



MARCH 2023

Atliq Hardware

CONSUMER GOOD AD-HOC INSIGHTS

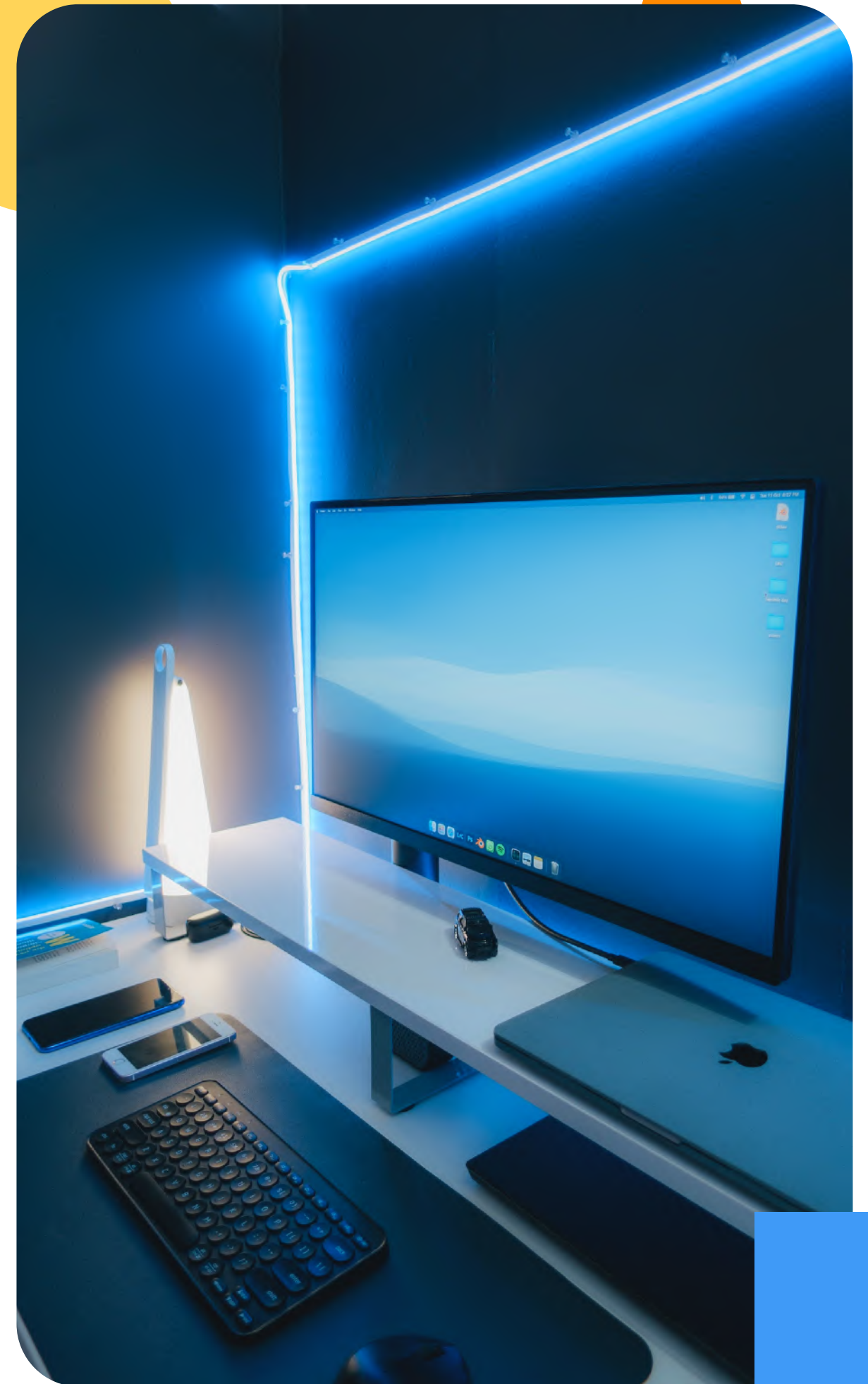
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CODEBASICS RESUME CHALLENGE

Domain: Consumer Goods | **Function:** Executive Management

AtliQ Hardware (imaginary company) is one of the leading computer hardware producers in India and well expanded in other countries.



AtliQ Hardware

MARCH 2023



01

The list of markets in which customer "AtliQ Exclusive" operates its business in the APAC region

```
SELECT
```

```
  DISTINCT market
```

```
FROM
```

```
  gdb023.dim_customer
```

```
WHERE
```

```
  customer = 'AtliQ Exclusive'
```

```
    AND region = 'APAC';
```

market
India
Indonesia
Japan
Philippines
South Korea
Australia
Newzealand
Bangladesh

Insight

AtliQ Hardware, a company operating in the APAC region, has established its presence in 10 markets within the region.

In contrast, AtliQ Exclusive customer operates its business in 8 markets within the same region.

It is noteworthy that AtliQ Exclusive customer does not have a business presence in the markets of **Pakistan** and **China** within the APAC region.

Market
Indian
Indonesia
Japan
Philippines
South Korea
Australlia
New Zealand
Bangladesh



02 The Percentage of unique product increase in 2021 vs. 2020?

WITH

year2020 AS (

SELECT COUNT(DISTINCT product_code) AS prod_2020

FROM gdb023.fact_sales_monthly

WHERE fiscal_year = 2020

),

year2021 AS (

SELECT COUNT(DISTINCT product_code) AS prod_2021

FROM gdb023.fact_sales_monthly

WHERE fiscal_year = 2021

)

SELECT

year2020.prod_2020 AS product_2020,

year2021.prod_2021 AS product_2021,

ROUND(((prod_2021 - prod_2020) / prod_2020) * 100, 2) AS per_difference

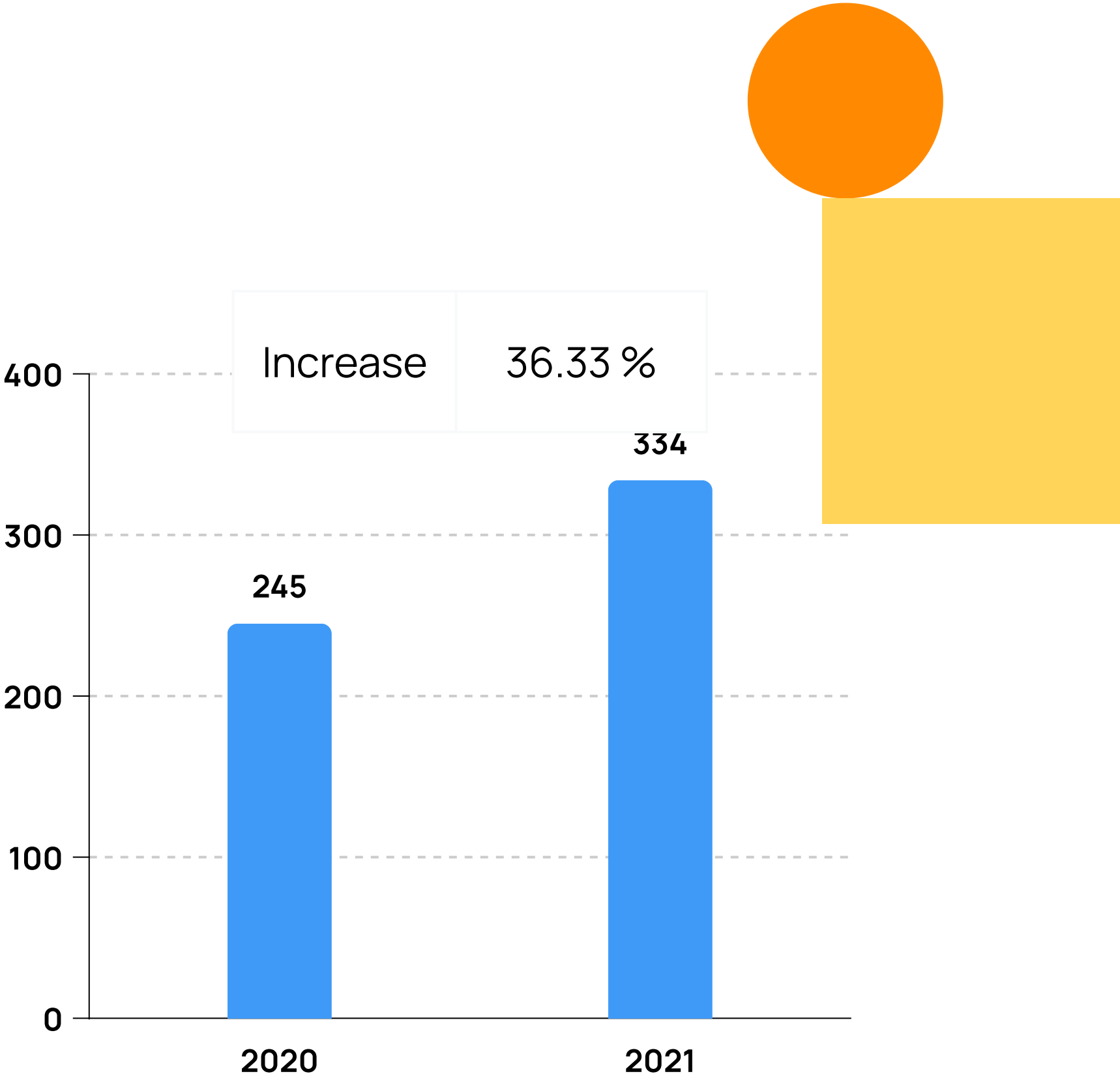
FROM year2020, year2021;

product_2020	product_2021	percentage_difference
245	334	36.33

Insight

Upon analyzing the data for fiscal years 2020 and 2021, it has been observed that the number of unique products increased by 89, resulting in a total of 334 unique products in 2021 as compared to 245 in 2020.

This indicates a significant growth of 36.33% in the number of unique products in 2021 as compared to the previous fiscal year.



03

All the unique product counts for each segment and sort them in descending order of product counts.

```
SELECT
```

```
  segment, COUNT(product_code) AS product_count
```

```
FROM
```

```
  gdb023.dim_product
```

```
GROUP BY segment
```

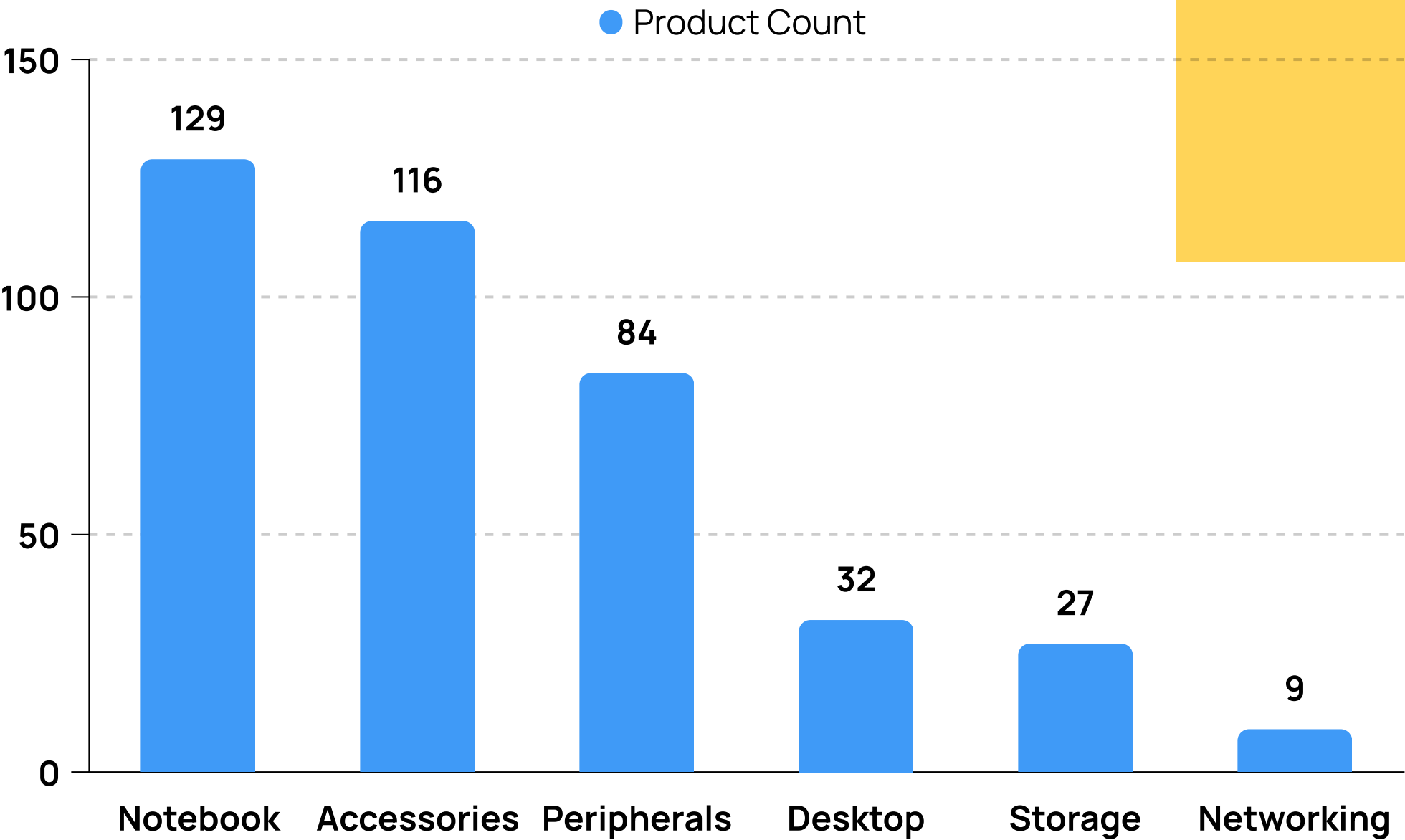
```
ORDER BY product_count DESC;
```

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

Insight

After analyzing the results, it has been observed that AtliQ Hardware operates in 6 different segments, namely Notebook, Accessories, Peripherals, Desktop, Storage, and Networking.

Among these segments, Notebook has the highest number of unique products, with a count of 129, followed by Accessories with 116 unique products, while Networking has the lowest number of unique products with only 9 in its portfolio.



04

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

```
WITH year2020 AS (  
    SELECT p.segment, count(DISTINCT p.product_code) AS prod_2020  
    FROM dim_product p JOIN fact_sales_monthly f  
    ON p.product_code = f.product_code  
    WHERE f.fiscal_year = 2020 GROUP BY segment ),  
year2021 AS (  
    SELECT p.segment, count(DISTINCT p.product_code) AS prod_2021  
    FROM dim_product p JOIN fact_sales_monthly f  
    ON p.product_code = f.product_code  
    WHERE f.fiscal_year = 2021 GROUP BY segment)  
SELECT year2020.SEGMENT, year2020.prod_2020 AS product_2020,  
       year2021.prod_2021 AS product_2021,  
       (year2021.prod_2021 - year2020.prod_2020) AS difference  
FROM year2020 JOIN year2021  
ON year2020.SEGMENT = year2021.SEGMENT  
ORDER BY difference DESC;
```

SEGMENT	product_2020	product_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

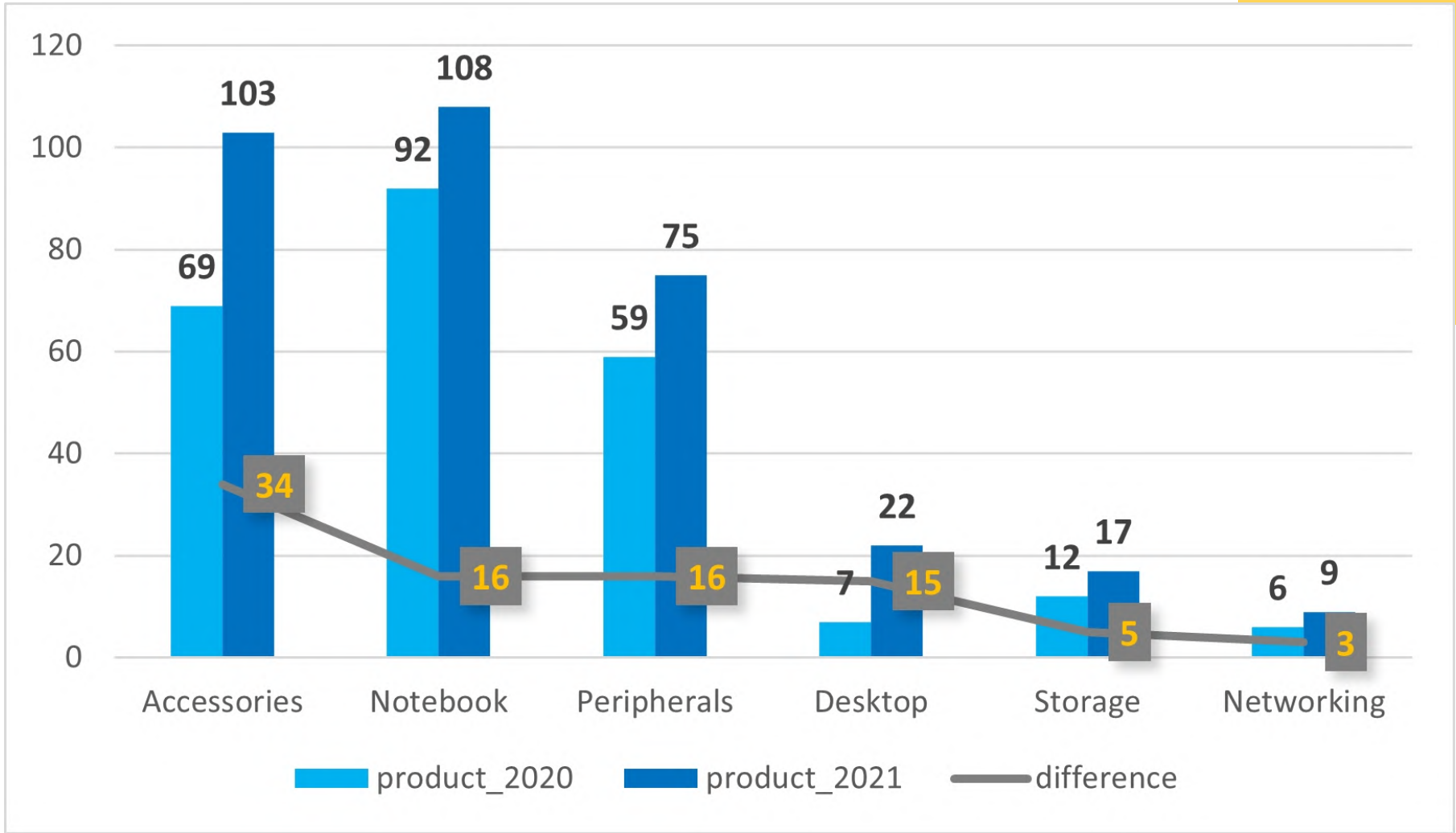
Insight

After analyzing the results, Accessories showed the highest growth in unique products with an increase of 34 from 2020 to 2021.

The Notebook and Peripherals segments also demonstrated positive growth with an increase of 16 unique products.

The Desktop and Storage segments showed moderate growth with a difference of 15 and 5, respectively.

The Networking segment had the smallest growth with only 3 more unique products in 2021 compared to 2020.



05

The products that have the highest and lowest manufacturing costs.

SELECT

p.product_code, p.product, m.manufacturing_cost

FROM

dim_product p

JOIN

fact_manufacturing_cost m ON m.product_code =
p.product_code

WHERE

manufacturing_cost = (**SELECT**
MIN(manufacturing_cost)

FROM

fact_manufacturing_cost)

OR manufacturing_cost = (**SELECT**

MAX(manufacturing_cost)

FROM

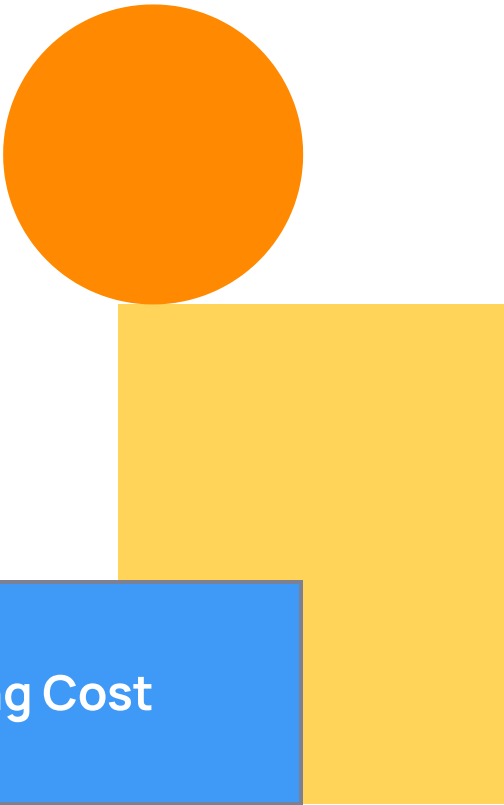
fact_manufacturing_cost);

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

Insight

Based on the manufacturing cost analysis, it has been observed that the AQ HOME Allin1 Gen 2 (A6120110206) product has the highest manufacturing cost, amounting to 240.54.

On the other hand, the AQ Master wired x1 Ms (A2118150101) product has the lowest manufacturing cost, which is only 0.89.



Product Name	Manufacturing Cost
AQ HOME Allin1 Gen 2	240.5364
AQ Master wired x1 Ms	0.8920

06

Top 5 customers who received an average high Discount for the fiscal year 2021 and in the Indian market.

```
WITH discounts AS (  
  SELECT  
    c.customer_code, c.customer,  
    AVG(p.pre_invoice_discount_pct) AS average_discount_percentage,  
    RANK() OVER (ORDER BY AVG(p.pre_invoice_discount_pct) DESC) AS discount_rank  
  FROM dim_customer c  
  JOIN fact_pre_invoice_deductions p  
  ON c.customer_code = p.customer_code  
  WHERE p.fiscal_year = 2021 AND c.market = 'India'  
  GROUP BY c.customer, c.customer_code )  
SELECT  
  customer,  
  ROUND(average_discount_percentage*100, 2) AS average_discount_percentage  
FROM discounts  
WHERE discount_rank <= 5  
ORDER BY average_discount_percentage DESC;
```

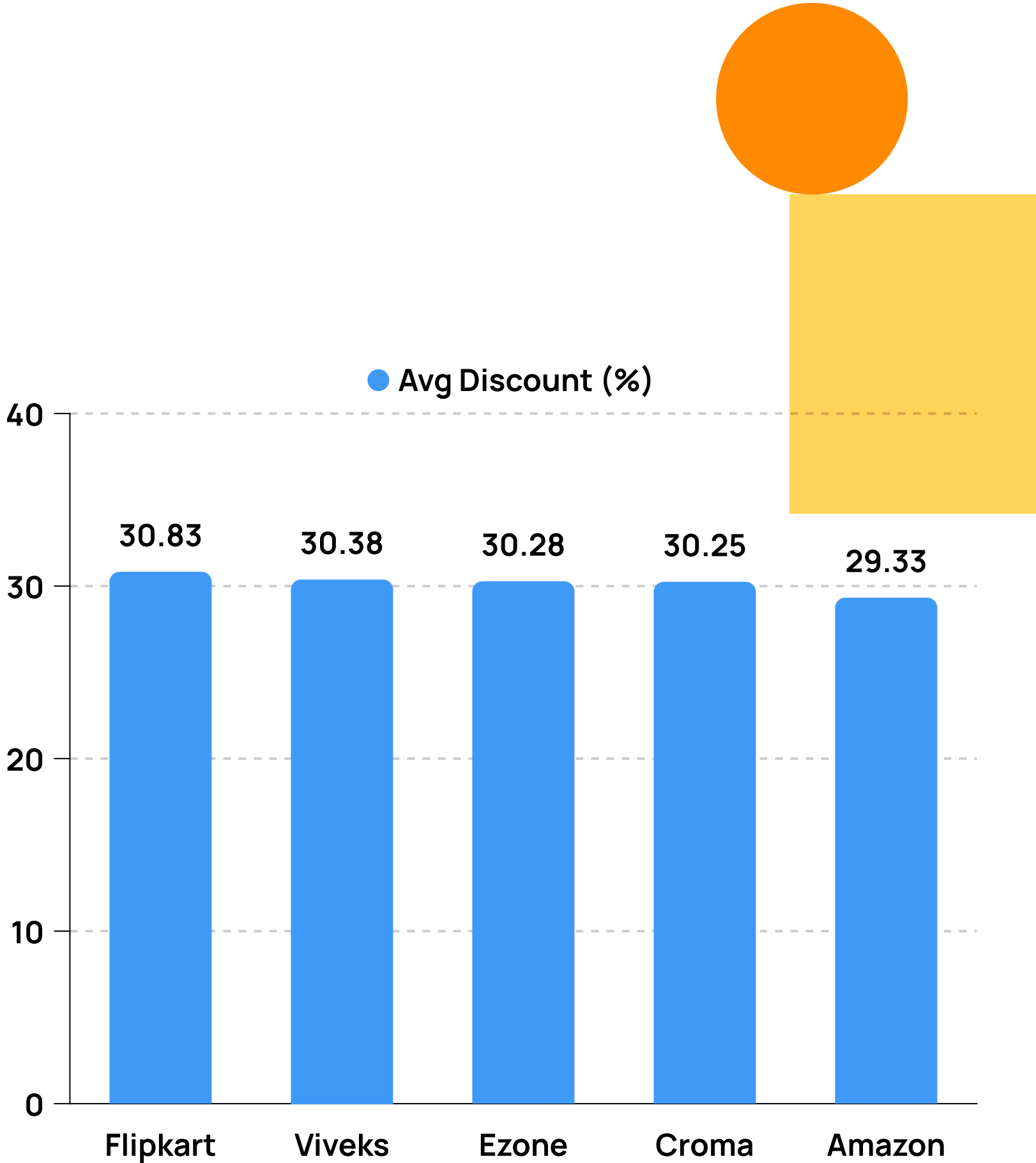
customer	avg_discount_percent
Flipkart	30.83
Viveks	30.38
Ezone	30.28
Croma	30.25
Amazon	29.33

Insight

For the fiscal year 2021

In India, Flipkart has received the maximum average high pre-invoice discount percentage from the manufacturer, which is 30.83%.

This is followed by Viveks, Ezone, Croma, and Amazon, respectively, with an average high pre-invoice discount percentage ranging between 29.33% to 30.28%.



07

The Gross sales amount for the customer “AtliQ Exclusive” for each month.

```
SELECT
```

```
    MONTHNAME(s.date) AS `month`,
```

```
    YEAR(s.date) AS `year`,
```

```
    ROUND((SUM((p.gross_price) * (s.sold_quantity)))/1000000,2)
```

```
AS Gross_Sales
```

```
FROM
```

```
    gdb023.fact_sales_monthly s
```

```
JOIN
```

```
    gdb023.fact_gross_price p
```

```
ON p.product_code = s.product_code
```

```
JOIN
```

```
    gdb023.dim_customer c
```

```
ON c.customer_code = s.customer_code
```

```
WHERE
```

```
    customer = 'AtliQ Exclusive'
```

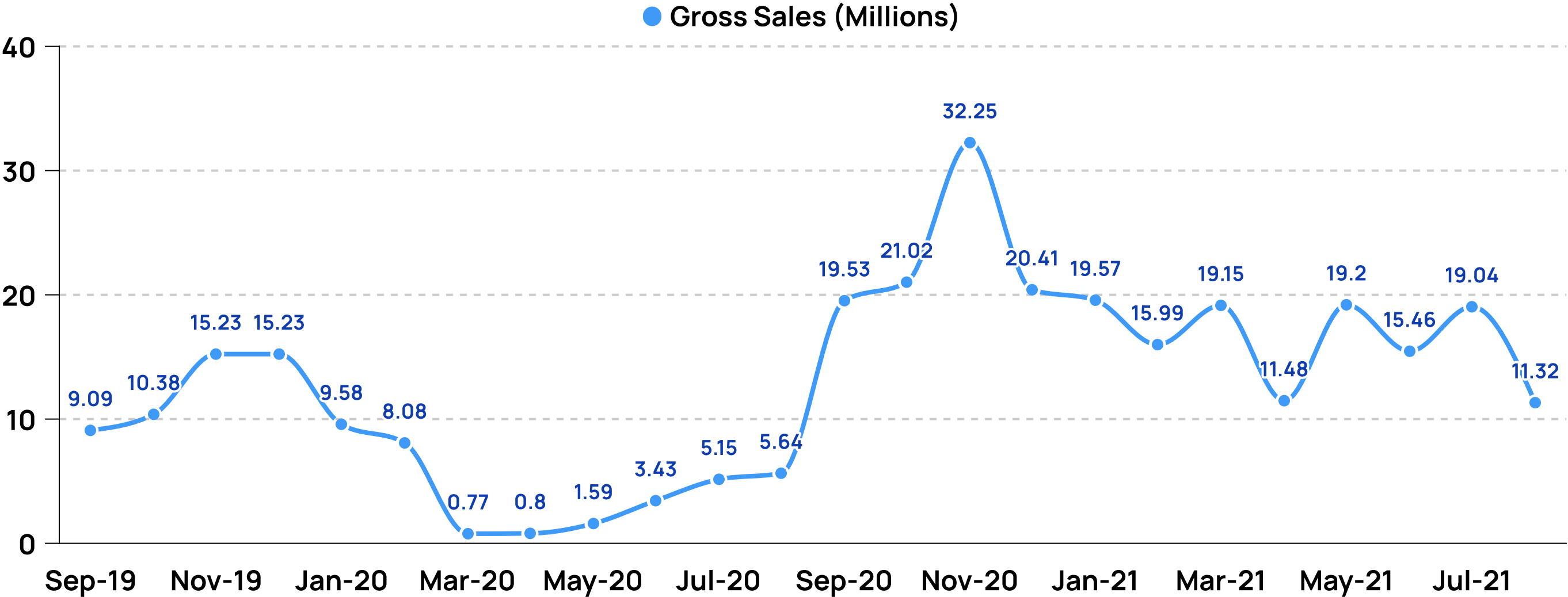
```
GROUP BY `year`,`month`;
```

month	year	Gross_Sales
September	2019	9.09
October	2019	10.38
November	2019	15.23
December	2019	9.76
January	2020	9.58
February	2020	8.08
March	2020	0.77
April	2020	0.80
May	2020	1.59
June	2020	3.43
July	2020	5.15
August	2020	5.64
September	2020	19.53
October	2020	21.02
November	2020	32.25
December	2020	20.41
January	2021	19.57
February	2021	15.99
March	2021	19.15
April	2021	11.48
May	2021	19.20
June	2021	15.46
July	2021	19.04
August	2021	11.32

Insight

The analysis of the Gross Sales data for the period of Sep-19 to Aug-21 reveals a fluctuating trend in the revenue generation of the company.

The highest Gross Sales recorded during this period was in Nov-20, with a value of 32.25 million, while the lowest was in Mar-20, with only 0.77 million in revenue.



08

In which quarter of 2020, got the maximum total_sold_quantity?

```
SELECT
```

```
  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'
```

```
    WHEN MONTH(date) IN (6 , 7, 8) THEN 'Q4'
```

```
  END
```

```
AS Quater2020,
```

```
  ROUND(SUM(sold_quantity) / 1000000, 2) AS Qua_in_millions
```

```
FROM
```

```
  gdb023.fact_sales_monthly
```

```
WHERE
```

```
  fiscal_year = 2020
```

```
GROUP BY Quater2020
```

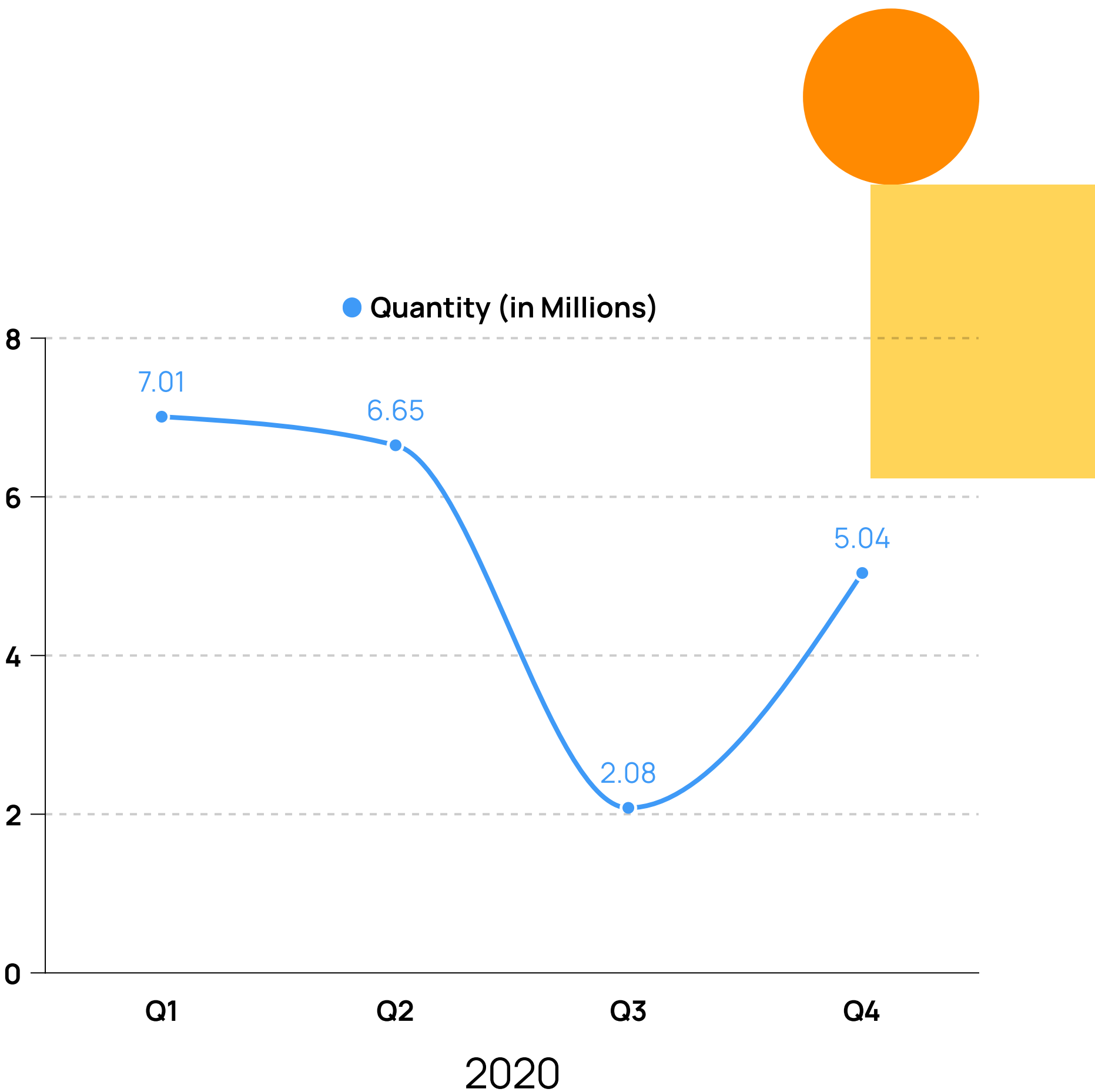
```
ORDER BY Qua_in_millions DESC;
```

Quater2020	Qua_in_millions
Q1	7.01
Q2	6.65
Q4	5.04
Q3	2.08

Insight

The analysis of the quarterly sales quantity data for the year 2020 reveals a fluctuating trend in the sales performance of the company.

The highest sales quantity recorded during this period was in Q1, with a value of 7.01 million, while the lowest was in Q3, with only 2.08 million in sales quantity.



09

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

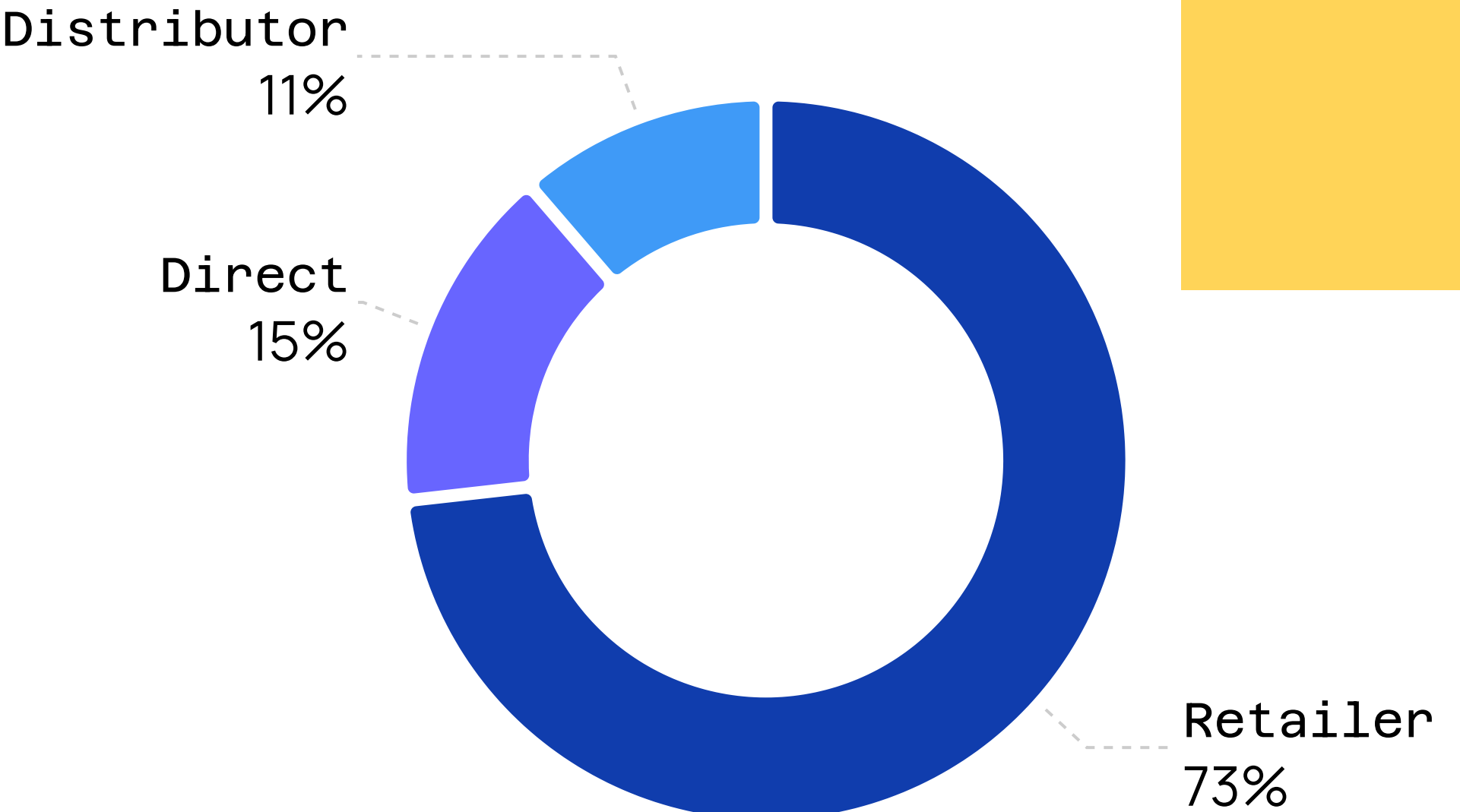
```
WITH cte AS (  
  SELECT  
    channel,  
    ROUND((SUM((p.gross_price) * (s.sold_quantity)))/1000000,2)  
  AS gross_sales_mn  
  FROM gdb023.fact_sales_monthly s  
  JOIN gdb023.fact_gross_price p  
  ON p.product_code = s.product_code  
  JOIN gdb023.dim_customer c  
  ON c.customer_code = s.customer_code  
  WHERE s.fiscal_year = 2021  
  GROUP BY channel)  
SELECT *, ROUND((gross_sales_mn*100)/SUM(gross_sales_mn)  
OVER(),2) AS Percentage  
FROM cte  
ORDER BY gross_sales_mn DESC;
```

channel	gross_sales_mn	Percentage
Retailer	1924.17	73.22
Direct	406.69	15.48
Distributor	297.18	11.31

Insight

Based on the data provided, it can be seen that the Retailer channel is the largest contributor to gross sales, accounting for 73.22% of the total sales, followed by Direct with 15.48%, and Distributor with 11.31%.

This indicates that AtliQ Hardware's products are mostly sold through Retailers, highlighting the importance of maintaining strong partnerships and distribution networks with retailers to sustain and grow sales.



10

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

```
WITH cte1 AS(
SELECT p.division, p.product_code, p.product,
ROUND((SUM(s.sold_quantity)/1000),2) AS sold_quantity
FROM gdb023.dim_product p
JOIN gdb023.fact_sales_monthly s
ON s.product_code = p.product_code
WHERE s.fiscal_year = 2021
GROUP BY p.division,p.product, p.product_code),
cte2 AS
(SELECT *, RANK() OVER(PARTITION BY division ORDER BY
sold_quantity DESC) AS rank_order
FROM cte1)
SELECT * FROM cte2
WHERE rank_order < 4;
```

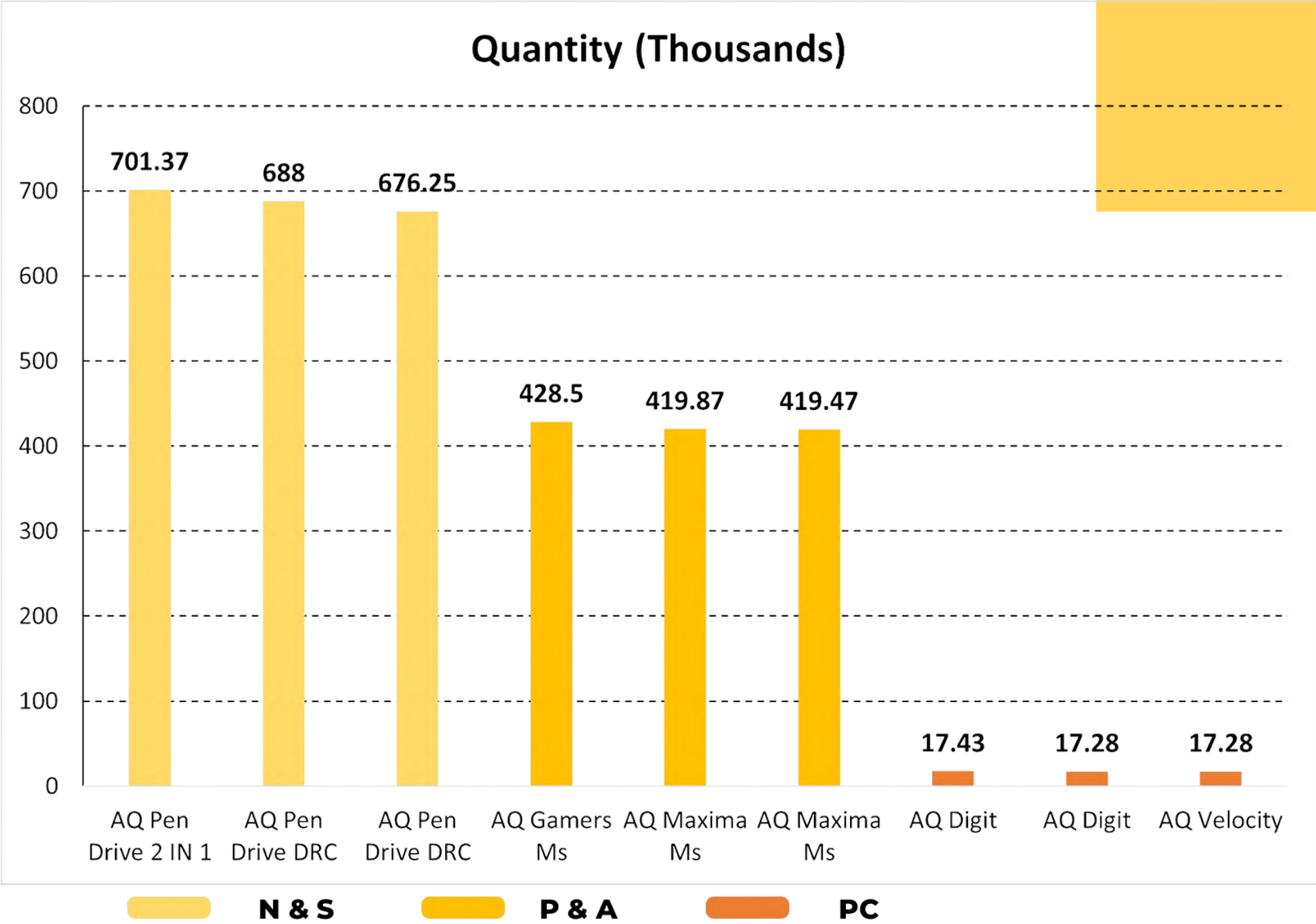
division	product_code	product	sold_quantity	rank_order
N & S	A6720160103	AQ Pen Drive 2 IN 1	701.37	1
N & S	A6818160202	AQ Pen Drive DRC	688.00	2
N & S	A6819160203	AQ Pen Drive DRC	676.25	3
P & A	A2319150302	AQ Gamers Ms	428.50	1
P & A	A2520150501	AQ Maxima Ms	419.87	2
P & A	A2520150504	AQ Maxima Ms	419.47	3
PC	A4218110202	AQ Digit	17.43	1
PC	A4218110208	AQ Digit	17.28	2
PC	A4319110306	AQ Velocity	17.28	2

Insight

The analysis of the top-selling product reveals that "N & S" division, the best-selling products are AQ Pen Drive 2 IN 1 and AQ Pen Drive DRC,

while for the "P & A" division, the top products are AQ Gamers Ms and AQ Maxima Ms.

Meanwhile, for the PC division, the top-selling products are AQ Digit and AQ Velocity.





Thank You