

The Questions

General

1. What are the essential applications of the Power BI? ↑

Power BI is mainly used by:

- PMO - Project Management Office
- Business & Data Analyst
- Developer & Database Administrator
- IT Team, IT Professional
- Consumer for End User Report
- Data Scientist

2. What are the different types of filters in Power BI Reports? ↑

Power BI provides variety of option to filter report, data and visualization. The following are the list of Filter types.

- **Visual-level Filters:** These filters work on only an individual visualization, reducing the amount of data that the visualization can see. Moreover, visual-level filters can filter both data and calculations.
- **Page-level Filters:** These filters work at the report-page level. Different pages in the same report can have different page-level filters.
- **Report-level Filters:** These filters work on the entire report, filtering all pages and visualizations included in the report.

We know that Power BI visual have interactions feature, which makes filtering a report a breeze. Visual interactions are useful, but they come with some limitations:

- The filter is not saved as part of the report. Whenever you open a report, you can begin to play with visual filters but there is no way to store the filter in the saved report.
- The filter is always visible. Sometimes you want a filter for the entire report, but you do not want any visual indication of the filter being applied.

3. Name out three important Power BI tools? ↑

Three important power BI tool are:

- Power BI Desktop—It is used for desktop computers
- Power BI service—It is an online software as a service tool
- Mobile Power BI apps—They are used for iOS and Android devices.

4. What is the general business need for Power BI? ↑

You can take the data and create robust reporting very easily. This assists in attracting new clients toward servicing and monitoring the customers already present. It also becomes possible to track information and set goals. Therefore, completely building an extraction, transformation and loading solution ultimately assists the management so they are able to make better decisions in the process. The return on investment when it comes to Power BI is also very high. Lastly, it makes some of the unwanted data into information, which can be utilized progressively.

5. What are the important components of the Power BI toolkit, and what do they do?

- Power Query: It allows you to discover, access, and consolidate information from different sources.
- Power Pivot: A modelling tool.
- Power View: It is a presentation tool for creating charts, tables, and more
- Power Map: Helps you to create geospatial representations of your data.
- Power Q&A: Allows you to use natural language to get answers to questions.

6. What is Power BI Desktop?

Power BI Desktop is a free desktop application that can be installed right on your own computer. Power BI Desktop works cohesively with the Power BI service by providing advanced data exploration, shaping, modeling, and creating report with highly interactive visualizations. You can save your work to a file or publish your data and reports right to your Power BI site to share with others.

7. What are the drawbacks of using Power BI? ↑

Here, are the main drawbacks of Power BI:

- Dashboards and reports only shared with users having identical email domains.
- Power BI does not mix imported data, which is accessed from real-time connections.
- Power BI can't accept file size larger than 1 GB.
- Dashboard does not accept or pass user, account, or other entity parameters.

8. What is content packs?

These are pre-built solutions build for popular services as a major part of the Power BI experience.

9. Why use selection pane in Power BI?

Selection Pane helps you to take control over visuals which require to be displayed and which should not be displayed. It allows you to combine multiple visual pages in the group and is also used in bookmarking.

10. What is Power BI?

Power BI is a cloud-based data sharing environment. Once you have developed reports using Power Query, Power Pivot and Power View, you can share your insights with your colleagues. This is where Power BI enters the equation. Power BI, which technically is an aspect of SharePoint online, lets you load Excel workbooks into the cloud and share them with a chosen group of co-workers. Not only that, but your colleagues can interact with your reports to apply filters and slicers to highlight data. They are completed by Power BI, a simple way of sharing your analysis and insights from the Microsoft cloud.

Power BI features allow you to:

- Share presentations and queries with your colleagues.
- Update your Excel file from data sources that can be on site or in the cloud.
- Display the output on multiple devices. This includes PCs, tablets, and HTML 5-enabled mobile devices that use the Power BI app.
- Query your data using natural language processing (or Q&A, as it is known).

11. What are the different views in Power BI Desktop?

There are three different views in Power BI, each of which serves a different purpose.

Report View: Users can add visualizations and additional report pages and publish the same on the portal from here.

Data View: Data shaping can be performed through Query Editor tools.

Relationship View: Users can manage relationships between datasets in this view.

12. Why use Power BI?

Here are four primary reasons for using Power BI tool:

- Pre-built dashboards and reports for SaaS Solutions.
- Power BI allows real-time dashboard updates.
- Offers Secure and reliable connection to your data sources in the cloud or on-premises
- Power BI offers fast deployment, hybrid configuration, and secure environment.
- Helps you in data exploration using natural language query

13. What is self-service business intelligence? ↑

- SSBI is an approach to data analytics that enables business users to filter, segment, and, analyze their data, without the in-depth technical knowledge in statistical analysis, business intelligence (BI).
- SSBI has made it easier for end users to access their data and create various visuals to get better business insights.
- Anybody who has a basic understanding of the data can create reports to build intuitive and shareable dashboards.

14. What data sources can Power BI connect to?

The list of data sources for Power BI is extensive, but it can be grouped into the following:

- **Files:** Data can be imported from Excel (.xlsx, .xlsm), Power BI Desktop files (.pbix) and Comma Separated Value (.csv).
- **Content Packs:** It is a collection of related documents or files that are stored as a group. In Power BI, there are two types of content packs, firstly those from services providers like Google Analytics, Marketo or Salesforce and secondly those created and shared by other users in your organization.
- **Connectors** to databases and other datasets such as Azure SQL, Database and SQL, Server Analysis Services tabular data, etc.

15. Where is data stored in Power BI?

When data is ingested into Power BI, it is basically stored in Fact and Dimension tables.

Fact tables: The central table in a star schema of a data warehouse, a fact table stores quantitative information for analysis and is not normalized in most cases.

Dimension tables: It is just another table in the star schema that is used to store attributes and dimensions that describe objects stored in a fact table.

16. What is Power BI embedded? ↑

Power BI embedded is an Azure-based cloud Service which enabled Web developers to create and integrate Power BI reports. Users/Developers can create their reports using Power BI desktop, without the need to write any code. Then, the Power BI desktop report can be published to a Power BI embedded workspace and consumed by end users

17. What are the important features of Power BI dashboard?

It allows you to drill through the page, bookmarks, and selection pane. It allows you to create various tiles like web content, images, textbox, and integrate URLs. Allows you to set report layout to mobile view.

18. What is Bookmark?

Bookmark in Power BI helps you to capture the configured view of a report page in a specific time. This includes filter and state of visual which can use a short cut to come back to the report that you can add as a bookmark.

19. What is BI?

Business intelligence is a technology-driven method. It helps you to analyse data and to provide actionable information which helps corporate executives, business managers, and other users to take decisive business decisions.

20. What are the parts of Microsoft self-service business intelligence solution?

Microsoft has two parts for Self-Service BI:

- **Excel BI Toolkit:** It allows users to create an interactive report by importing data from different sources and model data according to report requirement.
- **Power BI:** It is the online solution that enables you to share the interactive reports and queries that you have created using the Excel BI Toolkit.

21. What is the purpose of the 'Get Data' icon in Power BI?

When users click on the Get Data icon in Power BI, a drop-down menu appears and it shows all data sources from which data can be ingested. Data can actually be directly ingested from any source including files in Excel, CSV, XML, JSON, PDF, and SharePoint formats and databases such as SQL, Access, SQL Server Analysis Services, Oracle, IBM, MySQL, and much more. Also, Power BI datasets and Power BI data flows are compatible. Data can also be taken in from Azure and other online sources.

22. What data sources can Power BI connect to?

The following data sources that support DirectQuery in Power BI are as follows:

- Amazon Redshift
- Azure Data Explorer
- AtScale (Beta)
- Azure SQL Database
- Azure HDInsight Spark
- Google BigQuery
- Azure SQL Data Warehouse
- HDInsight Interactive Query

23. What are Building Blocks in Power BI?

The following are the Building Blocks (or) key components of Power BI:

- **Visualizations:** Visualization is a visual representation of data. Example: Pie Chart, Line Graph, Side by Side Bar Charts, Graphical Presentation of the source data on top of Geographical Map, Tree Map, etc.
- **Datasets:** Dataset is a collection of data that Power BI uses to create its visualizations. Example: Excel sheets, Oracle or SQL server tables.
- **Reports:** Report is a collection of visualizations that appear together on one or more pages. Example: Sales by Country, State, City Report, Logistic Performance report, Profit by Products report etc.

- **Dashboards:** Dashboard is single layer presentation of multiple visualizations, i.e we can integrate one or more visualizations into one page layer. Example: Sales dashboard can have pie charts, geographical maps and bar charts.
- **Tiles:** Tile is a single visualization in a report or on a dashboard. Example: Pie Chart in Dashboard or Report.

DAX

1. What does DATEDIFF function do?

This function gives a difference between 2 dates based on the specified Date part.

2. What are the data types of Dax?

Data types of Dax are:

- Numeric
- Boolean
- DateTime
- String
- Decimal

3. What is the DATEPART function?

It returns date function as an integer. However, DATENAME function does the same thing, except it returns the name of the part of the date.

4. State the difference between Count and CountD function.

Count function returns to count, excluding NULL values whereas Countd returns distinct values which exclude NULL values.

5. What is the use of statewith function?

This function returns the logical answers TRUE if the sub-string is the starting string for the superstring. If it is not, it will return false.

6. What is the use of INDEX Function in Power BI?

INDEX function helps you to retrieve the index of the respective row.

7. What is DAX function?

It is a formula expression language called (DAX) that can be used with various visualization tools like Power BI. It is also known as a functional language, where the full code is kept inside a function.

8. Explain DATEADD function in Power BI.

DATEDDD function helps you to convert any input to a date format. This input can number, string, or a data type input.

9. What is the main difference between LTRIM and RTRIM?

LTRIM function helps you to remove the white space from the LEFT of the string. RTRIM helps you to remove it from the right the last index.

10. What is the common table function for grouping data?

SUMMARIZE()

- Main groupby function in SSAS.
- Recommended practice is to specify table and group by columns but not metrics. You can use ADDCOLUMNS function.

SUMMARIZECOLUMNS

- New group by function for SSAS and Power BI Desktop; more efficient.
- Specify group by columns, table, and expressions.

11. Write a DAX for dynamic security?

We can implement through the following DAX
USERNAME(), USERPRICIPALNAME()

12. What is the calculated column?

It is a calculating expression of DAX which allows calculation on data stored in a new column.

13. What is DAX?

To do basic calculation and data analysis on data in power pivot, we use Data Analysis Expression (DAX). It is formula language used to compute calculated column and calculated field.

- DAX works on column values.
- DAX can not modify or insert data.
- We can create calculated column and measures with DAX but we can not calculate rows using DAX.

Sample DAX formula syntax: For the measure named Total Sales, calculate (=) the SUM of values in the [SalesAmount] column in the Sales table.

14. State the major differences between MAX and MAXA functions

If you want to calculate numeric values, then use MAX. However, if it is for non-numeric values, then you should use MAXA.

15. What is special or unique about the CALCULATE and CALCULATETABLE functions?

These are the only functions that allow you modify filter context of measures or tables.

- Add to existing filter context of queries.
- Override filter context from queries.
- Remove existing filter context from queries.

Limitations:

- Filter parameters can only operate on a single column at a time.
- Filter parameters cannot reference a metric.

16. Difference between Sum & Sumx?

Both SUM and SUMX are Aggregate Functions where:

SUM works on a Single Column vs SUMX can take the Table as Input SUMX has row-context whereas SUM doesn't have SUMX is an iterative Function whereas SUM is not.

17. What is CORR function? When we use it?

CORR is a correlation function. It gives a correlation between two variables. It mostly ranges from -1 to 1.

19. How is the FILTER function used?

The FILTER function returns a table with a filter condition applied for each of its source table rows. The FILTER function is rarely used in isolation, it's generally used as a parameter to other functions such as CALCULATE.

- FILTER is an iterator and thus can negatively impact performance over large source tables.
- Complex filtering logic can be applied such as referencing a measure in a filter expression.
FILTER(MyTable,[SalesMetric] > 500)

20. What does STARTSWITH function do?

STARTSWITH function returns the logical answers in a way, TRUE if the sub-string is the starting string for super-string. FALSE if not so.

21. How can you apply percentile function in Power BI?

PERCENTILE function allows you to returns the data value of the specific percentile number.

22. How can you differ COVAR and COVARP?

The main difference between the two is that: COVAR directly gives the same co-variance, whereas COVARP is the population covariance.

23. How to achieve Dynamic Top N Customers?

Dynamic Top N will be achieved with RANKX Function and What-if Parameter.

24. State the main difference between Distinct() and Values() in DAX?

The only difference between two functions is that with Distinct help you to calculate the null values.

25. In DAX we can do year to date and parallel period and such, which is great for financial reporting. What are some prerequisites for doing time intelligence? ↑

The main prerequisite is you need a date table, more specifically, a continuous date table with a whole range of dates (no breaks in the dates). That way you can calculate over that continuous line. You can build that date table using the M language in the Power Query Editor, use DAX or if you already have one in your model or data source you can bring it into Power BI.

The second element you need is to define the relationship with the date table and the other appropriate tables.

Remember all dates should be present without exception and you need a proper relationship for time intelligence to function the way you intend it to.

26. What is the difference between VAR and VARP?

VAR is the variance formula for population(n). VARP is the function of variance for sample(n-1).

27. What is the SIGN function?

Sign function returns the direction of the values. If it returns 1, if positive then 1, if 0 then 0.

28. What is IFNULL function?

If the value is not NULL IFNULL function result is the first expression, if it is not, then it will return the second expression.

29. What are the most common DAX Functions used?

Below are some of the most commonly used DAX function:

- SUM, MIN, MAX, AVG, COUNTROWS, DISTINCTCOUNT
- IF, AND, OR, SWITCH
- ISBLANK, ISFILTERED, ISCROSSFILTERED
- VALUES, ALL, FILTER, CALCULATE,
- UNION, INTERSECT, EXCEPT, NATURALINNERJOIN, NATURALLEFTOUTERJOIN, SUMMARIZECOLUMNS, ISEMPTY,
- VAR (Variables)
- GEOMEAN, MEDIAN, DATEDIFF

30. What is **RUNNING_AVG** function do? ↑

RUNNING_AVG function gives the average value to all the cells/pane/region processed for. It works to give the average by making all those inclusive values accordingly.

31. What does **DATENAME** function do?

DATENAME function shows the name of the specific part of the date that is given.

32. What is the difference between **Calculated Columns, Calculated Tables, and Measures?** ↑

Calculated Columns

- Added to tables by applying DAX formula on the existing data.
- DAX formula defines values in new columns rather than querying data sources.
- Useful when data sources do not contain data presented in the desired format.

Calculated Tables

- Created using DAX formula to define values.
- Created in both Report and Data views.
- Work well for intermediate calculations and the data that users want to be stored in the model.

Measures

- Use other DAX functions to create complex calculations.
- Used for highlighting running totals, comparing sales, sales forecasting, and other purposes.
- Created in both Report and Data views.

33. Suppose there are two tables and I have to put them one below the other. Can we do in Power bi? If yes, then what is the query used?

We need to use Append Queries option in Power Query Editor. If you want to append the 2 tables in Power BI Desktop, we need to use DAX Function UNION by creating a new table by clicking New Table.

34. What is the use of **ENDSWITH** function?

ENDSWITH function helps you to return the logical result to the given string. In case If the sub-string is available at the end of the sub string, then it returns TRUE.

35. How would you create trailing X month metrics via DAX against a non-standard calendar?

The solution will involve:

1. CALCULATE function to control (take over) filter context of measures.
2. ALL to remove existing filters on the date dimension.
3. FILTER to identify which rows of the date dimension to use.

Alternatively, CONTAINS may be used:

- CALCULATE(FILTER(ALL('DATE'),.....))

36. Describe the Gather function of the Power BI process?

The Gather function in Power BI collects and transforms data. As with the case of Query Editor, the data is gathered using the Gather function from multiple sources and stored in a single location. This facilitates smooth and prompt data analysis.

Following the collection, the data is transformed, which necessarily entails the removal of errors and any inconsistency. The end product of this process is clean data, which is aligned with the rest of the data stores in Power BI.

37. What is the use of MID function?

MID function returns the string character from the specified index position.

38. What are some benefits of using Variables in DAX ?

Below are some of the benefits:

- By declaring and evaluating a variable, the variable can be reused multiple times in a DAX expression, thus avoiding additional queries of the source database.
- Variables can make DAX expressions more intuitive/logical to interpret.
- Variables are only scoped to their measure or query, they cannot be shared among measures, queries or be defined at the model level.

40. How to Calculate MTD, WTD, and YTD in Power BI? ↑

We can use DAX Formulas to find MTD, YTD and WTD as given below:

YTDSales = CALCULATE(Sum(Sales[SalesProduct]),YEAR(Sales[CreatedDate])=YEAR(TODAY()))

MTDSales = CALCULATE(sum(Sales[SalesProduct]),MONTH(Sales[CreatedDate])=MONTH(TODAY()))

WTDSales = CALCULATE(sum(Sales[SalesProduct]),WEEKNUM(Sales[CreatedDate])=WEEKNUM(TODAY()))

41. Explain the collect function

Collect function excludes null value. It does aggregate spatial values. You can't transform data to another format.

43. What is the difference between Values() and Distinct() in DAX?

Both are used to do the same function of calculating values; the only difference is DISTINCT () can calculate null values as well.

Power Pivot

1. What are the filter writes in Power BI?

Filters are applicable in:

- Visualization level
- Page Level
- Report Level

2. What is Power Pivot Data Model?

It is a model that is made up of data types, tables, columns, and table relations. These data tables are typically constructed for holding data for a business entity.

3. What is Power Pivot?

Power Pivot is an add-in for Microsoft Excel 2010 that enables you to import millions of rows of data from multiple data sources into a single Excel workbook. It lets you create relationships between heterogeneous data, create calculated columns and measures using formulas, build PivotTables and PivotCharts. You can then further analyze the data so that you can make timely business decisions without requiring IT assistance.

4. Can we have more than one active relationship between two tables in data model of power pivot?

No, we cannot have more than one active relationship between two tables. However, can have more than one relationship between two tables but there will be only one active relationship and many inactive relationships. The dotted lines are inactive and continuous line are active.

5. What is xVelocity in-memory analytics engine used in Power Pivot?

The main engine behind power pivot is the xVelocity in-memory analytics engine. It can handle large amount of data because it stores data in columnar databases, and in memory analytics which results in faster processing of data as it loads all data to RAM memory.

6. What are some of differences in data modelling between Power BI Desktop and Power Pivot for Excel?

Here are some of the differences

- Power BI Desktop supports bi-directional cross filtering relationships, security, calculated tables, and Direct Query options.
- Power Pivot for Excel has single direction (one to many) relationships, calculated columns only, and supports import mode only. Security roles cannot be defined in Power Pivot for Excel.

Power Query

1. What is query folding in Power Query?

Query folding is when steps defined in Power Query/Query Editor are translated into SQL and executed by the source database rather than the client machine. It's important for processing performance and scalability, given limited resources on the client machine.

2. What are query parameters and Power BI templates?

Query parameters can be used to provide users of a local Power BI Desktop report with a prompt, to specify the values they're interested in.

- The parameter selection can then be used by the query and calculations.
- PBIX files can be exported as Templates (PBIT files).
- Templates contain everything in the PBIX except the data itself.

Parameters and templates can make it possible to share/email smaller template files and limit the amount of data loaded into the local PBIX files, improving processing time and experience .

3. What are some common Power Query/Editor Transforms?

Changing Data Types, Filtering Rows, Choosing/Removing Columns, Grouping, Splitting a column into multiple columns, Adding new Columns, etc.

4. Why do we need Power Query when Power Pivot can import data from mostly used sources?

Power Query is a self-service ETL (Extract, Transform, Load) tool which runs as an Excel add-in. It allows users to pull data from various sources, manipulate said data into a form that suits their needs and load it into Excel. It is most optimum to use Power Query over Power Pivot as it lets you not only load the data but also manipulate it as per the users needs while loading.

5. What are the data destinations for Power Queries?

There are two destinations for output we get from power query:

1. Load to a table in a worksheet.
2. Load to the Excel Data Model.

6. What is Power Query?

Power query is a ETL Tool used to shape, clean and transform data using intuitive interfaces without having to use coding. It helps the user to:

- Import Data from wide range of sources from files, databases, big data, social media data, etc.
- Join and append data from multiple data sources.
- Shape data as per requirement by removing and adding data.

7. Which language is used in Power Query?

A new programming language is used in power query called M-Code. It is easy to use and similar to other languages. M-code is case sensitive language.

8. Can SQL and Power Query/Query Editor be used together?

Yes, a SQL statement can be defined as the source of a Power Query/M function for additional processing/logic. This would be a good practice to ensure that an efficient database query is passed to the source and avoid unnecessary processing and complexity by the client machine and M function.

Power Map

1. What are the primary requirement for a table to be used in Power Map?

For a data to be consumed in power map there should be location data like:

- Latitude/Longitude pair
- Street, City, Country/Region, Zip Code/Postal Code, and State/Province, which can be geolocated by Bing

The primary requirement for the table is that it contains unique rows. It must also contain location data, which can be in the form of a Latitude/Longitude pair, although this is not a requirement. You can use address fields instead, such as Street, City, Country/Region, Zip Code/Postal Code, and State/Province, which can be geolocated by Bing.

2. What is Power Map?

Power Map is an Excel add-in that provides you with a powerful set of tools to help you visualize and gain insight into large sets of data that have a geo-coded component. It can help you produce 3D visualizations by plotting up to a million data points in the form of column, heat, and bubble maps on top of a Bing map. If the data is time stamped, it can also produce interactive views that display how the data changes over space and time.

3. What are the data hotspots when it comes to Power Map?

The data can either be available in Excel or it can be available remotely. For simplicity of setting up your data make sure the majority of your data is inside an Excel table where each of the columns is setup to a unique record. The segment headings or the column headings ought to have a message as opposed to genuine data with the objective that Power Map is there to decipher it in an accurate manner especially when it plots the geographic directions. The utilization of some of the important names makes the classification fields accessible in the Power Map Tour Editor Sheet. In order to utilize table structures, both time and geology within the Power Map have to incorporate the better part of the data within the table lines. In order to do this you might have to:

- You wish to stack the data from an outside source.
- In Excel click on the menu data > the association you need within the Get external data gathering.
- Take the means or results within the wizard that begins.
- On the last advance of the wizard, make certain Add this data to the Data Model is checked.

Additional Questions

1. Why is Top N not accessible by or for report level filter and page-level filter? ↑

Top N is not accessible for page-level filter and report level filter as they both are associated with different visuals.

2. What are the three Edit Interactions options of a visual tile in Power BI Desktop? ↑

The 3 edit interaction options are Filter, Highlight, and None.

Filter: It completely filter a visual/tile based on the filter selection of another visual/tile.

Highlight: It highlight only the related elements on the visual/tile, gray out the non-related items.

None: It ignore the filter selection from another tile/visual.

3. What are some of the differences in report authoring capabilities between using a live or direct query connection such as to an Analysis Services model, relative to working with a data model local to the Power BI Desktop file? ↑

With a data model local to the PBIX file (or Power Pivot workbook), the author has full control over the queries, the modeling/relationships, the metadata and the metrics.

With a live connection to an Analysis Services database (cube) the user cannot create new metrics, import new data, change the formatting of the metrics, etc – the user can only use the visualization, analytics, and formatting available on the report canvas.

With a direct query model in Power BI to SQL Server, for example, the author has access to the same features (and limitations) available to SSAS Direct Query mode.

- Only one data source (one database on one server) may be used, certain DAX functions are not optimized, and the user cannot use Query Editor functions that cannot be translated into SQL statements.

4. What are many-to-many relationships and how can they be addressed in Power BI? ↑

Many to Many relationships involve a bridge or junction table reflecting the combinations of two dimensions (e.g. doctors and patients). Either all possible combinations or those combinations that have occurred.

- Bi-Directional Crossfiltering relationships can be used in PBIX.
- CROSSFILTER function can be used in Power Pivot for Excel.
- DAX can be used per metric to check and optionally modify the filter context.

5. How to apply information security in Power BI report? ↑

A DAX look can be valuable on a table sifting its lines at question time. Dynamic security include the utilization of USERNAME works in security job definition. Typically a table is made in the model that relates clients to explicit measurements and a job.

6. Explain about Joins? ↑

We have Six types of Joins in Power BI which we use it in Power Query Editor:

Inner Join Left Outer Join Right Outer Join Full Outer Join Left Anti Right Anti Inner Join: If we want only the matching records from both the tables then will use Inner join/Simple join

Left Outer Join: If we want all the records from left table and only matching records from right table then will use left Outer join/left join.

Right Outer Join: If we want to display all the records from right table and only matching records from left table then will Right Outer join/Right Join.

Full Outer Join: If we want display all the records from both the tables then will use Full Outer Join

Left Anti: Displays only the mismatched records from Left Table

Right Anti: Displays only the mismatched records from the Right Table.

7. How do you bring data from SQL Server to Power BI? ↑

Step 1: Click on Get Data in Power BI Desktop Step 2: Select SQL Server from the list Step 3: Fill the Details of the Server and Database Step 4: Click on Import or Direct Query based on the Requirement.

8. What is a substance pack, and for what reason would you utilize one? ↑

A substance pack is an instant, predefined gathering of representations and reports utilizing your picked administration (for instance, Sales power). You'd utilize one when you need to get fully operational rapidly, rather than making a report without any preparation.

9. Why should General Formatting be applied to data in Power BI? ↑

By formatting data, users can help Power BI categorize and identify data, making it much easier to work with.

Enter a custom formula to create a new column, including calculations using values from the other columns To create a new column, click on Add Custom Column In the new column name box, type the name of the column and add the formula to the custom column formula box; for example, [ShipDate] – [OrderDate] Select a column from the available columns list and click on Insert or double-click to add it to the custom column formula text box. Then, click on OK The new column is appended to the table, and the formula is visible in the Formula Bar Custom Column Formula: = Table.AddColumn(#"Sorted Rows", "DaysOrderToShip", each [ShipDate] - [OrderDate]) The above code is the formula to create a custom column, which calculates the days from when an order was placed to when it got shipped.

10. What are the steps to go to Data Stories Gallery in Power Bi communities? ↑

Steps to go to Data Stories Gallery:

- First, open PowerBI.com in a favorite browser.
- By hovering on Learn
- Click on Community
- Scroll down little, and you will find Data Stories Gallery.
- Anyone can submit her or his Data Story as well.

11. If you click on a single data-point in one of the multiple visuals in a report, does it make any difference? ↑

Yes, it makes a difference. When we click on a single data-point, the data gets selected and copied to the dashboard. The copied data can be pasted then anywhere according to the requirement of the users.

12. How can you compare Target and Actual Value from a Power BI report? ↑

You need to use Gauge chart to compare two different measure.

13. Is on-premise access possible in Power BI? ↑

No, it is not possible to access Power BI services on private or internal service cloud. However, by using Power BI desktop, you can connect with the on-premises data sources.

14. What is the Power BI Publisher for Excel? ↑

You can use Power BI publisher for Excel to pin ranges, pivot tables and charts to Power BI.

- The user can manage the tiles – refresh them, remove them, in Excel.
- Pinned items must be removed from the dashboard in the service (removing in Excel only deletes the connection).
- The Power BI Publisher for Excel can also be used to connect from Excel to datasets that are hosted in the Power BI Service.
- An Excel pivot table is generated with a connection (ODC file) to the data in Azure.

The Publisher installs all necessary drivers on local machine to establish connectivity .

15. Which field composes can be added to the Field well of a Slicer visual? ↑

Computing segments should be made with a DAX articulation.

16. What context style is allowed by Power BI DAX? ↑

Power BI DAX content style is both Row and Filter.

17. How can u download excel files which has millions of records from a Power BI report? ↑

To download large extracts of data, we can host the excel file to a share point, which will generate a .xlsx link, which can be embedded to "Text" or "Button". On clicking on the Text link or Button. The excel file gets downloaded directly which is hosted in share point or some other base location.

18. Why might you have a table in the model without any relationships to other tables? ↑

There are mainly 2 reasons why we would have tables without relations in our model:

- A disconnected table might be used to present the user with parameter values to be exposed and selected in slicers (e.g. growth assumption.)
 - DAX metrics could retrieve this selection and use it with other calculations/metrics.
- A disconnected table may also be used as a placeholder for metrics in the user interface.
 - It may not contain any rows of data and its columns could be hidden but all metrics are visible.

19. What is the Embed Code? ↑

Power BI online contains an option for publishing on web that will generate a link address for the Power BI report. You can share these links to others, which is called embed code.

20. How do u hide and unhide a specific report in Power BI? ↑

We have to go to selection Pane in the menu bar and hide/unhide the report and the action can be passed to bookmark.

21. How is data security implemented in Power BI ? ↑

Power BI can apply Row Level Security roles to models.

- A DAX expression is applied on a table filtering its rows at query time.
- Dynamic security involves the use of USERNAME functions in security role definitions.
- Typically a table is created in the model that relates users to specific dimensions and a role.

22. Name the datasets that can be used with streaming data tiles to create dashboards. ↑

Hybrid datasets and Streaming datasets can be used with streaming data tiles to create dashboards.

23. What is query collapsing? ↑

The process of converting the steps in power query editor to SQL and executing it by the source database is called query collapsing.

24. How can we create a dashboard? ↑

First upload a dataset and then upload the same, create multiple reports and infuse everything together as an appealing dashboard.

25. What kind of data can you store in Power BI? ↑

In Power BI, you can store mainly two types of data.

Fact Tables:

The central table in a star schema of a data warehouse is a fact table that stores quantitative information for analysis, which is not normalized in most cases.

Dimension Tables:

It is a table in the star schema which helps you to store attributes and dimensions which describe objects that are stored in a fact table.

26. What are Tiles in Power BI? ↑

Tile is an important feature of power BI services and can be said as a picture of the data which can be pinned to the dashboard.

27. How to handle Many to Many relationships in Power BI? ↑

You can use Crossfiltering option in Power BI to address the Many to Many relationships.

28. What are the method to hide and unhide a specific report in Power BI? ↑

To hide and unhide specific report, you have to go to selection Pane in the menu bar, and press hides/unhide toggle button to bookmark.

29. What are the different connectivity modes in Power BI? ↑

Import Mode Direct Query Mode

30. How to represent different levels of hierarchy of data in one single visualization? ↑

Step 1. Create a hierarchy by grouping the required data from the data tab and pull that into Axis Tab and Enable drill down option by clicking on down arrow on the chart. Step 2. Pull all the hierarchical columns separately in to the axis pane in the order of their hierarchy and enable the drill down action by clicking on down arrow on the chart. Note: Both Step 1 and Step 2 will serve the same purpose.

31. Name some commonly used tasks in the Query Editor? ↑

- Connect to data
- Shape and combine data
- Group rows
- Pivot columns
- Create custom columns
- Query formulas

32. How to perform joins in Power bi? ↑

Joins will be performed in Model Tab in Power BI Desktop.

33. Give examples of data sources which will refresh in real-time. ↑

PowerBI currently supports different types of streaming datasets. You can directly stream data using a push URL to PowerBI.com service. PowerBI also supports streaming data sources from PubNub, which is an Infrastructure as a Service provider. The third option is to Azure Stream Analytics which is built on top of Azure Service Bus and Event Hub. You can select the streaming data to go-to PowerBI as your destination. Here is a sample report with streaming data.

34. Does the gateway have to be installed on the same machine as its data source? ↑

No, the gateway connects to its data source by using the provided connection information. In this sense, think of the gateway as a client application. It just needs to connect to the server that has the provided name.

35. What is the difference between Power BI and Power BI Pro? ↑

Power BI: It provides different features for the users to get started with data search in a unique way. Power BI Pro: It holds some extra features added to the Power BI features like higher storage capacity, data refresh scheduling and interactive live data sources.

36. Explain the term Custom Visuals. ↑

Graphs or visual which are not included in Power BI desktop are imported for better visualization.

37. Define the term 'M language.' ↑

It is a programming language used in Power Query. It's a functional, case-sensitive language which is similar to other programming languages and easy to use.

38. What are the different types of refreshing data for our published reports? ↑

There are four main types of refresh in Power BI. Package refresh, model or data refresh, tile refresh and visual container refresh.

- **Package refresh**

This synchronizes your Power BI Desktop, or Excel, file between the Power BI service and OneDrive, or SharePoint Online. However, this does not pull data from the original data source. The dataset in Power BI will only be updated with what is in the file within OneDrive, or SharePoint Online.

- **Model/data refresh**

It refers to refreshing the dataset, within the Power BI service, with data from the original data source. This is done by either using scheduled refresh, or refresh now. This requires a gateway for on-premises data sources.

- **Tile refresh**

Tile refresh updates the cache for tile visuals, on the dashboard, once data changes. This happens about every fifteen minutes. You can also force a tile refresh by selecting the **ellipsis (...)** in the upper right of a dashboard and selecting **Refresh dashboard tiles**.

- **Visual container refresh**

Refreshing the visual container updates the cached report visuals, within a report, once the data changes.

To know more about data refresh and understand how to implement data refresh, you can check the following [link](#).

39. What is Advanced Editor in Power BI? ↑

Advanced Editor can be used to see the query that Power BI runs against data sources to import data.

The query is written in M-code, the Power Query Formula Language To view the query code from Power BI Desktop, choose Edit Queries from the Home tab From either the Home or the View tab, click on Advanced Editor to work on the query. The Advanced Editor window opens, displaying the code for the currently selected query When we make transformations to our data in Query Editor, the steps are saved to the Applied Steps in the Query Settings These steps are also applied to the code in the Advanced Editor

40. How can you perform Dynamic filtering in Power BI? ↑

Dynamic Filtering in Power BI is done using the following steps:

Once all the data are set up, publish a detail report to Power BI. Publish it to group workspace. Create a filter link
Create a DAX calculated column. Public overview report

41. What happens by clicking on a single information point in one of the various visual in a report? ↑

When you click on single information point data gets select and copied to the clipboard. Moreover, the copied data can be pasted in any place according to your requirement.

42. What is Power BI Designer? ↑

It is a stand alone application where we can make Power BI reports and then upload it to Powerbi.com, it does not require Excel. Actually, it is a combination of Power Query, Power Pivot, and Power View.

43. What information is required to create a map in Power Map? ↑

Power Map can display visualizations which are geographical in nature. That's why some kind of location data is needed, for example, city, state, country or latitude and longitude.

44. Can you join two unique information source in the same Power BI dashboard? ↑

Yes, we can join two unique information source in the same Power BI dashboard. We can also merge comparable reports in your Power BI account into using single dashboard.

45. What are the different types of refresh in Power BI? ↑

Package Refresh Model/data Refresh Tile Refresh Visual Container Refresh

46. What is Bidirectional Cross-filtering in Power BI? ↑

Bidirectional cross-filtering in Power BI Desktop allows data modelers to determine how they want filters to flow for data using relationships between tables. With bidirectional cross-filtering, the filter context is propagated to a second related table on the other side of a table relationship. This can help data modelers solve the many-to-many problem without writing complicated DAX formulas. Thus, bidirectional cross-filtering simplifies the job for data modelers.

47. How can you analyze Power BI reports data in excel? ↑

You need to follow the below-given steps:

- Open Power BI Admin portal, go to tenant settings and select -> Analyze.
- Check that Power BI Administrator has enabled Excel option or not.
- Then at the upper right corner, click settings to download and install Excel updates.
- Next, go to the left-hand side navigation pane, go to the workspace, click on the dataset, click on Eclipses (three dots) and select Analyze in Excel.
- download ODC file, save, and double click on it.
- After that needs to provide power BI user id and password.

48. How to toggle between two options and make it interact with rest of the visualizations in report? ↑

Toggling Action can be achieved in Power BI reports, when in case there are two or more dimensions. This can be showcased using an "Enlighten Slicer" in Power BI which can be imported from Market Place.

49. What is Power BI Q&A? ↑

Power BI Q&A is a natural language tool which helps in querying your data and get the results you need from it. You do this by typing into a dialog box on your Dashboard, which the engine instantaneously generates an answer similar to Power View. Q&A interprets your questions and shows you a restated query of what it is looking for from your data.

Q&A was developed by Server and Tools, Microsoft Research and the Bing teams to give you a complete feeling of truly exploring your data.

50. Explain the process of dynamic filtering? ↑

The following are the steps of dynamic filtering:

Set all the data of a report ready to be published Publish it into group workspace Create a filter link Create a DAX calculated column Public overview report

51. What is the latency for running queries from the gateway to a data source? What is the best architecture? ↑

We recommend that you have the gateway as close to the data source as possible to avoid network latency. If you install the gateway on the actual data source, the introduced latency is minimized.

52. Name two types of connectivity modes in Power BI? ↑

Two types of connectivity modes used in Power BI are:

- Import
- Direct Query

53. Explain the term responsive slicers. ↑

On a report page, you can easily resize a responsive slicer to various sizes and shapes, and the data contained in it should be rearranged according to it. In case if the visual becomes too small to be useful, an icon representing the visual ability to take its place, thus saving the space on the report page.

54. Is the Power BI tool available for free? ↑

You can access Power BI for free. However, if you wish to use all the feature of Power BI, then you can use its pro subscription account. The subscription account offers an enhanced version of several features that are available with Power Bi free account.

55. What is grouping? How can you use it? ↑

Power BI Desktop allows you to group the data into small chunks. For grouping, you should use Ctrl + click to select multiple elements in the visual. Right-click one of those elements which appear in groups window.

56. What is data management gateway and Power BI personal gateway? ↑

Gateway acts a bridge between on-premises data sources and Azure cloud services.

Personal Gateway:

- Import Only, Power BI Service Only, No central monitoring/managing.
- Can only be used by one person (personal); can't allow others to use this gateway.

On-Premises Gateway:

- Import and Direct Query supported.
- Multiple users of the gateway for developing content.
- Central monitoring and control.

57. What is the only prerequisite for connecting to a database in Azure SQL Database? ↑

The only prerequisite for before connecting to a database is that the user need to configure firewall setting to allows remote connections.

58. Organization is owning Power BI workspace, has 10 members and wish to give access for few members Dashboard, for few reports, for few Datasets. Can we achieve this? ↑

To attain this need to create Content Pack,

Need to select Specific Group of people (User Email ids or Distribution lists) (OR) My Entire Organization in then we choose give access to Dashboards or Reports or Datasets.

59. Explain the term incremental refresh? ↑

Increment refresh is a newly added data so that there is no need to truncate or load the entire data.

60. What is Power Pivot Data Model? ↑

It is a model that contains data writes, tables, sections, and table relations. These data tables help you to develop for holding data for a business substance.

61. What are the differences between a Power BI Dataset, a Report, and a Dashboard? ↑

Dataset: The source used to create reports and visuals/tiles.

- A data model (local to PBIX or XLSX) or model in an Analysis Services Server
- Data could be inside of model (imported) or a Direct Query connection to a source.

Report: An individual Power BI Desktop file (PBIX) containing one or more report pages.

- Built for deep, interactive analysis experience for a given dataset (filters, formatting).
- Each Report is connected to atleast one dataset
- Each page containing one or more visuals or tiles.

Dashboard: a collection of visuals or tiles from different reports and, optionally, a pinned.

- Built to aggregate primary visuals and metrics from multiple datasets.

62. Why is TOP N not accessible for the Page and Report Level Filter? ↑

Top N is not accessible for the Page and Report Level Filters because their channels are associated with different visuals.

63. Is Power BI available on-premises? ↑

No, Power BI is not available as a private, internal cloud service. However, with Power BI and Power BI Desktop, you can securely connect to your own on-premises data sources. With the On-premises Data Gateway, you can connect live to your on-premises SQL Server Analysis Services, and other data sources. You can also scheduled refresh with a centralized gateway. If a gateway is not available, you can refresh data from on-premises data sources using the Power BI Gateway – Personal.

64. Name 4 types of roles-based usage of Power BI? ↑

Microsoft has categories Power BI users as below:

Consumers (also called as End-Users) of Power BI who gets insights of the data in the form of reports and used for decision making. Designers who Collect, Wangle, Explore, Transform, Model, and Evaluate Data and then design reports, publish reports to Power BI Web Service and create dashboards. Administrators who are responsible for User governance using Office 365 (like Provisioning of Power BI Access to workspaces Licenses) and Administering User Security (like assigning Power BI admin roles and assigning Premium capacity roles) Developers who helps Power BI consumers and designers to build integrating / embedding custom visuals in Power BI Reports and building streaming datasets.

65. What do you use as a consolidate inquiry in Power BI? ↑

Join Queries are used as a consolidate inquiries in Power BI

66. What is on-premise gateway? ↑

On-premise gateway acts as a bridge which helps you to transfer the data, which is on-premise (not on the cloud) safely and securely.

67. What is natural language search choice? ↑

The natural language search choice is language-based learning for communicating with information as a part of Power BI suite for Office 365 advertising.

68. Difference between Filter & Raw Filter? ↑

Raw Filter works only on Column where FILTER Function on Measure.

69. What are some ways that Excel experience can be leveraged with Power BI? ↑

Below are some of the ways through which we can leverage Power BI:

- The Power BI Publisher for Excel:
 - Can be used to pin Excel items (charts, ranges, pivot tables) to Power BI Service.
 - Can be used to connect to datasets and reports stored in Power BI Service.
- Excel workbooks can be uploaded to Power BI and viewed in the browser like Excel Services.
- Excel reports in the Power BI service can be shared via Content Packs like other reports.
- Excel workbooks (model and tables) can be exported to service for PBI report creation.
- Excel workbook Power Pivot models can be imported to Power BI Desktop models.

70. How can you identify which user has logged in to Power BI server or viewing the report from Power BI? ↑

The way to identify the user is to create a DAX column and embed "username ()" or "principalusername ()", which will retrieve information on the user has logged in.

71. Explain the term data alerts. ↑

Alert works on data that is refreshed, Power BI looks for an alert, and it reaches the alert threshold or the limit then the alert will be triggered.

72. How do we disable the Default interactivity in Desktop? ↑

Highlight the Visual and go to edit interactions and Click on None on the remaining visuals.

73. What is Power View? ↑

Power View is a data visualization technology that lets you create interactive charts, graphs, maps, and other visuals which bring your data to life. Power View is available in Excel, SharePoint, SQL Server, and Power BI.

The following pages provide details about different visualizations available in Power View:

- Charts
 - Line charts
 - Pie charts
 - Maps
 - Tiles
 - Cards

- Images
- Tables
- Power View
- Multiples Visualizations
- Bubble and scatter charts
- Key performance indicators (KPIs)

74. What is the option to unpivot data in the question proofreader? ↑

Unpivot line is a choice to unpivot any data in the question proofreader.

75. Explain the difference between Power BI and Tableau? ↑

The following are the differences between Power BI and Tableau:

Power BI focusses only on modeling and reporting, while Tableau is the best tool according to data visualization. Power BI is less expensive, while Tableau is very expensive. Power BI is associated with Microsoft Azure, while Tableau uses python Machine learning. Power BI has a simple and easy to use interface while Tableau has a customized dashboard. Power BI becomes slow while handling massive amounts of data, while Tableau easily handles any amount of data.

76. What is a calculated column in Power BI and why would you use them? ↑

Calculated Columns are DAX expressions that are computed during the model's processing/refresh process for each row of the given column and can be used like any other column in the model.

Calculated columns are not compressed and thus consume more memory and result in reduced query performance. They can also reduce processing/refresh performance if applied on large fact tables and can make a model more difficult to maintain/support given that the calculated column is not present in the source system.

77. What is Edit Interactions in Power Bi? ↑

Power Bi provides you to very cool features of visual Interaction, by default this feature is enable, that's means when you select any slicer value or click any visual by default all visuals get filtered on the basis of click or select value. And we can control this feature to using Edit Interactions.

78. Explain data source filter. ↑

It is a parameter to filter the data into machines.

79. Can you create multiple dynamic connections between two tables? ↑

No, we can't create more than one multiple dynamic connections.

80. What area do you go to change and reshape data in Power BI? ↑

Data Editing helps you to change and reshape data in Power BI.

81. Can we refresh our Power BI reports once uploaded to cloud (Share point or Powebi.com)? ↑

Yes we can refresh our reports through Data Management gateway(for sharepoint), and Power BI Personal gateway(for Powerbi.com)

82. State the main difference between Filter and Slicer. ↑

If you are using the normal filter user cannot interact with the dashboard. On the other hand, slicer allows users to have an interaction with Reports as well as Dashboards.

83. What is the major difference between the old version and a new version of Power BI tool? ↑

The latest version has more robust features, and it is famous with the name Power BI Desktop. This is an all in one solution for Power View, Power Pivot, and Power Query in the backend. Power BI offers many add-ins for Excel, which is useful for better visualizations.

84. Where incremental licensing refresh feature is accessible? ↑

Incremental refresh feature mainly used for high-end scalability of data by publishing only on that workspace in Power BI Service where Premium capacity is needed.

85. Explain z-order in Power BI? ↑

Z-order is a design strategy which is used for arranging visual over shapes. It can be defined as an implementation method which can be applied whenever reports have multiple elements.

86. Explain x-velocity in memory. ↑

It is the main engine which is used in power pivot. It allows you to load the large set of data into Power BI data.

87. What are Data alarms ↑

Ready work on information that is revived ,when information is invigorated BI searches for a caution and on the off chance that it achieves the ready edge or the utmost, at that point the alarm will be activated.

88. What are some of the unique data invigorations used for generating the distributed reports within Power BI? ↑

There are four main types of invigorating steps when it comes to Power BI. Bundle invigorate can model or revive your data.

- Visual compartment - This type of invigorating is a visual compartment refresh stored in a report type within a report once the data starts to change. In order to find out if the data invigorate worked and view how to actualize the data, you can check on the accompanying connections.
- Tile Invigorate - Tile invigorate refreshes the stores for the tile visuals on the dashboard once the data begins to change. This happens at regular type intervals. You may also constrain a tile for invigorating through the option of the ellipsis (which is three dots like this ...) on the upper right of the dashboard and choosing Refresh Dashboard Tiles.
- Bundle Invigorate – This would then synchronize the Power BI Desktop or Excel document between the Power BI benefit and OneDrive, or SharePoint Online. This does not pull the data from the first data source though. When the data comes to Power BI it can refresh it once it is inside the OneDrive record.
- Display/data revive – This refers to the type of revising to the dataset inside the Power BI benefit with data from the initial data source. This would either be finished by utilizing booked revive or invigorate now. That usually requires an entry point for the for the on-premises data sources, in the form of access tokens or login credentials.

89. State the differences between Power BI and SSRS. ↑

Power BI:

- Power BI gives strong data manipulation feature in its backend but provides access only to simple visualizations.
- In free version, Power BI limits the use 1 GB data.
- Power BI allows several data sources supported by Tableau. With the integration of Office 365 suite, it allows connection with Share point. Power BI also allows online support to the user for direct visualization through Search Engines but is limited to Bling search.
- There is a free version available in Power BI which allows the user to 1GB data set limit. Pro Software is paid but is cheaper in the market while compared to other BI tools.
- Power BI is free version and Power Pro is paid. Pro is available to the user at a cost of 9.99USD/month with 10 GB data limit and 1 million rows/hour data streaming.
- Implementation process in Power BI is quite simple. It uses cloud storage.

SQL Server Reporting Services:

- SQL server Reporting Services is generally used to make pixel perfect reports and provides limited dash board options.
- SSRS does not have any limit. Also, it allows users to connect larger data sets, which is not possible in Power BI.
- SSRS also allows various data sources for connections to make business intelligence reports.

- Upon request, the cost details are exposed to the user.
- This software license is available on request and is available on cloud platforms such as Azure, AWS and some other major platforms.
- Compared to Power BI, SSRS contains complex implementation process.

90. Is it possible to have created multiple active relationships in Power BI? ↑

No, we can't set multiple active relationships in Power BI.

91. How does SSRS integrate with Power BI? ↑

Below are some of the way through which SSRS can be integrated with Power BI:

- Certain SSRS Report items such as charts can be pinned to Power BI dashboards.
- Clicking the tile in Power BI dashboards will bring the user to the SSRS report.
- A subscription is created to keep the dashboard tile refreshed.
- Power BI reports will soon be able to be published to SSRS portal

Quiz

1. You've imported a spreadsheet, but Power BI Desktop hasn't realised that the first row should be used as column titles. What tool should you click on? ↑

- A) Enable column titles
- B) Move titles above data
- C) Use first row as headers
- D) Promote top row

Answer: C

2. Data can be refreshed in Power BI service by using ↑

- A) Gateway
- B) Power BI Desktop
- C) Apps
- D) Refresh service

Answer: A

3. As part of a large HR project you are working with a dataset of company employees, both past and present. The data includes columns for EthnicGroup, PayTypeID, HireDate (the date they started work), TermDate (the date they left) and several other columns. You want to create a new Calculated Column that determines if the person was a bad hire based on a set of rules. If they were a bad hire then the result is 1, otherwise the Calculated Column displays a zero. The bad hire rule is: BadHire = If the person stayed at the company less than 61 days Example: If a person joined the company on 27th June 2013 and left on 21st August 2013, then they would be a bad hire. Which DAX expression would you use for this Calculated Column? ↑

A) Slicer

B) IF(OR((((HireDate]-[TermDate])) >= 61,ISBLANK([TermDate])),0,1)

C) IF((((HireDate]-[TermDate])*-1) < 61),1,0)

D) IF((((TermDate]-[HireDate])*-1) >= 61,0,1)

Answer: A

4. You want to create a DAX formula that automatically calculates the previous month number. So if the month was June then the formula would return 5. You have already created the DAX formula below: Today Month = MONTH (Sales[Todays Date]) Which of the DAX formulas below would be the right choice next? ↑

A) Previous Month = Sales[Today Month]-1

B) Previous Month = PREVIOUSMONTH(Sales[Today Month])

C) Previous Month = STARTOFMONTH(Sales[Today Month])-1

D) Previous Month = IF (Sales[Today Month] =1, 12,Sales[Today Month]-1)

Answer: D

5. Which is a single page, often called a canvas, that uses visualizations to tell a story? ↑

A) Power BI Service dashboard

B) Power Bi Desktop Dashboard

C) Power Bi Desktop Sheet

D) Power BI Service Multiple sheet

Answer: A

6. Read the following paragraph carefully and decide whether the entire paragraph is TRUE or FALSE? You need a Power BI Pro license to share your dashboard but those you share it with do not need a license. When you share a dashboard, they can view it and interact with it, but can't edit it. They see the same data that you see in the dashboard and reports unless row-level security (RLS) is applied to the underlying dataset. The colleagues you share it with can share the dashboard with their colleagues, if you allow them to. ↑

A) TRUE

B) FALSE

Answer: B

7. Which of the accompanying field composposes can be added to the Field well of a Slicer visual? ↑

A) Local sections returned by a question.

B) Computed segments made with a DAX articulation.

C) Measures made by a DAX articulation.

D) Gatherings made inside a table utilizing the "New Group" Command in Power BI Desktop.

Answer: B

8. You have created a table with a column 'population' with numbers 53222122, 5322122, 33333. You want to display the 'population' column with comma signs. How should you do this? ↑

A) Right-click on the POPULATION column and choose FORMAT...

B) Go to the FIELD FORMATTING category of the table's properties, choose the POPULATION field and tick the THOUSANDS SEPARATOR box

C) You can't.

D) Go to the underlying table in DATA view, select the POPULATION column, and on the MODELING tab of the ribbon tick the THOUSANDS SEPARATOR icon.

Answer: D

9. Data has been scraped from a table on a popular retirement website. However, the Health care quality column's scores were not automatically transformed from text to numbers when Query Editor loaded the table. You thus right-clicked the column header, and selected Change Type > Whole Number to change them. Unfortunately, the Health care quality column contains a few ties in states' rankings, which was noted on the website by the word (tie) after their numbers. Query Editor thus reports a few errors. What is the consequence of using the Remove Errors option (ribbon or the right-click menu option) to resolve this? ↑

- A) Removes the applied step that has errors.
- B) Removes the error warnings but keeps all data intact.
- C) Blanks the cell values which have errors.
- D) Removes any rows with errors.

Answer: D

10. Which type of visualisation would you choose if you wanted to show relationships between 3 numerical values and turn the horizontal axis into a logarithmic scale? The worksheet data would include grouped sets of values and you wanted to show patterns in large sets of data, for example by showing linear or non-linear trends, clusters, and outliers? ↑

- A) Scatter Chart
- B) Bubble Chart
- C) Treemap
- D) Pie Chart

Answer: B

11. You are viewing a Power BI dashboard in a browser window. What happens when you click the Infocus mode of a tile? ↑

- A) The Power BI desktop file opens.
- B) The report from which the tile was pinned opens.
- C) The Power BI desktop file gets downloaded.
- D) The tile you selected expands and takes the full space.

Answer: D

12. How would you include different terms into Q&A? ↑

- A) In Power BI Desktop, go into the Relationships see, select the table, and select Modeling and Synonyms.
- B) In the Power BI benefit, go into the Relationships see, select the table, and select Modeling and Synonyms.
- C) In Power BI Desktop go to the report - > select the visual, modelling, Q and A Terms.

D) None of these

Answer: A

13. You want to extract from a balances table the balance for the last period for which a figure has been entered, and your friend suggests you use one of these functions: (which one is correct?) ↑

A) FINALBALANCE

B) LASTNONBLANK

C) BALANCE

D) LATESTVALID

Answer: B

14. Some of the most powerful data analysis solutions in Power BI Desktop can be created by using measures. Measures help us by performing calculations on our data as we interact with our reports. Understanding aggregations is fundamental to understanding measures, because every measure will perform some type of aggregation. Which of the below is TRUE regarding measures in Power BI? ↑

A) IF(OR((((HireDate]-[TermDate]))*-1) >= 61,ISBLANK([TermDate])),0,1).

B) You can reference another measure in a DAX expression by just typing an opening bracket ([).

C) Every time you interact with your report, you are changing the context in which a measure calculates and displays its results.

D) You can create a new measure by clicking on the New Measure button in the ribbon on Power BI Desktop's Home tab.

Answer: A

15. Which of the accompanying articulations are valid regarding outlining a Power BI Desktop venture in DirectQuery mode? ↑

A) You can not change over section information composes when altering an inquiry.

B) You can not add computed segments to the information show.

C) All inquiries inside the venture must be founded on a solitary source database.

D) You can not add measures to the information demonstrate.

Answer: A

16. Which of the accompanying is not a legitimate variable compose when programming in the M dialect? ↑

A) Capacity

B) Dataframe

C) Rundown

D) Record

Answer: B

17. You are creating a custom column with Column name as "Metres per unit" and Custom column formula as "[SquareMetres] / [NumberUnits]". Which language is custom formula written in? ↑

A) C

B) C++

C) Q

D) M

Answer: D

18. When creating a waterfall chart, which two field options that you need to define? ↑

A)Category

B)X Axis

C)Y Axis

D)Size

Answer: A & C

19. When you share with people outside your organization, they get an email with a link to the shared dashboard. They need a Power BI Pro license, and they have to sign in to Power BI to see the dashboard. After they sign in, they see the shared

dashboard in its own browser window without the left navigation pane, not in their usual Power BI portal. They have to bookmark the link to access this dashboard in the future. Which of the following statements is FALSE when sharing visualizations outside of your organisation? ↑

- A) They can't edit any content in this dashboard or report.
- B) They can change any filters/slicers available on the reports connected to the dashboard and save their changes.
- C) People outside your organization can't see any data if role- or row-level security is implemented on on-premises Analysis Services tabular models.

Answer: B

20. A CurrentSales dataset contains a large number of product codes for items that the company have sold in the last 12 months. Due to the nature of the business and the wide variety of suppliers, the product codes come in a variety of formats, including mixed case characters. You want to write a DAX expression that checks if the product code contains the letters "ex". Which DAX function below is the right one to use? ↑

- A) SEARCH("ex", [ProductCode])
- B) FIND("ex", [ProductCode])

Answer: A

21. Where do you discover the Q&A highlight? ↑

- A) At the highest point of a dashboard in the Power BI benefit.
- B) By tapping on Modeling and Synonyms in Power BI work area.
- C) At the highest point of a report in the Power BI benefit.
- D) None of these.

Answer: C

22. When you enable Snap objects to grid, all visuals on the Power BI Desktop canvas that you move (or resize) are automatically aligned to the nearest grid axis, making it much easier to ensure two or more visuals align to the same horizontal or vertical location or size. You can also manage the overlap of each element on the design surface, often referred to as? ↑

- A) Vertical stacking
- B) Stack-order

C) a-order

D) z-order

Answer: D

23. With Power BI Publish to web, you can easily embed interactive Power BI visualizations online, such as in blog posts, websites, through emails or social media, on any device. You have published a visualization but unfortunately changes to the underlying data are not immediately visible to users. What might be wrong? ↑

A) You must refresh the data manually after publishing to the web.

B) You cannot refresh data after publishing to the web, the visuals are static.

C) The user does not have the appropriate row level security permissions.

D) It takes up to an hour for data to refresh.

Answer: D

24. Which level of filter behaves the same as a slicer in a report in Power BI Desktop? ↑

A) Visual Level Filter

B) Page Level Filter

C) Report Level Filter

D) Query Level Filter

Answer: B

25. Department table has unique departments and employee table can have many employees in each department and both entities can be linked in relationship view from department to Employee table using ↑

A) 1 to 1 relationship

B) One to many Relationship

C) Many to Many Relationships

D) Many to one Relationship

Answer: B

26. Which three views are available in Power BI Desktop? 1) Dashboard 2) Report 3) Data 4) Relationships ↑

- A) 1,2, and 3.
- B) 1,2, and 4.
- C) 2,3, and 4.
- D) 1,2,3, and 4.

Answer: C

27. Which chart is used to compare data side by side? ↑

- A) Line
- B) Combo
- C) Bullet
- D) WaterFall

Answer: D

28. Which chart will show correlation between 2 variables? ↑

- A) Pie Chart
- B) Scatter
- C) Bar Chart
- D) Line Chart

Answer: B

29. You're importing a list of top films from web using a URL. If you type in a valid URL like this and choose to continue, what will Power BI Desktop let you import? ↑

- A) The inner or outer text for any valid HTML tag.

- B) The HTML for the page.
- C) Any parts of the HTML page rendered with the DATA_PACKET tab.
- D) One or more of the valid HTML tables on the web page.

Answer: D

30. Which of the following is crosstable chart? ↑

- A) Cross Table
- B) Matrix
- C) Line
- D) Guage

Answer: B

31. When planning an information display with Power BI Desktop, which of the accompanying proclamations are genuine in regards to the tenets for making table connections? ↑

- A) A connection between two tables must be characterized utilizing a solitary field from each table.
- B) No less than one section characterized in a table relationship must contain interesting qualities.
- C) You can characterize different connections between two tables in an information demonstrate however just a single of the connections can be set apart as dynamic.

Answer: C

32. Having created a new blank model you want to load in data from a SQL Server database which is hosted on the same PC as the Power BI Desktop application. You click the Get Date ribbon option and select SQL Server from the drop down list. What should you enter in the Server textbox? ↑

- A) local
- B) [blank]
- C) host
- D) localhost

Answer: D

33. Report Level filter applies to ↑

- A) One Page
- B) All Pages
- C) One Visualization
- D) Multiple Visualizations in same page

Answer: B

34. Which chart is suitable for comparing two sets of measure values that are usually hard to compare because of the differences in scale? ↑

- A) KPI Chart
- B) Gauge Chart
- C) Combo Chart
- D) Stacked Bar Chart

Answer: C

Behavioral Questions

1. Tell me about your educational background and the business intelligence analysis field you're experienced in. ↑

How to Answer

A business intelligence analyst can concentrate on various industries, such as finance, economics, IT, statistics, manufacturing, and more. Share with the interviewer which area you specialized in while obtaining your university degree, and briefly outline where your career journey has taken you so far. Make sure to demonstrate a keen interest in the company's industry or business sphere.

Answer Example

"I'm a Finance Graduate specialized in Business Administration. My education has helped me greatly on my business intelligence career path, as my interest and expertise evolved in fields such as business law, microeconomics, and financial accounting."

2. Specify two important chart types in your BI analyst arsenal. Why do you find them important? ↑

The hiring authority wants to see that you have basic knowledge when it comes to the diagrams and charts that you will be using during your business analyst career. Some examples include:

The interviewer wants to check your basic knowledge of charts you'll be using in your BI analyst's tasks. Some examples include:

area charts; bar charts; clustered column charts; combo charts; doughnut charts; funnel charts; gauge charts; line charts; pie charts; scatter plots; waterfall charts. You are probably familiar with most of these, so just choose two options which you have experience with and can easily talk about.

Answer Example

"The two types of charts I use most often are area charts and bar charts. In my role as BI analyst, area charts have helped me display where a specific trend is headed in the future, which, in turn, makes planning easier. Bar charts, on the other hand, can show clearly which products are most popular among customers or display the number of unique visitors on a landing page based on various criteria."

3. What is your opinion about Agile software development for BI projects? do you support employing Agile methodologies with your company's clients? ↑

How to Answer

Agile software development has received a warm welcome from companies worldwide since its onset. Agile stimulates collaboration with a team's clients and the end-users, enabling more cross-functional projects to run smoothly. However, there are still some who strongly prefer the structured development methodology of Waterfall, for example. So, before sharing your thoughts on Agile with the interviewer, make sure you know where the company stands on Agile.

Answer Example

"As far as I know, Agile software development is much more collaborative in comparison to other software development models. I believe Agile can be the best solution in many projects. However, maybe that's not always the case. That said, I'd love to get familiar with the methodologies employed here. At the end of the day, it's the end results that matter most, and not the methodologies behind the projects."

4. What specific technical skills do you have as a BI analyst? ↑

How to Answer

Your BI analyst experience and skillset are closely related to the focus of your career. Depending on whether you are a data BI analyst, an IT BI analyst, or a strategic BI analyst, your answer to this question will be different.

If you're applying for a data-focused role, your technical skillset may include proficiency in data analysis software and visual presentation tools, such as Power BI. A BI analyst in the IT field would probably have exposure to some software development programs. While a strategic BI analyst would be well-familiar with business case analysis software and applications. Taking that into consideration, share with the interviewer the technical skills you will bring to the company.

Answer Example

"As a data BI analyst, I've been exposed to data mining and big data software, such as LIONsolver and Oracle. I'm highly skilled in Microsoft Excel which I use for data modeling and Power BI where I create rich visuals and client presentations."

Scenario Based

1. We are using Power BI Desktop Currently. In next 5-6 months, we are planning to have Azure Analysis Services. We have Oracle Servers in our Company. We have to create data model in Power BI Desktop so that once we have AAS in place we can reuse whatever development we do. We have huge volume of data in many tables. Answer the following questions: ↑

Question: Shall we use Import method or Direct Query Method for our development if we have all the tables in Oracle Server?

- Depends on what "Huge Volume" means. Import will be faster, and give you the most flexibility in utilizing any ETL actions in the Query Editor in PBI. Direct Query is going to be slower and much of your ETL will need to be done on the DB side. You may have to do this if either the processing of the Power BI file takes too long, or gets too large.

Question: What should we do share our report with the users within our organization? If we use import method, the secured data would be pushed to cloud which we don't want currently as we don't have license yet.

- If you can't push data to the cloud, then you are stuck using Direct Query which will keep your data on premises. Any sort of sharing in Power BI will require a Pro license.

Question: If we use Direct Query method, we need to create Personal Gateway to connect to database so that we can see data in the reports.

- I would install the "normal" gateway (Enterprise) instead of personal. Personal is tied directly to one account, the Enterprise one is what you want to set up.

Question: There are some limitations in the Direct Query Method e.g. Merge Two columns not supported in Direct Query. If there are many limitations in Direct Query approach, is it worth doing the development using this approach?

- It wouldn't be wasted development as the source for your AAS model in the future could use the same source information instead of doing that in Power Query

Question: Is it safe if we publish the datamodel to the service and have on premise personal gateway to connect to db? Because I am putting tns entry of my database on services.

- Both gateways are secure... I'd still recommend not using the personal gateway. the other option allows more than one person to manage the gateway.