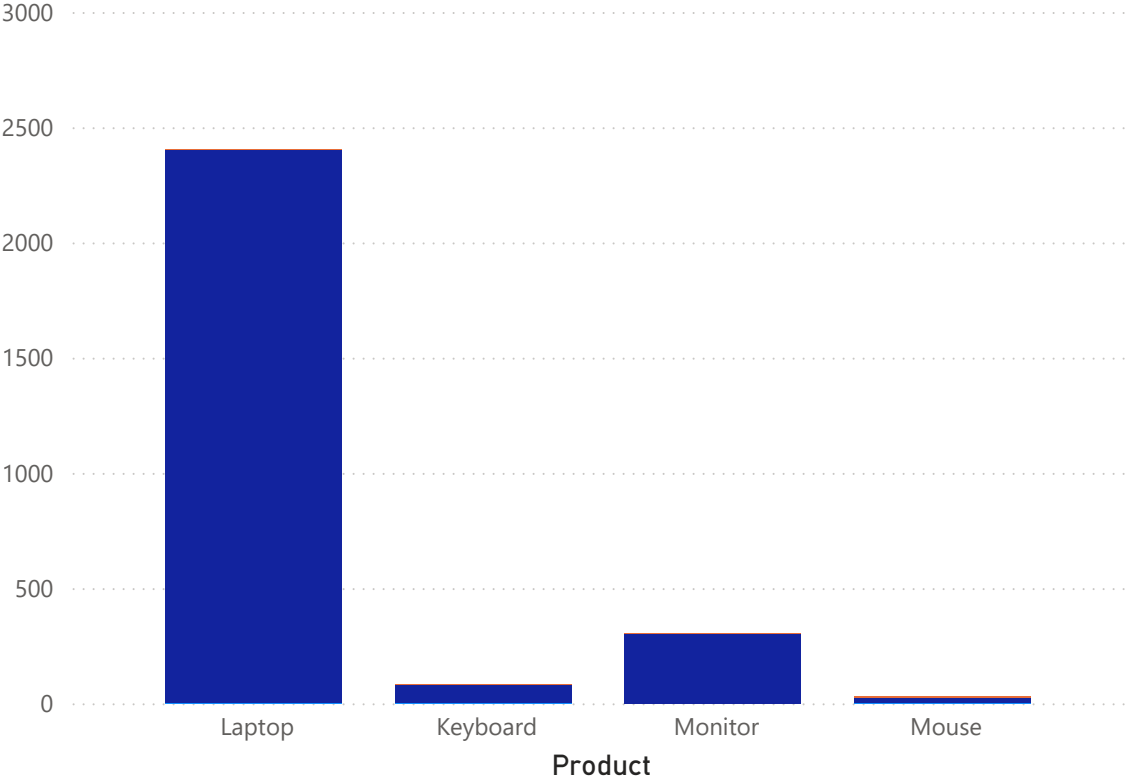


Количество OrderID, Сумма Price и Сумма Quantity по Product

● Количество OrderID ● Сумма Price ● Сумма Quantity



1. What is Power BI, and what are its three main components?

Power BI is a business analytics tool by Microsoft that enables users to visualize data, share insights, and make informed decisions.

Three main components:

- **Power BI Desktop** – A Windows application for creating reports and data models.
 - **Power BI Service** – A cloud-based platform for sharing, collaboration, and dashboard consumption.
 - **Power BI Mobile** – A mobile app for accessing reports and dashboards on the go.
-

2. Name two business use cases for Power BI dashboards.

- **Sales Performance Tracking** – Monitoring KPIs like revenue, growth, customer acquisition, and regional sales trends.
 - **Financial Analysis** – Budget vs. actual analysis, forecasting, and cost tracking across departments.
-

3. How do you download and install Power BI Desktop?

1. Go to the [official Power BI website](#).
 2. Click “**Download free**” and choose Microsoft Store or direct installer.
 3. Run the installer and follow the on-screen instructions.
-

4. What is the difference between Power BI Desktop and Power BI Service?

- **Power BI Desktop**: Used for creating data models and reports locally.
 - **Power BI Service**: Used for publishing, sharing, and collaborating on reports online.
-

5. What file extension does a Power BI project use?

- **.pbix** – Power BI Desktop file format.
-

6. Explain the role of Power Query in Power BI.

Power Query is the data connection and transformation tool in Power BI. It allows users to:

- Import data from multiple sources
 - Clean, transform, and shape the data
 - Apply filters and create calculated columns before loading it into the data model
-

7. Why would a business prefer Power BI over Excel for reporting?

- **Interactive Dashboards:** More visually appealing and user-friendly.
 - **Real-Time Data:** Supports live connections and scheduled refreshes.
 - **Collaboration:** Easy sharing and commenting in the cloud.
 - **Data Modeling:** Handles larger data sets and complex relationships more efficiently than Excel.
-

8. Describe one limitation of the free version of Power BI.

- Users with **Power BI Free** can create reports but **cannot share them** with others or collaborate in workspaces—requires a **Pro license**.
-

9. What is a "published report" in Power BI Service?

A **published report** is a report created in Power BI Desktop that has been uploaded (published) to the **Power BI Service**, enabling cloud-based access, sharing, and collaboration.

10. How does Power BI Mobile enhance accessibility?

- Allows users to view and interact with dashboards and reports on **iOS and Android** devices.
 - Offers real-time alerts, drill-downs, and filtering on the go.
 - Offline report viewing and biometric security features are supported.
-

11. Compare Power BI with Tableau—pros and cons.

Feature	Power BI	Tableau
Cost	More affordable, especially for Microsoft users	Generally more expensive
Ease of Use	Easier for Excel users	Steeper learning curve
Visualization	Great but slightly less flexible	Industry leader in advanced visuals
Integration	Strong with Microsoft stack (Azure, Excel)	Broad data source support

Feature	Power BI	Tableau
Deployment	Cloud, Desktop, and On-premises	Cloud, Desktop, On-premises

12. Explain how Power BI integrates with Azure services.

- **Azure Synapse:** Direct data modeling and reporting.
 - **Azure Data Lake:** Storing large datasets for reporting.
 - **Azure Machine Learning:** Embedding ML models into Power BI.
 - **Azure SQL Database:** Real-time dashboards with live data connections.
-

13. What are "gateways" in Power BI, and when are they needed?

Gateways act as bridges between on-premises data sources and Power BI Service. They are needed when:

- Your data is hosted on a local SQL Server, Excel file, or similar non-cloud source.
 - You want to schedule refreshes or enable real-time reporting from on-prem systems.
-

14. How would you convince a company to adopt Power BI? (ROI argument)

- **Lower TCO:** Affordable licensing, especially within Microsoft environments.
 - **Faster Insights:** Interactive dashboards lead to quicker decision-making.
 - **Improved Productivity:** Reduces manual reporting time by automating data refreshes.
 - **Scalability:** Grows with your organization's needs without major infrastructure changes.
 - **Enhanced Collaboration:** Real-time sharing and version control prevent data silos.
-

15. What security features does Power BI offer for sensitive data?

- **Row-Level Security (RLS):** Restrict data visibility by user role.
- **Microsoft Information Protection (MIP):** Labeling and encryption of sensitive reports.
- **Azure Active Directory (AAD):** Authentication and conditional access.
- **Data Loss Prevention (DLP):** Policies to prevent unauthorized sharing.
- **Audit Logs and Monitoring:** Track report access and changes.