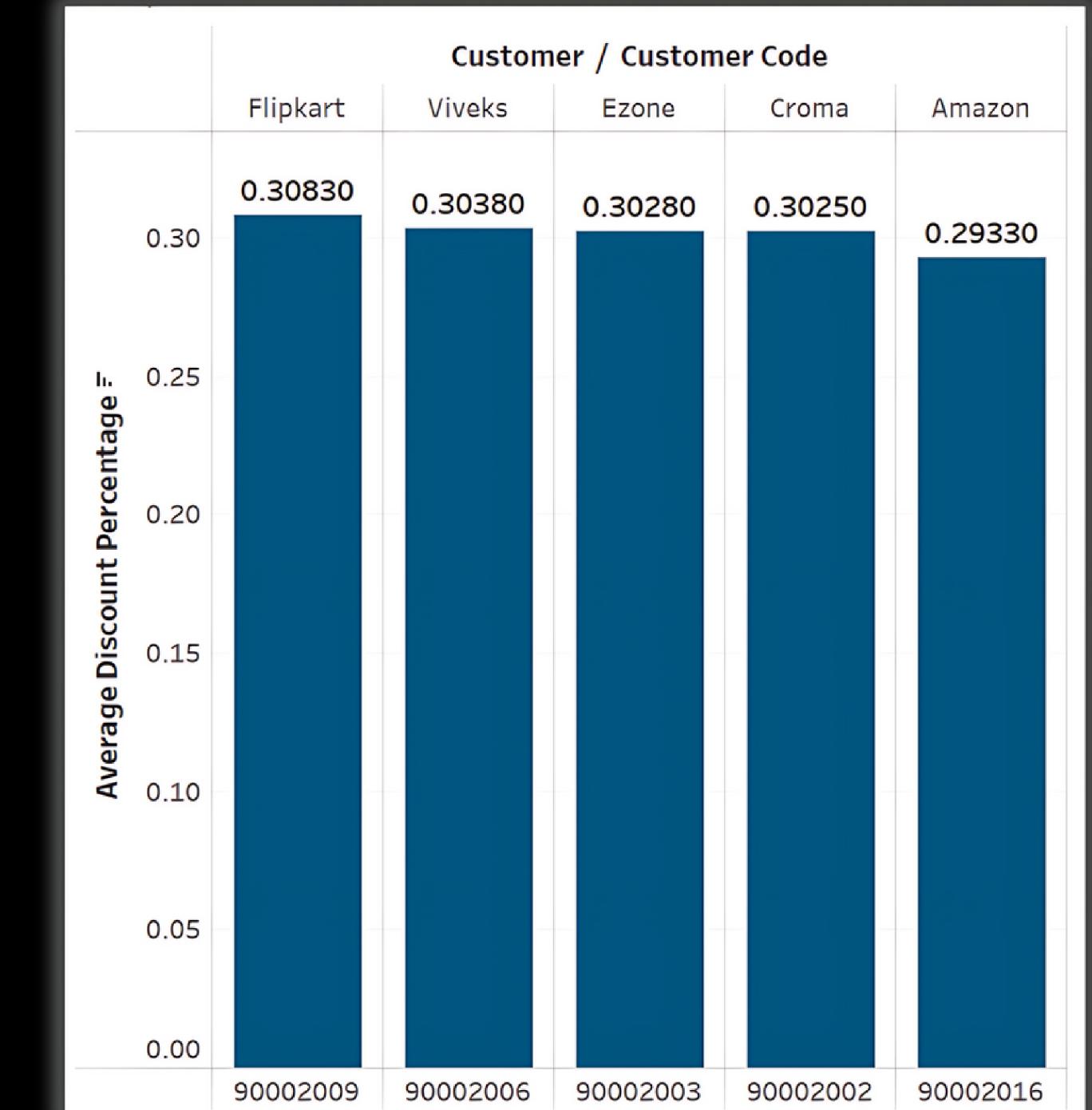
customer_code

customer

average_discount_percentage

Top 5 Indian customers who received a high **average discount percentage** for **fiscal year 2021**

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



Insight:

- The **largest** average pre-invoice discount goes to **Flipkart**.
- The **least** average pre-invoice discount goes to **Amazon**.

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

Month	fiscal_year	Gross sales Amount
September (2019)	2020	9092670.34
October (2019)	2020	10378637.60
November (2019)	2020	15231894.97
December (2019)	2020	9755795.06
January (2020)	2020	9584951.94
February (2020)	2020	8083995.55
March (2020)	2020	766976.45
April (2020)	2020	800071.95
May (2020)	2020	1586964.48
June (2020)	2020	3429736.57
July (2020)	2020	5151815.40
August (2020)	2020	5638281.83
September (2020)	2021	19530271.30
October (2020)	2021	21016218.21
November (2020)	2021	32247289.79
December (2020)	2021	20409063.18
January (2021)	2021	19570701.71
February (2021)	2021	15986603.89
March (2021)	2021	19149624.92
April (2021)	2021	11483530.30
May (2021)	2021	19204309.41
June (2021)	2021	15457579.66
July (2021)	2021	19044968.82
August (2021)	2021	11324548.34

FY 2020

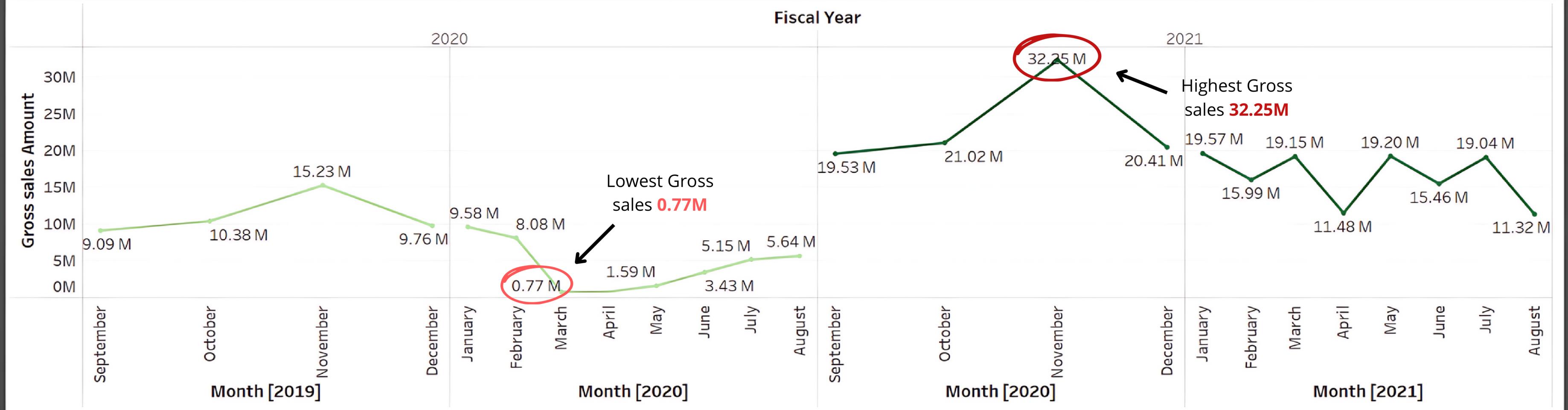
79.5 M

Insight:

- The **lowest total gross sales** for both fiscal years was in **March (2020)**.
- The **highest total gross sales** for both fiscal years was in **November (2020)**.
- **73.8%** of the **total gross sales** figure was in **fiscal year 2021**.

FY 2021

224.4 M



Reasons:

- COVID-19
- Global chip shortage

The 2020–2023 global chip shortage was a worldwide chip shortage affecting more than 169 industries.^[1] The crisis led to major price increases, long queues, and reselling among consumers and manufacturers for automobiles, graphics cards, video game consoles, computers, household appliances, and other consumer electronics that require integrated circuits (commonly called "chips").^{[2][3][4]}

From early 2020, the effects of and the mitigation of the COVID-19 pandemic caused disruptions in supply chains and logistics which, coupled with a 13% increase in global demand for PCs owing to some countries' shift to a stay-at-home economy,^[5] impacted the availability of key chips necessary for the manufacturing of a broad swathe of electronics.^[6] The pandemic's impact on the manufacture of semiconductors in South Korea and Taiwan was cited as a cause for the shortage, with constrained supply impacting industries as broad as console gaming and the automotive industry.^{[7][8]}

Source: https://en.wikipedia.org/wiki/2020%E2%80%932023_global_chip_shortage

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



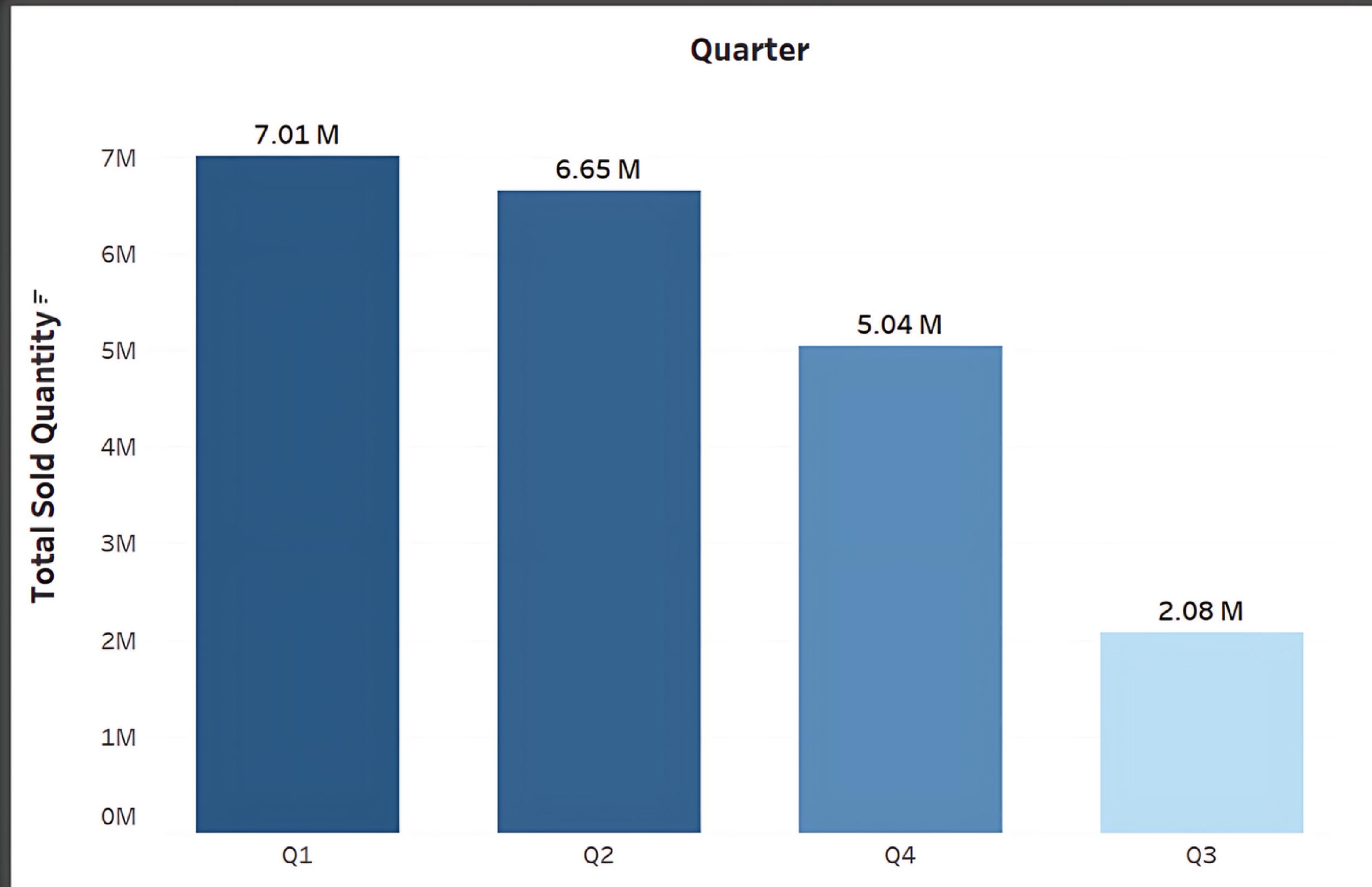
	quarter	total_sold_quantity
►	Q1	7005619
	Q2	6649642
	Q4	5042541
	Q3	2075087

Insight:

- **Quarter 1** of fiscal 2020 recorded the **most overall unit sales**, while the **3rd quarter** recorded the **least**.
- The **highest** and **lowest** overall sales quantities occurred in **December** and **March**.
- **Quarter 1** accounted for about **34%** of the **total quantity sold** for fiscal 2020.

Quarter	total_sold_quantity
Q1, September	1764002
Q1, October	2190792
Q1, November	3050825
Q2, December	3184205
Q2, January	1762652
Q2, February	1702785
Q3, March	238961
Q3, April	819956
Q3, May	1016170
Q4, June	1559773
Q4, July	1692575
Q4, August	1790193

Total **sold quantity** for each **Quarter** in **FY 2020**



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

The final output contains these fields,

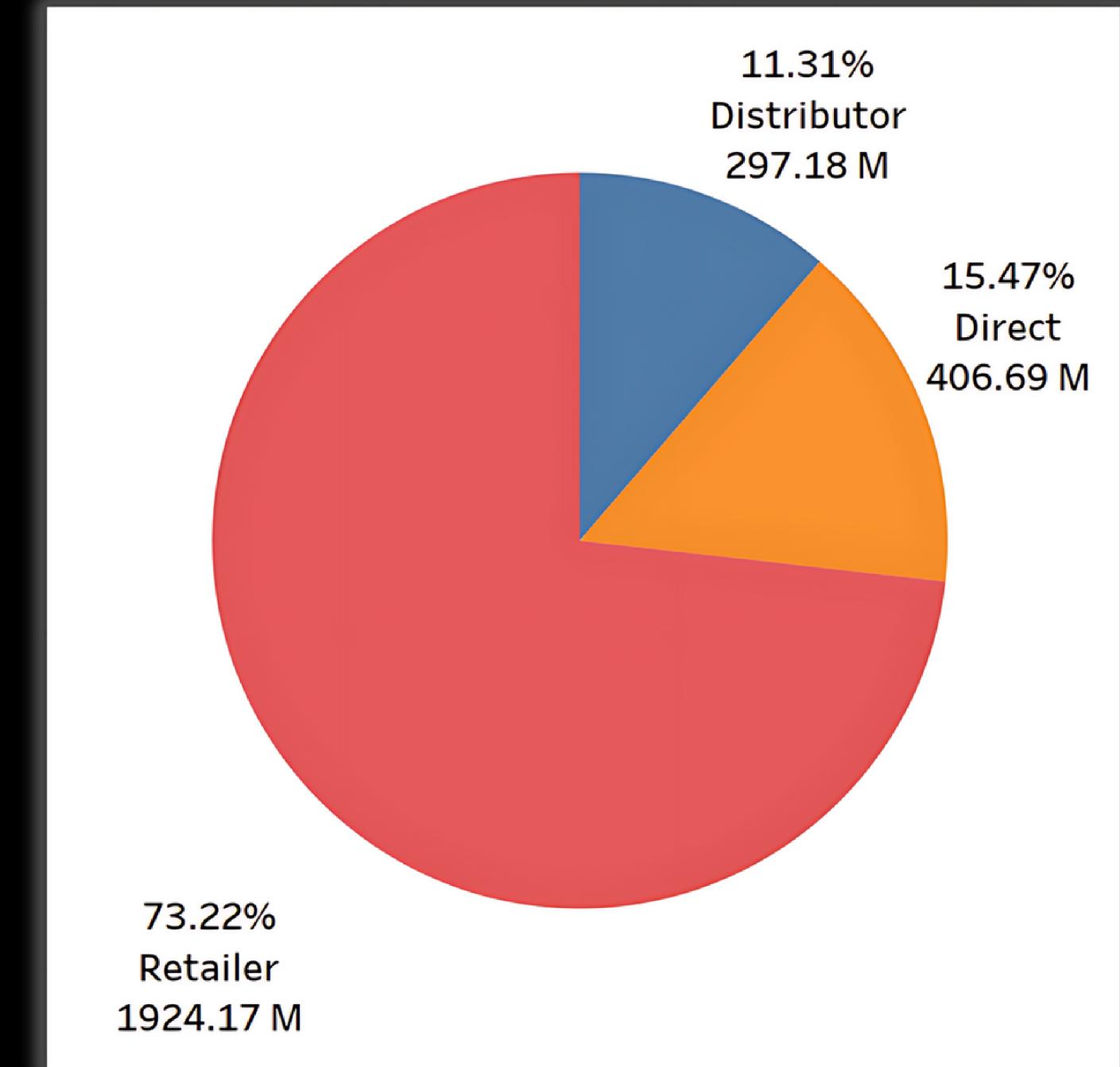
channel

gross_sales_mln

percentage



<i>channel</i>	<i>Gross_sales_mln</i>	<i>percentage</i>
Retailer	1924.17 M	73.22%
Direct	406.69 M	15.47%
Distributor	297.18 M	11.31%



Insight:

- The "**Retailer**" channel contributes the most to the company's sales with a contribution percentage of **73.22%**. This is followed by the "**Direct**" channel at **15.47%**, and the "**Distributor**" channel contributes the least with **11.31%**.

10. 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,

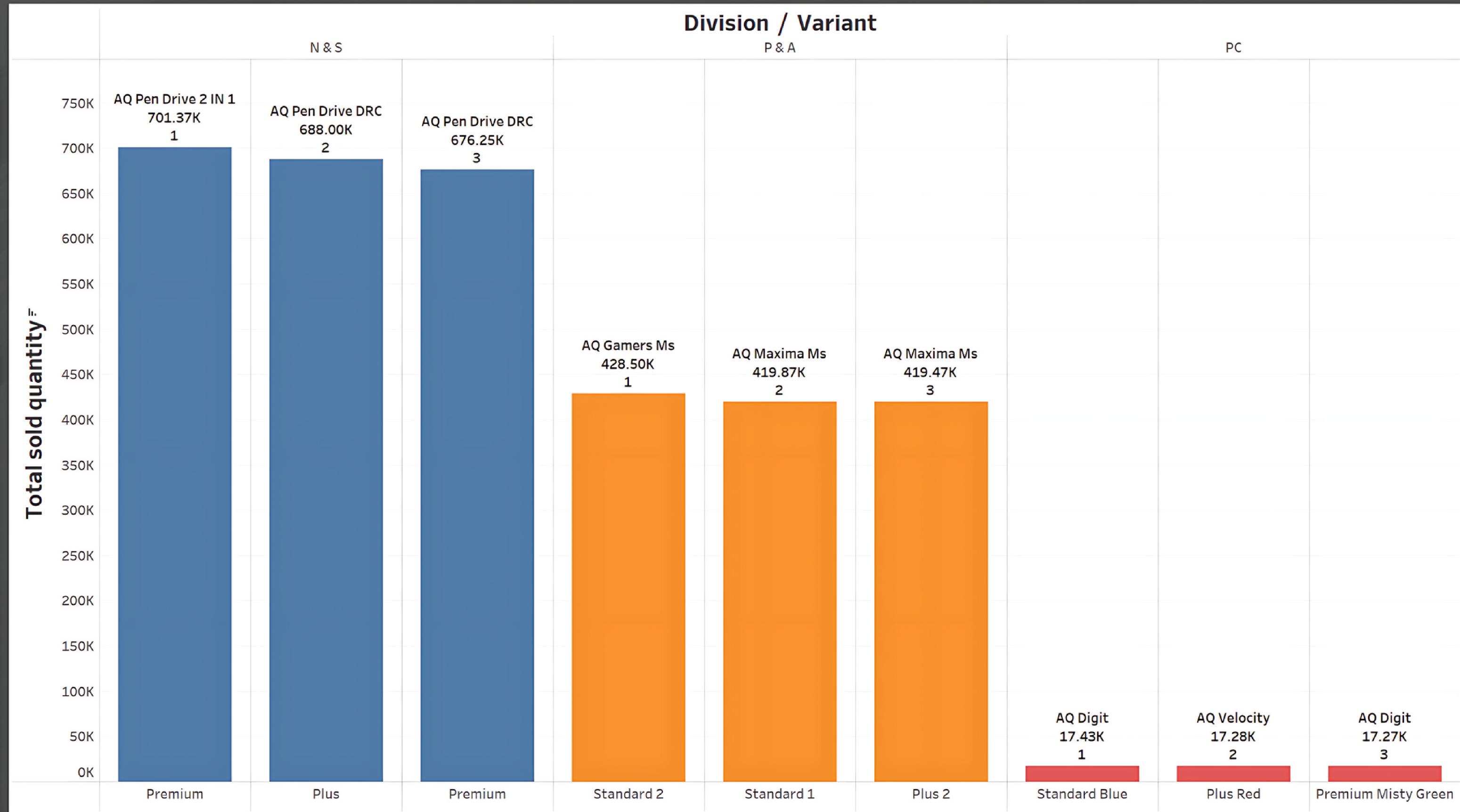
division
product_code
product
total_sold_quantity
rank_order

<i>division</i>	<i>product_code</i>	<i>product</i>	<i>Total_sold_quantity</i>	<i>Rank_Order</i>
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

Insight:

- **Each division** has products with **different variants** that appear **twice** in the list of top three products by division.
- The “**N & S**” division is the division with the **highest** total sold quantity in **fiscal 2021**.

Top 3 products in each division that have a high total_sold_quantity in the FY 2021





**END
THANK YOU!**

