Excel

Power Pivot, Solver

Q1) What is power pivot, and how does it extend the capa-bilities of Excel?

A) **Power Pivot and its Capabilities:**

Power Pivot is an excel add-in that allows you to perform powerful data analysis and create sophisticated data models. It extends excel by

* **Handling Large Datasets:** It can manage millions of rows of data (far beyond the standard 1,048,576 row limit)
* **Data Modeling:** It lets you connect multiple tables from different sources into a single model
* **Advanced Calculations:** It uses DAX (Data Analysis ex-pressions) for complex formulas and measures.

Q2) How do you import data into power pivot from multiple sources?

Importing Data from Multiple Sources:

Open the power pivot tab and click Manage. In the Power Pivot window, go to Home > Get External Data. You can import from SQL Databases, Access, excel files, text files, or even web feeds. Each source is brought in as a separate tab within the power pivot environment.

Q3) Explain the process of creating relationships between tables in power pivot.

A) Creating Relationships:

In the power pivot window, switch to Diagram View (found on the Home tab). You will see your tables as boxes. click on a column (the "Foreign key") in one table and drag and drop it onto the related column (the "primary key") in another table to create a relation-ship.

Q4) How would you create Calculated columns and measures in power pivot?

A) Calculated columns Vs Measures:

Calculated columns: Created by typing a formula directly into a new column in the Power Pivot

data view. It calculates a value for every row in the table (e.g., =[price]*[quantity])

* Measures (Calculated fields) :- created in the "calculation Area" below the data. these are used for aggregations. (like sum or Average) that respond to filters in a pivot table (e.g., Total sales: =sum([sales Amount])).

Q5) What is the purpose of the solver add-in in excel?

A) Purpose of the Solver Add-in :

Solver is a "what-if" analysis tool used for optimization. It finds the Best (maximum, minimum, or specific) value for a formula in one cell-called the objective cell-subject to Constraints or limits on the values of other formula cells in the sheet

Q6) How do you set up constraints in solver to optimize a solution?

A) Setting up Constraints in Solver :

Go to Data > Solver. In the Solver parameters dialog:

1) Set objective: Select the cell you want to optimize

2) By changing variable cells: Select the cells Solver can adjust

3) Subject to the Constraints: click Add. Define your roles (e.g., cell A1 <= 100 or cell B2 = Integer)

4) click Solve to find the optimal result within those boundaries.