**What is BI (Business Intelligence)?**

**Business Intelligence (BI)** refers to the technologies, strategies, and practices used to analyze business data and provide actionable insights. BI helps organizations make **data-driven decisions** by collecting, processing, and visualizing data. It includes **data mining, reporting, dashboards, and predictive analytics** to identify trends and improve business performance.

**How Power BI Helps in BI and How It Benefits Analysts?**

**Power BI** is a Microsoft tool used for **data visualization, reporting, and analytics** in BI. It helps businesses by:

1. **Data Integration:** Connects multiple data sources (SQL, Excel, APIs, cloud databases).
2. **Interactive Dashboards:** Allows analysts to create **real-time visualizations**.
3. **Automated Reporting:** Reduces manual effort in report generation.
4. **Data Cleaning & Transformation:** Enables **data preprocessing** within Power Query.
5. **Advanced Analytics:** Supports AI-based **predictive modeling** and DAX functions for deeper insights.

**How It Helps Analysts:**

* Automates **data collection and visualization**.
* Enables quick **trend identification**.
* Provides **self-service BI** (users can create reports without technical expertise).

**What is Descriptive Analytics?**

**Descriptive analytics** summarizes past data to provide insights into what has happened. It helps organizations **identify trends, patterns, and key performance indicators (KPIs)** using historical data.

**Example:**

* Sales trends over the last 12 months.
* Customer churn rate in the last quarter.

**Tools Used:** Excel, SQL, Power BI, Tableau.

**What is Predictive Analytics?**

**Predictive analytics** uses statistical models and machine learning to forecast future trends based on past data. It helps businesses **anticipate outcomes and take proactive actions**.

**Example:**

* Predicting customer churn using past behavior.
* Forecasting sales for the next quarter.

**Techniques Used:** Regression analysis, Machine Learning, Time Series Forecasting.

**What is Prescriptive Analytics?**

**Prescriptive analytics** goes beyond prediction and provides recommendations on **what actions to take** for the best possible outcome.

**Example:**

* Suggesting **optimal pricing** for a product based on market trends.
* Recommending the best **marketing strategy** based on customer engagement data.

**Techniques Used:** AI-driven decision models, Optimization algorithms.

**Five Real-Life Questions Power BI Can Solve**

1. **Which product has the highest sales in different regions?**  
   → Helps businesses **optimize inventory and marketing** strategies.
2. **What is the customer churn rate, and what factors contribute to it?**  
   → Helps in **retention strategies** by identifying patterns.
3. **What are the key reasons for low employee productivity?**  
   → Provides HR insights into **performance improvement**.
4. **How do different marketing campaigns impact sales?**  
   → Helps businesses measure **ROI on marketing efforts**.
5. **How will the company’s revenue grow in the next quarter?**  
   → Uses predictive analytics to **forecast revenue trends**.