**Homework 20**

1. Power BI uses Premium Capacity to handle large datasets by giving dedicated cloud resources, higher storage limits, and faster refresh/performance. It allows models up to 400 GB+ and supports incremental refresh for big data.
2. **Import mode** – Data is **copied into Power BI**, fast performance, supports full modeling.  
   **DirectQuery** – Data stays in the **source**, queries run live, slower but always up-to-date.  
   **Live Connection** – Connects directly to a **published dataset or Analysis Services**, uses existing model (no local data).
3. **Deployment pipelines** help manage report and dataset versions across environments.  
   They include **three stages**:
4. **Development** – build and test content.
5. **Test** – validate with sample users/data.
6. **Production** – publish final, live content to users.
7. Power BI Service integrates by:

* **Embedding reports** directly in **Teams channels or chats** for collaboration.
* **Adding reports/webparts** to **SharePoint Online pages** so users can view them without leaving SharePoint.

1. The **XMLA endpoint** in Power BI Premium allows **programmatic read/write access** to datasets using tools like SQL Server Management Studio or Tabular Editor.  
   It benefits developers by enabling **advanced modeling, automation, and enterprise-level dataset management**.
2. **Usage metrics** track how reports and dashboards are viewed (views, users, frequency).  
   **Audit logs** record **who accessed or modified content**, helping with **compliance and security monitoring**.
3. In a workspace, assign **roles** to users:

* **Admin** – full control
* **Member** – edit and publish content
* **Contributor** – create/edit content, but can’t change workspace settings
* **Viewer** – read-only access to reports/dashboards

1. Data governance in Power BI Service is enforced through:

* **Row-Level Security (RLS)** for data access control
* **Workspaces & role-based permissions**
* **Data lineage & impact analysis**
* **Usage metrics & audit logs**
* **Certified/dataset endorsement** for trusted data sources

1. **RLS limitations with DirectQuery or Live Connection:**

* Only **role-based filters** defined on source tables are applied.
* **Dynamic RLS** (user-specific filters) often needs configuration at the source.
* Certain **DAX functions** may not work in Live Connection models.
* **Performance** can be slower since each query hits the live source.

1. You can refresh a dataset in Power BI Service using:
2. **Power Automate** – use the **“Refresh a dataset”** action, select the workspace and dataset, then trigger it on a schedule, button, or event.
3. **REST API** – call the **POST https://api.powerbi.com/v1.0/myorg/groups/{groupId}/datasets/{datasetId}/refreshes** endpoint with proper authentication to start a refresh programmatically.