Lesson 1 – Introduction to Power BI: Answers

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

Power BI is a Microsoft business intelligence tool for visualizing data and sharing insights. The three main components are:  
- Power BI Desktop  
- Power BI Service  
- Power BI Mobile

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

1. Sales performance tracking (e.g., revenue, top products)  
2. Customer service monitoring (e.g., ticket resolution, satisfaction)

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

Go to https://powerbi.microsoft.com, click 'Download Power BI Desktop', install the file, and launch the app.

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

Power BI Desktop is for creating reports locally; Power BI Service is cloud-based for sharing and collaboration.

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

.pbix

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

Power Query is used to load, clean, and transform data before analysis. It is the ETL (Extract, Transform, Load) tool in Power BI.

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

Power BI offers interactive visuals, automation, better data modeling, and scalability compared to Excel.

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

You cannot share reports with others online unless you have a Power BI Pro or Premium license.

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

It is a report created in Power BI Desktop and uploaded to Power BI Service for sharing and collaboration.

## 10. How does Power BI Mobile enhance accessibility?

It allows users to access dashboards on mobile devices, receive alerts, and interact with reports anytime, anywhere.

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

Power BI: More affordable, great for Microsoft users, easy to learn.  
Tableau: More powerful for customization, but expensive and with a steeper learning curve.

## 12. Explain how Power BI integrates with Azure services.

It connects with Azure SQL, Synapse, Machine Learning, and Active Directory for secure, scalable data analytics.

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

Gateways connect on-premises data sources to Power BI Service. Needed when using local files or databases.

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

Power BI saves time, reduces manual effort, and improves decision-making with real-time dashboards at a low cost.

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

Row-Level Security, Azure Active Directory, encryption, access controls, and audit logging.