



Analyzing Data with Microsoft Power BI v1.0 (DA-100) - Full Access

Question 1 (Testlet 1)



Case Study -

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Overview -

Litware, Inc. is an online retailer that uses Microsoft Power BI dashboards and reports.

The company plans to leverage data from Microsoft SQL Server databases, Microsoft Excel files, text files, and several other data sources.

Litware uses Azure Active Directory (Azure AD) to authenticate users.

Existing Environment -

Sales Data -

Litware has online sales data that has the SQL schema shown in the following table.

Table name	Column name	Data type
Sales_Region	region_id	Integer
	name	VARCHAR
Region_Manager	region_id	Integer
	manager_id	Integer
Sales_Manager	sales_manager_id	Integer
	name	VARCHAR
Sales	username	VARCHAR
	sales_id	Integer
	sales_date_id	Integer
	sales_amount	Floating
	customer_id	Integer
	sales_ship_date_id	Integer
	region_id	VARCHAR
	customer_id	Integer
	first_name	VARCHAR
Customer_Date	last_name	VARCHAR
	date_id	Integer
	date	Date
	month	Integer
	week	Integer
Date	year	Integer
	week_id	Integer
	total_returns	Floating
	sales_region_id	VARCHAR
Targets	target_id	Integer
	sales_target	Decimal
	date_id	Integer
	region_id	Integer

In the Date table, the date_id column has a format of yyymmdd and the month column has a format of yyyyymm.

The week column in the Date table and the week_id column in the Weekly_Returns table have a format of yyyyww.

The sales_id column in the Sales table represents a unique transaction.

The region_id column can be managed by only one sales manager.

Data Concerns -

You are concerned with the quality and completeness of the sales data. You plan to verify the sales data for negative sales amounts.

Reporting Requirements -

Litware identifies the following technical requirements:

Executives require a visual that shows sales by region.

Regional managers require a visual to analyze weekly sales and returns.

Sales managers must be able to see the sales data of their respective region only.

The sales managers require a visual to analyze sales performance versus sales targets.

The sale department requires reports that contain the number of sales transactions.

Users must be able to see the month in reports as shown in the following example: Feb 2020.

The customer service department requires a visual that can be filtered by both sales month and ship month independently.

You need to create a calculated column to display the month based on the reporting requirements.

Which DAX expression should you use?

- A. FORMAT('Date'[date], "MMM YYYY")
- B. FORMAT('Date' [date], "M YY")
- C. FORMAT('Date'[date_id], "MMM") & "" & FORMAT('Date'[year], "#")
- D. FORMAT('Date' [date_id], "MMM YYYY")

Answer : D

Explanation:

Scenario: In the Date table, the date_id column has a format of yyyymmdd. Users must be able to see the month in reports as shown in the following example:

Feb 2020.

Question 2 (Testlet 1)



Case Study -

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Litware has online sales data that has the SQL schema shown in the following table.

Table name	Column name	Data type
Sales_Region	region_id	Integer
	name	Varchar
Region_Manager	region_id	Integer
	manager_id	Integer
Sales_Manager	sales_manager_id	Integer
	name	Varchar
	username	Varchar
Sales	sales_id	Integer
	sales_date_id	Integer
	sales_amount	Floating
	customer_id	Integer
	sales_ship_date_id	Integer
	region_id	Varchar
Customer_Date	customer_id	Integer
	first_name	Varchar
	last_name	Varchar
Date	date_id	Integer
	date	Date
	month	Integer
	week	Integer
Weekly_Returns	year	Integer
	week_id	Integer
	total_returns	Floating
Targets	sales_region_id	Varchar
	target_id	Integer
	sales_target	Decimal
Targets	date_id	Integer
	region_id	Integer

In the Date table, the date_id column has a format of yyyyymmdd and the month column has a format of yyyyymm.

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The sale department requires reports that contain the number of sales transactions.

Users must be able to see the month in reports as shown in the following example: Feb 2020.

The customer service department requires a visual that can be filtered by both sales month and ship month independently.

You need to review the data for which there are concerns before creating the data model.

What should you do in Power Query Editor?

- A. Transform the sales_amount column to replace negative values with 0.
- B. Select Column distribution.
- C. Select the sales_amount column and apply a number filter.
- D. Select Column profile, and then select the sales_amount column.

Answer : A

Explanation:

Scenario: Data Concerns -

You are concerned with the quality and completeness of the sales data. You plan to verify the sales data for negative sales amounts.

How to convert negative numbers into positive numbers, editor and right click, select transform, and choose absolute value. That would give the positive number outcome you're looking for.

Reference:

<https://www.xspdf.com/resolution/50510644.html>

Prepare the Data -

Question 3 (Testlet 2)



Case Study -

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Overview -

Contoso, Ltd. is a manufacturing company that produces outdoor equipment. Contoso has quarterly board meetings for which financial analysts manually prepare

Microsoft Excel reports, including profit and loss statements for each of the company's four business units, a company balance sheet, and net income projections for the next quarter.

Existing Environment -

Data and Sources -

Data for the reports comes from three sources. Detailed revenue, cost, and expense data comes from an Azure SQL database. Summary balance sheet data comes from Microsoft Dynamics 365 Business Central. The balance sheet data is not related to the profit and loss results, other than they both relate dates.

Monthly revenue and expense projections for the next quarter come from a Microsoft SharePoint Online list. Quarterly projections relate to the profit and loss results by using the following shared dimensions: date, business unit, department, and product category.

Net Income Projection Data -

Net income projection data is stored in a SharePoint Online list named Projections in the format shown in the following table.

MonthStartDate	Projection type	ProductCategory	Department	Projection
1-Apr-20	Revenue	Bikes	N/A	200,000
1-Apr-20	Revenue	Components	N/A	250,000
1-Apr-20	Revenue	Clothing	N/A	300,000
1-Apr-20	Revenue	Accessories	N/A	150,000
1-May-20	Revenue	Bikes	N/A	200,000
1-May-20	Revenue	Components	N/A	250,000
1-Apr-20	Expense	Bikes	Bike Manufacture	50,000
1-Apr-20	Expense	Bikes	Bike Sales	3,333

Revenue projections are set at the monthly level and summed to show projections for the quarter.

Balance Sheet Data -

The balance sheet data is imported with final balances for each account per month in the format shown in the following table.

AccountCategory	Account	Month	Year	BalanceAmount
Current assets	Cash and cash equivalents	3	2020	20,289
Current assets	Inventories	3	2020	4,855
Long-term liabilities	Long-term debt	3	2020	50,207
Current assets	Cash and cash equivalents	2	2020	28,209
Current assets	Inventories	2	2020	5,845
Long-term liabilities	Long-term debt	2	2020	49,887
Current assets	Cash and cash equivalents	1	2020	25,567
Current assets	Inventories	1	2020	65,998
Long-term liabilities	Long-term debt	1	2020	46,124

There is always a row for each account for each month in the balance sheet data.

Dynamics 365 Business Central Data

Business Central contains a product catalog that shows how products roll up to product categories, which roll up to business units.

Revenue data is provided at the date and product level. Expense data is provided at the date and department level.

Business Issues -

Historically, it has taken two analysts a week to prepare the reports for the quarterly board meetings. Also, there is usually at least one issue each quarter where a value in a report is wrong because of a bad cell reference in an Excel formula. On occasion, there are conflicting results in the reports because the products and departments that roll up to each business unit are not defined consistently.

Requirements -

Planned Changes -

Contoso plans to automate and standardize the quarterly reporting process by using Microsoft Power BI. The company wants to how long it takes to populate reports to less than two days. The company wants to create common logic for business units, products, and departments to be used across all reports, including, but not limited, to the quarterly reporting for the board.

Technical Requirements -

Contoso wants the reports and datasets refreshed with minimal manual effort.

The company wants to provide a single package of reports to the board that contains custom navigation and links to supplementary information.

Maintenance, including manually updating data and access, must be minimized as much as possible.

Security Requirements -

The reports must be made available to the board from powerbi.com. A mail-enabled security group will be used to share information with the board.

The analysts responsible for each business unit must see all the data the board sees, except the profit and loss data, which must be restricted to only their business unit's data. The analysts must be able to build new reports from the dataset that contains the profit and loss data, but any reports that the analysts build must not be included in the quarterly reports for the board. The analysts must not be able to share the quarterly reports with anyone.

Report Requirements -

You plan to relate the balance sheet to a standard date table in Power BI in a many-to-one relationship based on the last day of the month. At least one of the balance sheet reports in the quarterly reporting package must show the ending balances for the quarter, as well as for the previous quarter.

Projections must contain a column named RevenueProjection that contains the revenue projection amounts. A relationship must be created from Projections to a table named Date that contains the columns shown in the following table.

Name	Data type	Example
Date	Date	4-Apr-2020
Month	Integer	20,2004
Month Name	Text	February
Quarter	Integer	20,202
Year	Integer	2,020

The definitions and attributes of products, departments, and business units must be consistent across all reports.

The board must be able to get the following information from the quarterly reports:

Revenue trends over time

Ending balances for each account

A comparison of expenses versus projections by quarter

Changes in long-term liabilities from the previous quarter

A comparison of quarterly revenue versus the same quarter during the prior year

What is the minimum number of Power BI datasets needed to support the reports?

- A. two imported datasets
- B. a single DirectQuery dataset
- C. two DirectQuery datasets
- D. a single imported dataset

Answer : A

Explanation:

Scenario: Data and Sources -

Data for the reports comes from three sources. Detailed revenue, cost, and expense data comes from an Azure SQL database. Summary balance sheet data comes from Microsoft Dynamics 365 Business Central. The balance sheet data is not related to the profit and loss results, other than they both relate dates.

Monthly revenue and expense projections for the next quarter come from a Microsoft SharePoint Online list. Quarterly projections relate to the profit and loss results by using the following shared dimensions: date, business unit, department, and product category.

Reference:

<https://docs.microsoft.com/en-us/power-bi/connect-data/service-datasets-understand>

Prepare the Data -

Question 4 (Question Set 1) 

You have a custom connector that returns ID, From, To, Subject, Body, and Has Attachments for every email sent during the past year. More than 10 million records are returned.

You build a report analyzing the internal networks of employees based on whom they send emails to.

You need to prevent report recipients from reading the analyzed emails. The solution must minimize the model size.

What should you do?

- A. Implement row-level security (RLS) so that the report recipients can only see results based on the emails they sent.
- B. Remove the Subject and Body columns during the import.
- C. From Model view, set the Subject and Body columns to Hidden.

Answer : B

Explanation:

Incorrect Answers:

A, C: Does not reduce the size of the model.

Question 5 (Question Set 1)



You have the tables shown in the following table.

Table name	Column name
Campaigns	Campaign_ID
	Name
Ads	Ad_id
	Name
	Campaign_id
Impressions	Impression_id
	Ad_id
	Site_name
	Impression_time
	Impression_date

The Impressions table contains approximately 30 million records per month.

You need to create an ad analytics system to meet the following requirements:

- ☞ Present ad impression counts for the day, campaign, and Site_name. The analytics for the last year are required.
- ☞ Minimize the data model size.

Which two actions should you perform? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- A. Group the impressions by Ad_id, Site_name, and Impression_date. Aggregate by using the CountRows function.
- B. Create one-to-many relationships between the tables.
- C. Create a calculated measure that aggregates by using the COUNTROWS function.
- D. Create a calculated table that contains Ad_id, Site_name, and Impression_date.

Answer : AB

Question 6 (Question Set 1)



Your company has training videos that are published to Microsoft Stream.

You need to surface the videos directly in a Microsoft Power BI dashboard.

Which type of tile should you add?

- A. video
- B. custom streaming data
- C. text box
- D. web content

Answer : B

Explanation:

The only way to visualize a streaming dataset is to add a tile and use the streaming dataset as a custom streaming data source.

Reference:

<https://docs.microsoft.com/en-us/power-bi/connect-data/service-real-time-streaming>

Question 7 (Question Set 1)

You open a query in Power Query Editor.

You need to identify the percentage of empty values in each column as quickly as possible.

Which Data Preview option should you select?

- A. Show whitespace
- B. Column profile
- C. Column distribution
- D. Column quality

Answer : D

Explanation:

Column quality: In this section, we can easily see valid, Error and Empty percentage of data values associated with the Selected table.

Note: In Power Query Editor, Under View tab in Data Preview Section we can see the following data profiling functionalities:

- ☞ Column quality
- ☞ Column distribution
- ☞ Column profile

Reference:

<https://community.powerbi.com/t5/Community-Blog/Data-Profiling-in-Power-BI-Power-BI-Update-April-2019/ba-p/674555>

Question 8 (Question Set 1)

You have a prospective customer list that contains 1,500 rows of data. The list contains the following fields:

- ☞ First name
- ☞ Last name
- ☞ Email address
- ☞ State/Region
- ☞ Phone number

You import the list into Power Query Editor.

You need to ensure that the list contains records for each State/Region to which you want to target a marketing campaign.

Which two actions should you perform? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- A. Open the Advanced Editor.
- B. Select Column quality.
- C. Enable Column profiling based on entire dataset.
- D. Select Column distribution.
- E. Select Column profile.

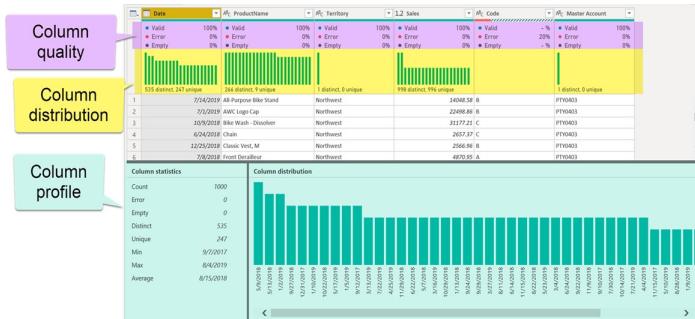
Answer : DE

Explanation:

Data Profiling, Quality & Distribution in Power BI / Power Query features

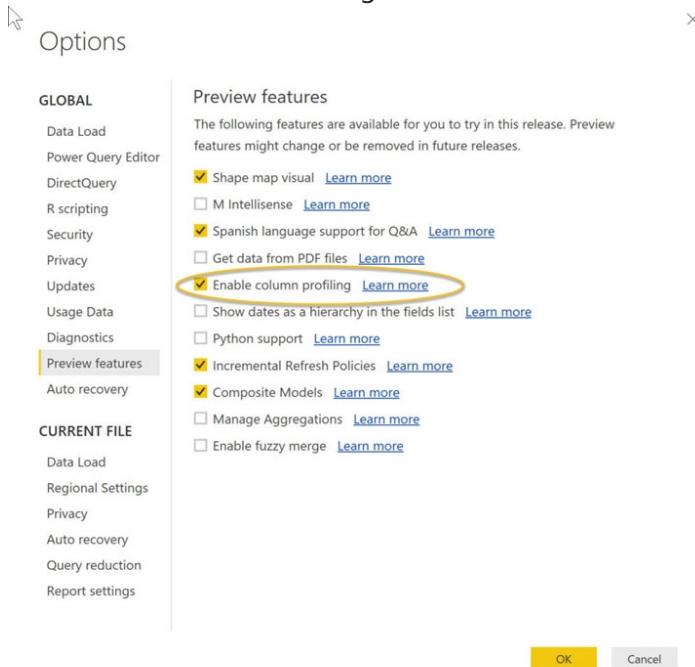
To enable these features, you need to go to the View tab → Data Preview Group → Check the following:

- ☞ Column quality
- ☞ Column profile
- ☞ Column distribution



⇒ Column profile

Turn on the Column Profiling feature.



⇒ Column distribution

Can use it to visually realize that your query is missing some data because of distinct and uniqueness counts.



Reference:

<https://www.poweredsolutions.co/2019/08/13/data-profiling-quality-distribution-in-power-bi-power-query/>

<https://www.altentertraining.com/microsoft/power-bi/column-profiling-is-good/>

Question 9 (Question Set 1)



HOTSPOT -

You have an API that returns more than 100 columns. The following is a sample of column names.

⇒ client_notified_timestamp

☈ client_notified_source
 ☈ client_notified_sourceid
 ☈ client_notified_value
 ☈ client_responded_timestamp

 ☈ client_responded_source
 ☈ client_responded_sourceid
 ☈ client_responded_value

You plan to include only a subset of the returned columns.

You need to remove any columns that have a suffix of sourceid.

How should you complete the Power Query M code? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

```

let
  Source = ...,
  rawData = Source{[tableId= "clientData"]}[Data],
  removeSources = Table.RemoveColumns(
    rawData,
    Table.ColumnNames(rawData) (
      List.Contains(
        List.Select(
          Table.ColumnNames(rawData),
          each Text.Contains(_, "sourceid"))
      )
    )
  )
in
  removeSources

```

Answer :

Answer Area

```

let
  Source = ...,
  rawData = Source{[tableId= "clientData"]}[Data],
  removeSources = Table.RemoveColumns(
    rawData,
    Table.ColumnNames(rawData) (
      List.Select(
        Table.ColumnNames(rawData),
        each Text.Contains(_, "sourceid"))
      )
    )
  )
in
  removeSources

```

Explanation:

Box 1: Table.RemoveColumns -

When you do "Remove Columns" Power Query uses the Table.RemoveColumns function

Box 2: List.Select -

Get a list of columns.

Box 3: Text.Contains -

Example code to remove columns with a slash (/):

```
let
Source = Excel.Workbook(File.Contents("C: Source"), null, true),
#"1_Sheet" = Source{[Item="1",Kind="Sheet"]}[Data],
#"Promoted Headers" = Table.PromoteHeaders(#"1_Sheet", [PromoteAllScalars=true]),
// get columns which contains any slash among values
ColumnsToRemove =
List.Select(
// get a list of all columns
Table.ColumnNames(#"Promoted Headers"),
(columnName) =>
let
// get all values of a columns
ColumnValues = Table.Column(#"Promoted Headers", columnName),
// go through values and stop when you find the first occurrence of a text containing a slash
// if there is a value with a slash, return true else false
ContainsSlash = List.AnyTrue(List.Transform(ColumnValues, each Text.Contains(_, "/")))
in
ContainsSlash
),
// remove columns
Result = Table.RemoveColumns(#"Promoted Headers", ColumnsToRemove) in
Result
```

Reference:

<https://community.powerbi.com/t5/Power-Query/Remove-columns-containing-a-certain-value/td-p/759657>

Question 10 (Question Set 1)



DRAG DROP -

You are building a dataset from a JSON file that contains an array of documents.

You need to import attributes as columns from all the documents in the JSON file. The solution must ensure that date attributes can be used as date hierarchies in Microsoft Power BI reports.

Which three actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

Select and Place:

Actions	Answer Area
Expand the columns.	(X)
Expand the records.	(X)
Add columns that use data type conversions.	(X)
Set the data types.	(X)
Convert the list to a table.	(X)

Answer :

Actions	Answer Area
Expand the columns.	(X)
Expand the records.	(X)
Add columns that use data type conversions.	(X)
Set the data types.	(X)
Convert the list to a table.	(X)

Explanation:

Step 1: Expand the records.

First Open Power BI desktop and navigate to Power Query, import the JSON file, then load the data, click on the record to expand it and to see the record and list.

Step 2: Add columns that use data type conversions.

Question 11 (Question Set 1)

You import two Microsoft Excel tables named Customer and Address into Power Query. Customer contains the following columns:

- Customer ID
- Customer Name
- Phone
- Email Address
- Address ID

Address contains the following columns:

- Address ID
- Address Line 1
- Address Line 2
- City
- State/Region
- Country
- Postal Code

The Customer ID and Address ID columns represent unique rows.

You need to create a query that has one row per customer. Each row must contain City, State/Region, and Country for each customer.

What should you do?

- A. Merge the Customer and Address tables.
- B. Transpose the Customer and Address tables.
- C. Group the Customer and Address tables by the Address ID column.
- D. Append the Customer and Address tables.

Answer : A

Explanation:

There are two primary ways of combining queries: merging and appending.

- When you have one or more columns that you'd like to add to another query, you merge the queries.
- When you have additional rows of data that you'd like to add to an existing query, you append the query.

Reference:

<https://docs.microsoft.com/en-us/power-bi/connect-data/desktop-shape-and-combine-data>

Question 12 (Question Set 1)

You have the following three versions of an Azure SQL database:

- Test
- Production
- Development

You have a dataset that uses the development database as a data source.

You need to configure the dataset so that you can easily change the data source between the development, test, and production database servers from powerbi.com.

Which should you do?

- A. Create a JSON file that contains the database server names. Import the JSON file to the dataset.
- B. Create a parameter and update the queries to use the parameter.
- C. Create a query for each database server and hide the development tables.
- D. Set the data source privacy level to Organizational and use the ReplaceValue Power Query M function.

Answer : D

Explanation:

With privacy level settings, you can specify an isolation level that defines the degree that one data source must be isolated from other data sources. An Organizational data source limits the visibility of a data source to a trusted group of people. An Organizational data source is isolated from all Public data sources, but is visible to other Organizational data sources.

Reference:

<https://docs.microsoft.com/en-us/power-bi/admin/desktop-privacy-levels>

Question 13 (Question Set 1)

You have a CSV file that contains user complaints. The file contains a column named Logged. Logged contains the date and time each compliant occurred. The data in Logged is in the following format: 2018-12-31 at 08:59.

You need to be able to analyze the complaints by the logged date and use a built-in date hierarchy.

What should you do?

- A. Create a column by example that starts with 2018-12-31.
- B. Apply the Parse function from the Date transformations options to the Logged column.
- C. Create a column by example that starts with 2018-12-31 and set the data type of the new column to Date.
- D. Apply a transform to extract the first 11 characters of the Logged column.

Answer : D

Explanation:

With Power Query you can Split Date and Time into Separate Columns by using a transform.

Reference:

<https://www.exceljetconsult.com.ng/home/blog/power-query-split-date-and-time-into-separate-columns/>

Question 14 (Question Set 1)

You have an Azure SQL database that contains sales transactions. The database is updated frequently.

You need to generate reports from the data to detect fraudulent transactions. The data must be visible within five minutes of an update.

How should you configure the data connection?

- A. Add a SQL statement.
- B. Set Data Connectivity mode to DirectQuery.
- C. Set the Command timeout in minutes setting.
- D. Set Data Connectivity mode to Import.

Answer : B

Explanation:

With Power BI Desktop, when you connect to your data source, it's always possible to import a copy of the data into the Power BI Desktop. For some data sources, an alternative approach is available: connect directly to the data source using DirectQuery.

DirectQuery: No data is imported or copied into Power BI Desktop. For relational sources, the selected tables and columns appear in the Fields list.

For multi-dimensional sources like SAP Business Warehouse, the dimensions and measures of the selected cube appear in the Fields list. As you create or interact with a visualization, Power BI Desktop queries the underlying data source, so you're always viewing current data.

Incorrect Answers:

D: Import: The selected tables and columns are imported into Power BI Desktop. As you create or interact with a visualization, Power BI Desktop uses the imported data. To see underlying data changes since the initial import or the most recent refresh, you must refresh the data, which imports the full dataset again.

Reference:

<https://docs.microsoft.com/en-us/power-bi/connect-data/desktop-use-directquery>

Question 15 (Question Set 1)

You have a data model that contains many complex DAX expressions. The expressions contain frequent references to the RELATED and

https://www.itexams.com/exam/DA-100?qpp_select=100

You have a data model that contains many complex DAX expressions. The expressions contain frequent references to the RELATED and RELATEDTABLE functions.

You need to recommend a solution to minimize the use of the RELATED and RELATEDTABLE functions.

What should you recommend?

- A. Split the model into multiple models.
- B. Hide unused columns in the model.
- C. Merge tables by using Power Query.
- D. Transpose.

Answer : C

Explanation:

Combining data means connecting to two or more data sources, shaping them as needed, then consolidating them into a useful query.

When you have one or more columns that you'd like to add to another query, you merge the queries.

Note: The RELATEDTABLE function is a shortcut for CALCULATETABLE function with no logical expression.

CALCULATETABLE evaluates a table expression in a modified filter context and returns A table of values.

Reference:

<https://docs.microsoft.com/en-us/power-bi/connect-data/desktop-shape-and-combine-data>

Question 16 (Question Set 1)



You have a large dataset that contains more than 1 million rows. The table has a datetime column named Date.

You need to reduce the size of the data model.

What should you do?

- A. Round the hour of the Date column to startOfHour.
- B. Change the data type of the Date column to Text.
- C. Trim the Date column.
- D. Split the Date column into two columns, one that contains only the time and another that contains only the date.

Answer : D

Explanation: We have to separate date & time tables. Also, we don't need to put the time into the date table, because the time is repeated every day.

Split your DateTime column into a separate date & time columns in fact table, so that you can join the date to the date table & the time to the time table. The time need to be converted to the nearest round minute or second so that every time in your data corresponds to a row in your time table.

Reference:

<https://intellipaat.com/community/6461/how-to-include-time-in-date-hierarchy-in-power-bi>

Question 17 (Question Set 1)



DRAG DROP -

You are modeling data in a table named SalesDetail by using Microsoft Power BI.

You need to provide end users with access to the summary statistics about the SalesDetail data. The users require insights on the completeness of the data and the value distributions.

Which three actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order,

Select and Place:

Actions	Answer Area
Specify the following query, then close and apply. -Table.Distinct(#"SalesDetail")	⊗
Create a visual for the query table.	⊗
Create a parameter that uses a query for the suggested values.	⊗
Create a query that uses Common Data Service as a data source.	⊗
Specify the following query, then close and apply. -Table.Profile(#"SalesDetail")	⊗
Create a blank query as a data source.	⊗

[Create a blank query as a data source.](#)

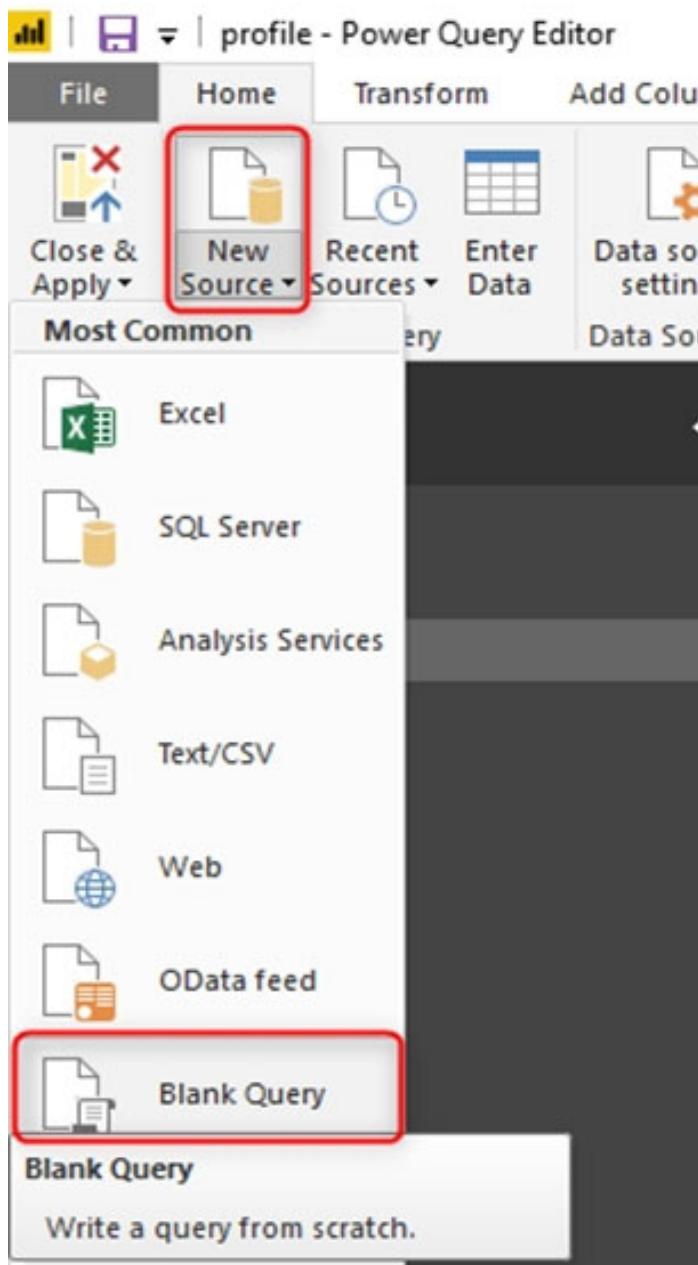
Answer :

Actions	Answer Area
Specify the following query, then close and apply. -Table.Distinct(#"SalesDetail")	Create a blank query as a data source.
Create a visual for the query table.	Specify the following query, then close and apply. -Table.Profile(#"SalesDetail")
Create a parameter that uses a query for the suggested values.	Create a visual for the query table.
Create a query that uses Common Data Service as a data source.	(C) Create a blank query as a data source.
Specify the following query, then close and apply. -Table.Profile(#"SalesDetail")	(V) Create a blank query as a data source.
Create a blank query as a data source.	

Explanation:

Step 1: Create a blank query as a data source

Start with a New Source in Power Query Editor, and then Blank Query.





Create a parameter that uses a query for suggested values.

Step 2: Specify the following query, then close and apply. -Table.Profile(#`SalesDetail")

In the new blank query, in the formula bar (if you don't see the formula bar, check the formula bar option in the View tab of the Power Query Editor), type below expression:

=Table.Profile()

Note that this code is not complete yet, we need to provide a table as the input of this function.

Note: The Table.Profile() function takes a value of type table and returns a table that displays, for each column in the original table, the minimum, maximum, average, standard deviation, count of values, count of null values and count of distinct values.

Step 3: Create a visual for the query table.

The profiling data that you get from Table.Profile function is like below:

1	AddressLine1	null	null						
2	City	null	null						
3	Country	M	null						
4	Color	Black	Yellow						
5	CustomerID	0	4	2.051320312	2.508891298				
6	CustomerName	null	null						
7	ExDate	null	null						
8	EnglishDescription	null	null						
9	EnglishProductName	AWC Logo Cap	Women's Tights, S						
10	EnglishQuantity	FALSE	TRUE						
11	EnglishUnitPrice	null	null						
12	FrenchDescription	Ville de route 750 noir, 58	null						
13	Gender	null	null						
14	HomeTown	null	null						
15	JapaneseDescription	null	null						
16	Language	null	null						
17	ModelID	null	null						
18	ProductID	49-5381	109-H098						
19	ProductKey	X	ABK	300.0	279.040404	300	0	300	
20	ProductNumber	null	null						
21	ProductSubcategoryID	null	null						
22	Region	0	750	371.400901	271.003157	600	0	6	
23	SafetyStockLevel	4	1000	495.201201	364.071143	600	0	6	
24	Size	null	null						
25	Supplier	28-40 CM	BL						
26	StockCount	null	null						
27	StockStatusReasonCode	null	null						
28	SupplierName	Supports m鷖icos para bicicletas	null						
29	Store	null	null						
30	StoreID	1/07/2007 12:00:00 AM	1/07/2007 12:00:00 AM	20/11/2001 5:40:18 AM					
31	Style	null	null						
32	ThickDescription	null	null						
33	UnitMeasure	null	null						
34	Weight	2	1000	56.11702129	158.0451589	600	324	41	
35	WeightUnitMeasureCode	G	LB						

After loading the data into Power BI, you'll have the table with all columns, and it can be used in any visuals.

Reference:

<https://radacad.com/create-a-profiling-report-in-power-bi-give-the-end-user-information-about-the-data>

Question 18 (Question Set 1)



You create the following step by using Power Query Editor.

- Table.ReplaceValue(SalesLT_Address,"1318","1319",Replacer.ReplaceText,{"AddressLine1"})

A row has a value of 21318 Lasalle Street in the AddressLine1 column.

What will the value be when the step is applied?

A. 1318

B. 1319

C. 21318 Lasalle Street

D. 21319 Lasalle Street

Answer : D

Explanation:

Example:

Replace the text "ur" with the text "or" in the table.

```
Table.ReplaceValue(
    Table.FromRecords({
        [a = 1, b = "hello"],
        [a = 3, b = "wurld"]
    }),
    "ur",
    "or",
    Replacer.ReplaceText,
    {"b"}
)
```

a	b
1	hello
3	world

Reference:

<https://docs.microsoft.com/en-us/powerquery-m/table-replacevalue>

Question 19 (Question Set 1)



You have a Microsoft Power BI report. The size of PBIX file is 550 MB. The report is accessed by using an App workspace in shared capacity of powerbi.com.

The report uses an imported dataset that contains one fact table. The fact table contains 12 million rows. The dataset is scheduled to refresh twice a day at 08:00 and 17:00.

The report is a single page that contains 15 AppSource visuals and 10 default visuals.

Users say that the report is slow to load the visuals when they access and interact with the report.

You need to recommend a solution to improve the performance of the report.

What should you recommend?

- A. Change any DAX measures to use iterator functions.
- B. Replace the default visuals with AppSource visuals.
- C. Change the imported dataset to DirectQuery.
- D. Remove unused columns from tables in the data model.

Answer : C

Explanation:

DirectQuery: No data is imported or copied into Power BI Desktop.

Import: The selected tables and columns are imported into Power BI Desktop. As you create or interact with a visualization, Power BI Desktop uses the imported data.

Benefits of using DirectQuery -

There are a few benefits to using DirectQuery:

☞ DirectQuery lets you build visualizations over very large datasets, where it would otherwise be unfeasible to first import all the data with pre-aggregation.

☞ Underlying data changes can require a refresh of data. For some reports, the need to display current data can require large data transfers, making reimporting data unfeasible. By contrast, DirectQuery reports always use current data.

The 1-GB dataset limitation doesn't apply to DirectQuery.

Reference:

<https://docs.microsoft.com/en-us/power-bi/connect-data/desktop-use-directquery>

Question 20 (Question Set 1)



You create a dashboard by using the Microsoft Power BI Service. The dashboard contains a card visual that shows total sales from the current year.

You grant users access to the dashboard by using the Viewer role on the workspace.

A user wants to receive daily notifications of the number shown on the card visual.

You need to automate the notifications.

What should you do?

- A. Create a data alert.
- B. Share the dashboard to the user.
- C. Create a subscription.
- D. Tag the user in a comment.

Answer : C

Explanation:

You can subscribe yourself and your colleagues to the report pages, dashboards, and paginated reports that matter most to you. Power BI e-mail subscriptions allow you to:

☞ Decide how often you want to receive the emails: daily, weekly, hourly, monthly, or once a day after the initial data refresh.

☞ Choose the time you want to receive the email, if you choose daily, weekly, hourly, or monthly.

Note: Email subscriptions don't support most custom visuals. The one exception is those custom visuals that have been certified.

Email subscriptions don't support R-powered custom visuals at this time.

Incorrect Answers:

A: Set data alerts to notify you when data in your dashboards changes beyond limits you set.

Reference:

<https://docs.microsoft.com/en-us/power-bi/collaborate-share/service-report-subscribe> <https://docs.microsoft.com/en-us/power-bi/create-reports/service-set-data-alerts>

Question 21 (Question Set 1)



Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You are modeling data by using Microsoft Power BI. Part of the data model is a large Microsoft SQL Server table named Order that has more than 100 million records.

During the development process, you need to import a sample of the data from the Order table.

Solution: From Power Query Editor, you import the table and then add a filter step to the query.

Does this meet the goal?

- A. Yes
- B. No

Answer : B

Explanation:

The filter is applied after the data is imported.

Instead add a WHERE clause to the SQL statement.

Reference:

<https://docs.microsoft.com/en-us/power-bi/connect-data/service-gateway-sql-tutorial>

Question 22 (Question Set 1)



Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

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You are modeling data by using Microsoft Power BI. Part of the data model is a large Microsoft SQL Server table named Order that has more than 100 million records.

During the development process, you need to import a sample of the data from the Order table.

Solution: You add a WHERE clause to the SQL statement.

Does this meet the goal?

A. Yes

B. No

Answer : A

Explanation:

The WHERE clause has its effects before the data is imported.

Reference:

<https://docs.microsoft.com/en-us/power-bi/connect-data/service-gateway-sql-tutorial>

Question 23 (Question Set 1)



Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You create a parameter named DataSourceExcel that holds the file name and location of a Microsoft Excel data source.

You need to update the query to reference the parameter instead of multiple hard-coded copies of the location within each query definition.

Solution: In the Power Query M code, you replace references to the Excel file with DataSourceExcel.

Does this meet the goal?

A. Yes

B. No

Answer : B

Explanation:

Instead modify the source step of the queries to use DataSourceExcel as the file path.

Note: Parameterising a Data Source could be used in many different use cases. From connecting to different data sources defined in Query Parameters to load different combinations of columns.

Reference:

<https://www.biinsight.com/power-bi-desktop-query-parameters-part-1/>

Question 24 (Question Set 1)



Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.
 After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.
 You create a parameter named DataSourceExcel that holds the file name and location of a Microsoft Excel data source.
 You need to update the query to reference the parameter instead of multiple hard-coded copies of the location within each query definition.
 Solution: You modify the source step of the queries to use DataSourceExcel as the file path.
 Does this meet the goal?

- A. Yes
- B. No

Answer : A

Explanation:

Parameterising a Data Source could be used in many different use cases. From connecting to different data sources defined in Query Parameters to load different combinations of columns.

Reference:

<https://www.biinsight.com/power-bi-desktop-query-parameters-part-1/>

Question 25 (Question Set 1)



Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.
 After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.
 You create a parameter named DataSourceExcel that holds the file name and location of a Microsoft Excel data source.
 You need to update the query to reference the parameter instead of multiple hard-coded copies of the location within each query definition.
 Solution: You create a new query that references DataSourceExcel.
 Does this meet the goal?

- A. Yes
- B. No

Answer : B

Explanation:

Instead modify the source step of the queries to use DataSourceExcel as the file path.

Note: Parameterising a Data Source could be used in many different use cases. From connecting to different data sources defined in Query Parameters to load different combinations of columns.

Reference:

<https://www.biinsight.com/power-bi-desktop-query-parameters-part-1/>

Model the Data -

Question 26 (Testlet 3)



Case Study -

This is a case study. Case studies are not timed separately. You can use as much exam time as you would like to complete each case. However, there may be additional case studies and sections on this exam. You must manage your time to ensure that you are able to complete all questions included on this exam in the time provided.

To answer the questions included in a case study, you will need to reference information that is provided in the case study. Case studies might contain exhibits and other resources that provide more information about the scenario that is described in the case study. Each question is independent of the other question on this case study.

At the end of this case study, a review screen will appear. This screen allows you to review your answers and to make changes before you move to the next section of the exam. After you begin a new section, you cannot return to this section.

To start the case study -

To display the first question on this case study, click the Next button. Use the buttons in the left pane to explore the content of the case study before you answer the questions. Clicking these buttons displays information such as business requirements, existing environment, and problem statements.

If the case study has an All Information tab, note that the information displayed is identical to the information displayed on the subsequent tabs.
When you are ready to answer a question, click the Question button to return to the question.

Overview -

Litware, Inc. is an online retailer that uses Microsoft Power BI dashboards and reports.

The company plans to leverage data from Microsoft SQL Server databases, Microsoft Excel files, text files, and several other data sources.

Litware uses Azure Active Directory (Azure AD) to authenticate users.

Existing Environment -

Sales Data -

Litware has online sales data that has the SQL schema shown in the following table.

Table name	Column name	Data type
Sales_Region	region_id	Integer
	name	VARCHAR
Region_Manager	region_id	Integer
	manager_id	Integer
Sales_Manager	sales_manager_id	Integer
	name	VARCHAR
	username	VARCHAR
Sales	sales_id	Integer
	sales_date_id	Integer
	sales_amount	Floating
	customer_id	Integer
	sales_ship_date_id	Integer
	region_id	VARCHAR
Customer_Date	customer_id	Integer
	first_name	VARCHAR
	last_name	VARCHAR
Date	date_id	Integer
	date	Date
	month	Integer
	week	Integer
Weekly_Returns	year	Integer
	week_id	Integer
	total_returns	Floating
Targets	sales_region_id	VARCHAR
	target_id	Integer
	sales_target	Decimal
	date_id	Integer
Targets	region_id	Integer

In the Date table, the date_id column has a format of yyyyymmdd and the month column has a format of yyymm.

The week column in the Date table and the week_id column in the Weekly_Returns table have a format of yyyyww.

The sales_id column in the Sales table represents a unique transaction.

The region_id column can be managed by only one sales manager.

Data Concerns -

You are concerned with the quality and completeness of the sales data. You plan to verify the sales data for negative sales amounts.

Reporting Requirements -

Litware identifies the following technical requirements:

Executives require a visual that shows sales by region.

Regional managers require a visual to analyze weekly sales and returns.

Sales managers must be able to see the sales data of their respective region only.

The sales managers require a visual to analyze sales performance versus sales targets.

The sale department requires reports that contain the number of sales transactions.

Users must be able to see the month in reports as shown in the following example: Feb 2020.

The customer service department requires a visual that can be filtered by both sales month and ship month independently.

You need to provide a solution to provide the sales managers with the required access.

What should you include in the solution?

- A. Create a security role that has a table filter on the Sales_Manager table where username = UserName().
- B. Create a security role that has a table filter on the Region_Manager table where sales_manager_id = UserPrincipalName().
- C. Create a security role that has a table filter on the Sales_Manager table where name = UserName().
- D. Create a security role that has a table filter on the Sales_Manager table where username = sales_manager_id.

Answer : B

Explanation:

Scenario: The region_id column can be managed by only one sales manager.

You can use Username() or userprincipalname() in DAX with Row-Level Security.

Within Power BI Desktop, username() will return a user in the format of DOMAIN\User and userprincipalname() will return a user in the format of user@contoso.com.

Reference:

<https://docs.microsoft.com/en-us/power-bi/admin/service-admin-rls>

Question 27 (Testlet 3)



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Existing Environment -

Sales Data -

Litware has online sales data that has the SQL schema shown in the following table.

Table name	Column name	Data type
Sales_Region	region_id	Integer
	name	Varchar
Region_Manager	region_id	Integer
	manager_id	Integer
Sales_Manager	sales_manager_id	Integer
	name	Varchar
Sales	username	Varchar
	sales_id	Integer
	sales_date_id	Integer
	sales_amount	Floating
	customer_id	Integer
	sales_ship_date_id	Integer
	region_id	Varchar
Customer_Date	customer_id	Integer
	first_name	Varchar
	last_name	Varchar
Date	date_id	Integer
	date	Date
	month	Integer
	week	Integer
	year	Integer
Weekly_Returns	week_id	Integer
	total_returns	Floating
	sales_region_id	Varchar
	target_id	Integer
	sales_format	Decimal

Targets

Sales_target	Decimal
date_id	Integer
region_id	Integer

In the Date table, the date_id column has a format of yyyyymmdd and the month column has a format of yyymm.

The week column in the Date table and the week_id column in the Weekly_Returns table have a format of yyyyww.

The sales_id column in the Sales table represents a unique transaction.

The region_id column can be managed by only one sales manager.

Data Concerns -

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Reporting Requirements -

Litware identifies the following technical requirements:

Executives require a visual that shows sales by region.

Regional managers require a visual to analyze weekly sales and returns.

Sales managers must be able to see the sales data of their respective region only.

The sales managers require a visual to analyze sales performance versus sales targets.

The sale department requires reports that contain the number of sales transactions.

Users must be able to see the month in reports as shown in the following example: Feb 2020.

The customer service department requires a visual that can be filtered by both sales month and ship month independently.

You need to create a relationship between the Weekly_Returns table and the Date table to meet the reporting requirements of the regional managers.

What should you do?

- A. Add the Weekly_Returns data to the Sales table by using RELATED DAX functions.
- B. In the Weekly_Returns table, create a new calculated column named date_id in a format of yyyyymmdd and use the calculated column to create a relationship to the Date table.
- C. Create a new table based on the Date table where date_id is unique, and then create a many-to-many relationship to Weekly_Return.

Answer : B

Explanation:

Scenario: Regional managers require a visual to analyze weekly sales and returns.

To relate the two tables we need a common column.

Question 28 (Testlet 3)



Case Study -

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	manager_id	Integer
	sales_manager_id	Integer
Sales_Manager	name	VARCHAR
	username	VARCHAR
	sales_id	Integer
Sales	sales_date_id	Integer
	sales_amount	Floating
	customer_id	Integer
	sales_ship_date_id	Integer
	region_id	VARCHAR
	customer_id	Integer
Customer_Date	first_name	VARCHAR
	last_name	VARCHAR
Date	date_id	Integer
	date	Date
	month	Integer
	week	Integer
	year	Integer
Weekly_Returns	week_id	Integer
	total_returns	Floating
	sales_region_id	VARCHAR
Targets	target_id	Integer
	sales_target	Decimal
	date_id	Integer
	region_id	Integer

In the Date table, the date_id column has a format of yyyyymmdd and the month column has a format of yyymm.

The week column in the Date table and the week_id column in the Weekly_Returns table have a format of yyyyww.

The sales_id column in the Sales table represents a unique transaction.

The region_id column can be managed by only one sales manager.

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Regional managers require a visual to analyze weekly sales and returns.

Sales managers must be able to see the sales data of their respective region only.

The sales managers require a visual to analyze sales performance versus sales targets.

The sale department requires reports that contain the number of sales transactions.

Users must be able to see the month in reports as shown in the following example: Feb 2020.

The customer service department requires a visual that can be filtered by both sales month and ship month independently.

You need to create relationships to meet the reporting requirements of the customer service department. What should you create?

- A. an additional date table named ShipDate, a one-to-many relationship from Date[sales_date_id] to Sales[date_id], and a one-to-many relationship from ShipDate[sales_ship_date_id] to Sales[date_id]
- B. an additional date table named ShipDate, a many-to-many relationship from Sales[sales_date_id] to Date[date_id], and a many-to-many relationship from Sales[sales_ship_date_id] to ShipDate[date_id]
- C. a one-to-many relationship from Date[date_id] to Sales[sales_date_id] and another one-to-many relationship from Date[date_id] to Weekly_Returns[week_id]
- D. a one-to-many relationship from Sales[sales_date_id] to Date[date_id] and a one-to-many relationship from Sales[sales_ship_date_id] to Date[date_id]

Answer : A

Explanation:

Scenario: The customer service department requires a visual that can be filtered by both sales month and ship month independently.

In Power BI Desktop, only one relationship can be active between a Fact table and Dimension table, so we need an extra table.

Use one-to-many relationship to be able to filter.

Incorrect Answers:

C: Cannot make a relation between a date_id and a week_id.

D: The one-to-many relationships between the Sales and the Date tables goes in the other direction: for each date there can be many sales or shipments.

Reference:

<https://docs.microsoft.com/en-us/power-bi/transform-model/desktop-relationships-understand>

Model the Data -

Question 29 (Testlet 4)



Case Study -

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To start the case study -

To display the first question on this case study, click the Next button. Use the buttons in the left pane to explore the content of the case study before you answer the questions. Clicking these buttons displays information such as business requirements, existing environment, and problem statements. If the case study has an All Information tab, note that the information displayed is identical to the information displayed on the subsequent tabs. When you are ready to answer a question, click the Question button to return to the question.

Overview -

Contoso, Ltd. is a manufacturing company that produces outdoor equipment. Contoso has quarterly board meetings for which financial analysts manually prepare

Microsoft Excel reports, including profit and loss statements for each of the company's four business units, a company balance sheet, and net income projections for the next quarter.

Existing Environment -

Data and Sources -

Data for the reports comes from three sources. Detailed revenue, cost, and expense data comes from an Azure SQL database. Summary balance sheet data comes from Microsoft Dynamics 365 Business Central. The balance sheet data is not related to the profit and loss results, other than they both relate dates.

Monthly revenue and expense projections for the next quarter come from a Microsoft SharePoint Online list. Quarterly projections relate to the profit and loss results by using the following shared dimensions: date, business unit, department, and product category.

Net Income Projection Data -

Net income projection data is stored in a SharePoint Online list named Projections in the format shown in the following table.

MonthStartDate	Projection type	ProductCategory	Department	Projection
1-Apr-20	Revenue	Bikes	N/A	200,000
1-Apr-20	Revenue	Components	N/A	250,000
1-Apr-20	Revenue	Clothing	N/A	300,000
1-Apr-20	Revenue	Accessories	N/A	150,000
1-May-20	Revenue	Bikes	N/A	200,000
1-May-20	Revenue	Components	N/A	250,000
1-Apr-20	Expense	Bikes	Bike Manufacture	50,000
1-Apr-20	Expense	Bikes	Bike Sales	3,333

Revenue projections are set at the monthly level and summed to show projections for the quarter.

Balance Sheet Data -

The balance sheet data is imported with final balances for each account per month in the format shown in the following table.

AccountCategory	Account	Month	Year	BalanceAmount
Current assets	Cash and cash equivalents	3	2020	20,289
Current assets	Inventories	3	2020	4,855
Long-term liabilities	Long-term debt	3	2020	50,207
Current assets	Cash and cash equivalents	2	2020	28,209
Current assets	Inventories	2	2020	5,845
Long-term liabilities	Long-term debt	2	2020	49,887
Current assets	Cash and cash equivalents	1	2020	25,567
Current assets	Inventories	1	2020	65,998
Long-term liabilities	Long-term debt	1	2020	46,124

There is always a row for each account for each month in the balance sheet data.

Dynamics 365 Business Central Data

Business Central contains a product catalog that shows how products roll up to product categories, which roll up to business units.

Revenue data is provided at the date and product level. Expense data is provided at the date and department level.

Business Issues -

Historically, it has taken two analysts a week to prepare the reports for the quarterly board meetings. Also, there is usually at least one issue each quarter where a value in a report is wrong because of a bad cell reference in an Excel formula. On occasion, there are conflicting results in the reports because the products and departments that roll up to each business unit are not defined consistently.

Requirements -**Planned Changes -**

Contoso plans to automate and standardize the quarterly reporting process by using Microsoft Power BI. The company wants to know how long it takes to populate reports to less than two days. The company wants to create common logic for business units, products, and departments to be used across all reports, including, but not limited, to the quarterly reporting for the board.

Technical Requirements -

Contoso wants the reports and datasets refreshed with minimal manual effort.

The company wants to provide a single package of reports to the board that contains custom navigation and links to supplementary information.

Maintenance, including manually updating data and access, must be minimized as much as possible.

Security Requirements -

The reports must be made available to the board from powerbi.com. A mail-enabled security group will be used to share information with the board.

The analysts responsible for each business unit must see all the data the board sees, except the profit and loss data, which must be restricted to only their business unit's data. The analysts must be able to build new reports from the dataset that contains the profit and loss data, but any reports that the analysts build must not be included in the quarterly reports for the board. The analysts must not be able to share the quarterly reports with anyone.

Report Requirements -

You plan to relate the balance sheet to a standard date table in Power BI in a many-to-one relationship based on the last day of the month. At least one of the balance sheet reports in the quarterly reporting package must show the ending balances for the quarter, as well as for the previous quarter.

Projections must contain a column named RevenueProjection that contains the revenue projection amounts. A relationship must be created from Projections to a table named Date that contains the columns shown in the following table.

Name	Data type	Example
Date	Date	4-Apr-2020
Month	Integer	20,2004
Month Name	Text	February
Quarter	Integer	20,202
Year	Integer	2,020

The definitions and attributes of products, departments, and business units must be consistent across all reports.

The board must be able to get the following information from the quarterly reports:

Revenue trends over time

Ending balances for each account

A comparison of expenses versus projections by quarter

Changes in long-term liabilities from the previous quarter

A comparison of quarterly revenue versus the same quarter during the prior year

Which DAX expression should you use to get the ending balances in the balance sheet reports?

- A. CALCULATE (SUM(BalanceSheet [BalanceAmount]), DATESQTD('Date'[Date]))
- B. CALCULATE (SUM(BalanceSheet [BalanceAmount]), LASTDATE('Date'[Date]))
- C. FIRSTNONBLANK ('Date' [Date] SUM(BalanceSheet[BalanceAmount]))
- D. CALCULATE (MAX(BalanceSheet[BalanceAmount]), LASTDATE('Date' [Date]))

Answer : A

Explanation:

Scenario: At least one of the balance sheet reports in the quarterly reporting package must show the ending balances for the quarter, as well as for the previous quarter.

DATESQTD returns a table that contains a column of the dates for the quarter to date, in the current context.

Reference:

<https://docs.microsoft.com/en-us/dax/datesqtd-function-dax>



Question 30 (Testlet 4)

Case Study -

This is a case study. Case studies are not timed separately. You can use as much exam time as you would like to complete each case. However, there may be additional case studies and sections on this exam. You must manage your time to ensure that you are able to complete all questions included on this exam in the time provided.

To answer the questions included in a case study, you will need to reference information that is provided in the case study. Case studies might contain exhibits and other resources that provide more information about the scenario that is described in the case study. Each question is independent of the other question on this case study.

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Requirements -

Planned Changes -

Contoso plans to automate and standardize the quarterly reporting process by using Microsoft Power BI. The company wants to know how long it takes to populate reports to less than two days. The company wants to create common logic for business units, products, and departments to be used across all reports, including, but not limited, to the quarterly reporting for the board.

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Report Requirements -

You plan to relate the balance sheet to a standard date table in Power BI in a many-to-one relationship based on the last day of the month. At least one of the balance sheet reports in the quarterly reporting package must show the ending balances for the quarter, as well as for the previous quarter.

Projections must contain a column named RevenueProjection that contains the revenue projection amounts. A relationship must be created from Projections to a table named Date that contains the columns shown in the following table.

Name	Data type	Example
Date	Date	4-Apr-2020
Month	Integer	202004
Month Name	Text	February
Quarter	Integer	20202
Year	Integer	2020

The definitions and attributes of products, departments, and business units must be consistent across all reports.

The board must be able to get the following information from the quarterly reports:

Revenue trends over time

Ending balances for each account

A comparison of expenses versus projections by quarter

Changes in long-term liabilities from the previous quarter

A comparison of quarterly revenue versus the same quarter during the prior year

HOTSPOT -

You need to calculate the last day of the month in the balance sheet data to ensure that you can relate the balance sheet data to the Date table.

Which type of calculation and which formula should you use? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Type of calculation:	<input type="button" value="▼"/> A DAX calculated column
	<input type="button" value="▼"/> A DAX calculated measure
	<input type="button" value="▼"/> An M custom column

Formula:	<input type="button" value="▼"/> Date.EndOfMonth(#date([Year], [Month], 1))
	<input type="button" value="▼"/> Date.EndOfQuarter(#date([Year], [Month], 1))
	<input type="button" value="▼"/> ENDOFQUARTER(DATE('BalanceSheet'[Year], BalanceSheet[Month], 1), 0)

Answer :

Answer Area

Type of calculation:	<input type="button" value="▼"/> A DAX calculated column
	<input checked="" type="button" value="▼"/> A DAX calculated measure
	<input type="button" value="▼"/> An M custom column

Formula:	<input type="button" value="▼"/> Date.EndOfMonth(#date([Year], [Month], 1))
	<input checked="" type="button" value="▼"/> Date.EndOfQuarter(#date([Year], [Month], 1))
	<input type="button" value="▼"/> ENDOFQUARTER(DATE('BalanceSheet'[Year], BalanceSheet[Month], 1), 0)

Explanation:

Box 1: A DAX Calculated measure -

Box 2: Date.EndofQuarter(#date([Year],[Mont],1))

ENDOFQUARTER returns the last date of the quarter in the current context for the specified column of dates.

The following sample formula creates a measure that returns the end of the quarter, for the current context.

= ENDOFQUARTER(DateTime[DateKey])

Reference:

<https://docs.microsoft.com/en-us/dax/endofquarter-function-dax>

Model the Data -



You have a Microsoft Power BI data model that contains three tables named Orders, Date, and City. There is a one-to-many relationship between Date and Orders and between City and Orders.

The model contains two row-level security (RLS) roles named Role1 and Role2. Role1 contains the following filter.

City[State Province] = "Kentucky"

Role2 contains the following filter.

Date[Calendar Year] = 2020 -

If a user is a member of both Role1 and Role2, what data will they see in a report that uses the model?

- A. The user will see data for which the State Province value is Kentucky and the Calendar Year is 2020.
- B. The user will see data for which the State Province value is Kentucky or the Calendar Year is 2020.
- C. The user will see only data for which the State Province value is Kentucky.
- D. The user will receive an error and will not be able to see the data in the report.

Answer : B

Explanation:

When a report user is assigned to multiple roles, RLS filters become additive. It means report users can see table rows that represent the union of those filters.

Reference:

<https://docs.microsoft.com/en-us/power-bi/guidance/rls-guidance>

Question 32 (Question Set 2)



HOTSPOT -

Your company has affiliates who help the company acquire customers.

You build a report for the affiliate managers at the company to assist them in understanding affiliate performance.

The managers request a visual showing the total sales value of the latest 50 transactions for each affiliate. You have a data model that contains the following tables.

Table name	Column name
Transactions	TransactionDate
	ItemsOrdered
	Amount
	AffiliateID
	TransactionID
Affiliate	AffiliateID
	Name

The Affiliate table has a one-to-many relationship to the Transactions table based on the AffiliateID column.

You need to develop a measure to support the visual.

How should you complete the DAX expression? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

```
Revenue Last 50 Transactions =
CALCULATE(
    SUM(
        SUMX(
            TOPN(
                CALCULATE(
                    SUM(
                        SUMX(
                            TOPN(
                                CALCULATE(
                                    SUM(
                                        SUMX(
                                            TOPN(
                                                DESC(
                                                    )
                                            )
                                        )
                                    )
                                )
                            )
                        )
                    )
                )
            )
        )
    )
)
```

Answer :

Answer Area

```
Revenue Last 50 Transactions =
CALCULATE(
    CONCATENATEX(
        SUM(
            SUMX(
                TOPN(
                    DESC(
                        )
                    )
                )
            )
        )
    )
    (Transactions[Amount]),

CALCULATE(
    CONCATENATEX(
        SUM(
            SUMX(
                TOPN(
                    DESC(
                        )
                    )
                )
            )
        )
    )
    (50, Transactions, Transactions
        [
            TransactionID,
            [Amount],
            [ItemsOrdered],
            [TransactionDate],
        ]
    )
)
```

Explanation:

Box 1: CALCULATE -

Start with CALCULATE and use a SUMX.

CALCULATE evaluates an expression in a modified filter context.

Box 2: SUMX -

SUMX returns the sum of an expression evaluated for each row in a table.

The following sample creates a measure with the sales of the top 10 sold products.

```
= SUMX(TOPN(10, SUMMARIZE(Product, [ProductKey], "TotalSales", SUMX(RELATED(InternetSales_USD[SalesAmount_USD]), InternetSales_USD [SalesAmount_USD]) + SUMX(RELATED(ResellerSales_USD[SalesAmount_USD]), ResellerSales_USD[SalesAmount_USD])))
```

Box 3: TOPN -

TOPN returns the top N rows of the specified table.

Box 4: [TransactionDate]

TOPN Syntax: TOPN(<n_value>, <table>, <orderBy_expression>, [<order>[, <orderBy_expression>, [<order>]]])

The orderBy_expression: Any DAX expression where the result value is used to sort the table and it is evaluated for each row of table.

Reference:

<https://docs.microsoft.com/en-us/dax/topn-function-dax>

Question 33 (Question Set 2)



You are configuring a Microsoft Power BI data model to enable users to ask natural language questions by using Q&A.

You have a table named Customer that has the following measure.

Customer Count = DISTINCTCOUNT(Customer[CustomerID])

Users frequently refer to customers as subscribers.

You need to ensure that the users can get a useful result for "subscriber count" by using Q&A. The solution must minimize the size of the model.

What should you do?

- Set Summarize By to None for the CustomerID column.
- Add a synonym of "subscriber" to the Customer table.
- Add a synonym of "subscriberID" to the CustomerID column.
- Add a description of "subscriber count" to the Customer Count measure.

Answer : B

Explanation:

You can add synonyms to tables and columns.

Note: This step applies specifically to Q&A (and not to Power BI reports in general). Users often have a variety of terms they use to refer to the same thing, such as total sales, net sales, total net sales. You can add these synonyms to tables and columns in the Power BI model.

This step applies specifically to Q&A (and not to Power BI reports in general). Users often have a variety of terms they use to refer to the same thing,

such as total sales, net sales, total net sales. You can add these synonyms to tables and columns in the Power BI model.

Reference:

<https://docs.microsoft.com/en-us/power-bi/natural-language/q-and-a-best-practices>

Question 34 (Question Set 2)



HOTSPOT -

You are creating a Microsoft Power BI data model that has the tables shown in the following table.

Table name	Column name
Sales	SalesID
	ProductID
	DateKey
	SalesAmount
Products	ProductID
	ProductName
	ProductCategoryID
ProductCategory	ProductCategoryID
	CategoryName

The Products table is related to the ProductCategory table through the ProductCategoryID column.

You need to ensure that you can analyze sales by product category.

How should you configure the relationships from Products to ProductCategory? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Cardinality:	<div style="display: flex; align-items: center;"> ▼ <ul style="list-style-type: none"> <input type="checkbox"/> One-to-many <input type="checkbox"/> One-to-one <input type="checkbox"/> Many-to-many </div>
Cross-filter direction:	<div style="display: flex; align-items: center;"> ▼ <ul style="list-style-type: none"> <input type="checkbox"/> Single <input type="checkbox"/> Both </div>

Answer :

Answer Area

Cardinality:	One-to-many One-to-one Many-to-many
Cross-filter direction:	Single Both

Explanation:

Box 1: One-to-many -

Box 2: Both -

For One-to-many relationships, the cross filter direction is always from the "one" side, and optionally from the "many" side (bi-directional).

Note:

Cardinality type	Cross filter options
One-to-many (or Many-to-one)	Single Both

Question 35 (Question Set 2)



HOTSPOT -

You are creating a quick measure as shown in the following exhibit.

Quick measures

Calculation

Rolling average

Calculate the average of base value over a certain number of periods before and/or after each date.
[Learn more](#)

Base value Add data fields here

Date Add data fields here

Period Days

Periods before

Periods after

Fields

Search

- Customer
- Product
- Sales
- Date
- Gross Margin
- Month
- MonthNumberOfYear
- Quarter
- Sales_SRC
 - Time Intelligence
- Total Cost
- Total Order Qty
- Total Sales
- Total Sales rolling average
- Unit Price
- Year

You need to create a monthly rolling average measure for Sales over time.

How should you configure the quick measure calculation? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Base value:

Month
Total Cost
Total Order Qty
Total Sales
Year

Date:

Date
Month
Total Sales
Year

Period:

Days
Months
Quarters
Years

Answer :

Answer Area

Base value:

Month
Total Cost
Total Order Qty
Total Sales
Year

Date:

Date
Month
Total Sales

Question 36 (Question Set 2)



You have four sales regions. Each region has multiple sales managers.

You implement row-level security (RLS) in a data model. You assign the relevant distribution lists to each role.

You have sales reports that enable analysis by region. The sales managers can view the sales records of their region. The sales managers are prevented from viewing records from other regions.

A sales manager changes to a different region.

You need to ensure that the sales manager can see the correct sales data.

What should you do?

- A. Change the Microsoft Power BI license type of the sales manager.
- B. From Microsoft Power BI Desktop, edit the Row-Level Security setting for the reports.
- C. Request that the sales manager be added to the correct Azure Active Directory group.
- D. Manage the permissions of the underlying dataset.

Answer : C

Explanation:

Using AD Security Groups, you no longer need to maintain a long list of users.

All that you will need to do is to put in the AD Security group with the required permissions and Power BI will do the REST! This means a small and simple security file with the permissions and AD Security group.

Note: Configure role mappings -

Once published to Power BI, you must map members to dataset roles.

Members can be user accounts or security groups. Whenever possible, we recommend you map security groups to dataset roles. It involves managing security group memberships in Azure Active Directory. Possibly, it delegates the task to your network administrators.

Reference:

<https://www.fourmoo.com/2018/02/20/dynamic-row-level-security-is-easy-with-active-directory-security-groups/> <https://docs.microsoft.com/en-us/power-bi/guidance/rls-guidance>

Question 37 (Question Set 2)



DRAG DROP -

You have a Microsoft Power BI data model that contains three tables named Sales, Product, and Date.

The Sales table has an existing measure named [Total Sales] that sums the total sales from the Sales table.

You need to write a calculation that returns the percentage of total sales that a selected ProductCategoryName value represents. The calculation must respect any slicers on ProductCategoryName and must show the percentage of visible total sales. For example, if there are four ProductCategoryName

values, and a user filters one out, a table showing ProductCategoryName and the calculation must sum up to 100 percent.

How should you complete the calculation? To answer, drag the appropriate values to the correct targets. Each value may be used once, more than

once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Select and Place:

Values	Answer Area
ALL	Product Category % of Total 2 =
ALLSELECTED	<input type="text"/> ([Total Sales],
CALCULATE	<input type="text"/> ([Total Sales] ,
CALCULATETABLE	<input type="text"/> (
CURRENTGROUP	Product[ProductCategoryName])))
DIVIDE	
SUMMARIZE	
TOPN	

Answer :

Values	Answer Area
ALL	Product Category % of Total 2 =
ALLSELECTED	<input type="text"/> CALCULATE ([Total Sales],
CALCULATE	<input type="text"/> DIVIDE ([Total Sales] ,
CALCULATETABLE	<input type="text"/> ALLSELECTED (
CURRENTGROUP	Product[ProductCategoryName])))
DIVIDE	
SUMMARIZE	
TOPN	

Explanation:

Box 1: CALCULATE -

CALCULATE evaluates an expression in a modified filter context.

Box 2: DIVIDE -

As a data modeler, when you write a DAX expression to divide a numerator by a denominator, you can choose to use the DIVIDE function or the divide operator (/ - forward slash).

When using the DIVIDE function, you must pass in numerator and denominator expressions.

Box 3: ALLSELECTED -

ALLSELECTED removes context filters from columns and rows in the current query, while retaining all other context filters or explicit filters.

The ALLSELECTED function gets the context that represents all rows and columns in the query, while keeping explicit filters and contexts other than row and column filters. This function can be used to obtain visual totals in queries.

Example:

measure 'Reseller Sales'[Reseller Visual Total]=calculate(sum('Reseller Sales'[Sales Amount]), ALLSELECTED())

Reference:

<https://docs.microsoft.com/en-us/dax/allselected-function-dax>

Question 38 (Question Set 2)



You have sales data in a star schema that contains four tables named Sales, Customer, Date, and Product. The Sales table contains purchase and ship dates.

Most often, you will use the purchase date to analyze the data, but you will analyze the data by both dates independently and together.

You need to design an imported dataset to support the analysis. The solution must minimize the model size and the number of queries against the data source.

Which data modeling design should you use?

- A. Use the Auto Date/Time functionality in Microsoft Power BI and do NOT import the Date table.
- B. Duplicate the Date query in Power Query and use active relationships between both Date tables.
- C. On the Date table, use a reference query in Power Query and create active relationships between Sales and both Date tables in the modeling view.
- D. Create an active relationship between Sales and Date for the purchase date and an inactive relationship for the ship date.

Answer : D

Explanation:

Only one relationship can be active.

Note: If you query two or more tables at the same time, when the data is loaded, Power BI Desktop attempts to find and create relationships for you. The relationship options Cardinality, Cross filter direction, and Make this relationship active are automatically set.

Reference:

<https://docs.microsoft.com/en-us/power-bi/transform-model/desktop-create-and-manage-relationships>

Question 39 (Question Set 2)



You build a report to analyze customer transactions from a database that contains the tables shown in the following table.

Table name	Column name
Customer	CustomerID (primary key)
	Name
	State
	Email
Transaction	TransactionID (primary key)
	CustomerID (foreign key)
	Date
	Amount

You import the tables.

Which relationship should you use to link the tables?

- A. many-to-many between Customer and Transaction
- B. one-to-many from Transaction to Customer
- C. one-to-many from Customer to Transaction
- D. one-to-one between Customer and Transaction

Answer : C

Explanation:

Each customer can have many transactions.

For each transaction there is exactly one customer.



Question 40 (Question Set 2)

HOTSPOT -

You have a Power BI report.

You need to create a calculated table to return the 100 highest spending customers.

How should you complete the DAX expression? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

```
Top 100 Customers =  
    ASC[  
    DESC(  
    FILTER(  
    SUMMARIZE[  
        100,  
        TOPN(  
            (FactTransaction,  
            FactTransaction[Customer ID],  
            "Sales",  
            SUM(FactTransaction[Sale]))),  
            [Sales]),  
        ASC  
        DESC  
        FILTER  
        SUMMARIZE  
        TOPN
```

Answer :

Answer Area

```
Top 100 Customers =  
    ASC[  
    DESC(  
    FILTER(  
    SUMMARIZE[  
        100,  
        TOPN(  
            (FactTransaction,  
            FactTransaction[Customer ID],  
            "Sales",  
            SUM(FactTransaction[Sale]))),  
            [Sales]),  
        DESC  
        FILTER  
        SUMMARIZE  
        TOPN
```

Explanation:

Box 1: TOPN -

TOPN returns the top N rows of the specified table.

Box 2: SUMMARIZE -

SUMMARIZE returns a summary table for the requested totals over a set of groups.

Box 3: DESC -

Sort in descending order.

It is last in the TOPN command.

TOPN syntax:

`TOPN(<n_value>, <table>, <orderBy_expression>, [<order>[, <orderBy_expression>, [<order>]]";])`

Reference:

<https://docs.microsoft.com/en-us/dax/topn-function-dax>

<https://docs.microsoft.com/en-us/dax/summarize-function-dax>

Question 41 (Question Set 2)**HOTSPOT -**

You have two tables named Customers and Invoice in a Power BI model. The Customers table contains the following fields:

- CustomerID
- Customer City
- Customer State
- Customer Name
- Customer Address 1
- Customer Address 2
- Customer Postal Code

The Invoice table contains the following fields:

- Order ID
- Invoice ID
- Invoice Date
- Customer ID
- Total Amount
- Total Item Count

The Customers table is related to the Invoice table through the Customer ID columns. A customer can have many invoices within one month.

The Power BI model must provide the following information:

- The number of customers invoiced in each state last month
- The average invoice amount per customer in each postal code

You need to define the relationship from the Customers table to the Invoice table. The solution must optimize query performance.

What should you configure? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area**Cardinality:**

Many-to-many
Many-to-one
One-to-many
One-to-one

Cross-filter direction:

Both
Single

Answer :

Answer Area

Cardinality:

Many-to-many
Many-to-one
One-to-many
One-to-one

Cross-filter direction:

Both
Single

Explanation:

Box 1: One-to-many -

A customer can have many invoices within one month.

Box 2: Single -

For One-to-many relationships, the cross filter direction is always from the "one" side, and optionally from the "many" side (bi-directional). For Single cross filter direction means "single direction", and Both means "both directions". A relationship that filters in both directions is commonly described as bi- directional.

Reference:

<https://docs.microsoft.com/en-us/power-bi/transform-model/desktop-relationships-understand>

Visualize the Data -

Question 42 (Testlet 5)



Case Study -

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When you are ready to answer a question, click the Question button to return to the question.

Overview -

Litware, Inc. is an online retailer that uses Microsoft Power BI dashboards and reports.

The company plans to leverage data from Microsoft SQL Server databases, Microsoft Excel files, text files, and several other data sources.

Litware uses Azure Active Directory (Azure AD) to authenticate users.

Existing Environment -

Sales Data -

Litware has online sales data that has the SQL schema shown in the following table.

Table name	Column name	Data type
Sales_Region	region_id	Integer
	name	VARCHAR
Region_Manager	region_id	Integer
	manager_id	Integer
Sales_Manager	sales_manager_id	Integer
	name	VARCHAR
	username	VARCHAR
Sales	sales_id	Integer
	sales_date_id	Integer
	sales_amount	Floating
	customer_id	Integer
	sales_ship_date_id	Integer
	region_id	VARCHAR
Customer_Date	customer_id	Integer
	first_name	VARCHAR
	last_name	VARCHAR
Date	date_id	Integer
	date	Date
	month	Integer
	week	Integer
Weekly_Returns	year	Integer
	week_id	Integer
	total_returns	Floating
Targets	sales_region_id	VARCHAR
	target_id	Integer
	sales_target	Decimal
	date_id	Integer
Targets	region_id	Integer

In the Date table, the date_id column has a format of yyyyymmdd and the month column has a format of yyyyymm.

The week column in the Date table and the week_id column in the Weekly_Returns table have a format of yyyyww.

The sales_id column in the Sales table represents a unique transaction.

The region_id column can be managed by only one sales manager.

Data Concerns -

You are concerned with the quality and completeness of the sales data. You plan to verify the sales data for negative sales amounts.

Reporting Requirements -

Litware identifies the following technical requirements:

Executives require a visual that shows sales by region.

Regional managers require a visual to analyze weekly sales and returns.

Sales managers must be able to see the sales data of their respective region only.

The sales managers require a visual to analyze sales performance versus sales targets.

The sale department requires reports that contain the number of sales transactions.

Users must be able to see the month in reports as shown in the following example: Feb 2020.

The customer service department requires a visual that can be filtered by both sales month and ship month independently.

HOTSPOT -

You need to create a visualization to meet the reporting requirements of the sales managers.

How should you create the visualization? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Visualization type:

- Card
- Donut chart
- Gauge
- Key influencers
- KPI

Indicator:

- Date[month]
- Sales[sales_amount]
- Sales[sales_id]
- Targets[sales_target]
- Weekly_Returns[total_returns]

Trend axis:

- Date[month]
- Sales[sales_amount]
- Sales[sales_id]
- Targets[sales_target]
- Weekly_Returns[total_returns]

Target goals:

- Date[month]
- Sales[sales_amount]
- Sales[sales_id]
- Targets[sales_target]
- Weekly_Returns[total_returns]

Answer :

Answer Area

Visualization type:

Card
Donut chart
Gauge
Key influencers
KPI

Indicator:

Date[month]
Sales[sales_amount]
Sales[sales_id]
Targets[sales_target]
Weekly_Returns[total_returns]

Trend axis:

Date[month]
Sales[sales_amount]
Sales[sales_id]
Targets[sales_target]
Weekly_Returns[total_returns]

Target goals:

Date[month]
Sales[sales_amount]
Sales[sales_id]
Targets[sales_target]
Weekly_Returns[total_returns]

Explanation:

Scenario: The sales managers require a visual to analyze sales performance versus sales targets.

Box 1: KPI -

Question 43 (Testlet 5)



Case Study -

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At the end of this case study, a review screen will appear. This screen allows you to review your answers and to make changes before you move to the next section of the exam. After you begin a new section, you cannot return to this section.

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When you are ready to answer a question, click the Question button to return to the question.

Overview -

Litware, Inc. is an online retailer that uses Microsoft Power BI dashboards and reports.

The company plans to leverage data from Microsoft SQL Server databases, Microsoft Excel files, text files, and several other data sources.

Litware uses Azure Active Directory (Azure AD) to authenticate users.

Existing Environment -

Sales Data -

Litware has online sales data that has the SQL schema shown in the following table.

Table name	Column name	Data type
Sales_Region	region_id	Integer
	name	Varchar
Region_Manager	region_id	Integer
	manager_id	Integer
Sales_Manager	sales_manager_id	Integer
	name	Varchar
	username	Varchar
Sales	sales_id	Integer
	sales_date_id	Integer
	sales_amount	Floating
	customer_id	Integer
	sales_ship_date_id	Integer
	region_id	Varchar
Customer_Date	customer_id	Integer
	first_name	Varchar
	last_name	Varchar
Date	date_id	Integer
	date	Date
	month	Integer
	week	Integer
Weekly_Returns	year	Integer
	week_id	Integer
	total_returns	Floating
Targets	sales_region_id	Varchar
	target_id	Integer
	sales_target	Decimal
	date_id	Integer
	region_id	Integer

In the Date table, the date_id column has a format of yyyyymmdd and the month column has a format of yyyyymm.

The week column in the Date table and the week_id column in the Weekly_Returns table have a format of yyyyww.

The sales_id column in the Sales table represents a unique transaction.

The region_id column can be managed by only one sales manager.

Data Concerns -

You are concerned with the quality and completeness of the sales data. You plan to verify the sales data for negative sales amounts.

Reporting Requirements -

Litware identifies the following technical requirements:

Executives require a visual that shows sales by region.

Regional managers require a visual to analyze weekly sales and returns.

Sales managers must be able to see the sales data of their respective region only.

The sales managers require a visual to analyze sales performance versus sales targets.

The sale department requires reports that contain the number of sales transactions.

Users must be able to see the month in reports as shown in the following example: Feb 2020.

The customer service department requires a visual that can be filtered by both sales month and ship month independently.

HOTSPOT -

You need to create a KPI visualization to meet the reporting requirements of the sales managers.

How should you create the visualization? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Indicator:

Date[month]
Sales[sales_amount]
Sales[sales_id]
Targets[sales_target]
Weekly_Returns[total_returns]

Trend axis:

Date[month]
Sales[sales_amount]
Sales[sales_id]
Targets[sales_target]
Weekly_Returns[total_returns]

Target goals:

Date[month]
Sales[sales_amount]
Sales[sales_id]
Targets[sales_target]
Weekly_Returns[total_returns]

Answer :

Answer Area

Indicator:

Date[month]
Sales[sales_amount]
Sales[sales_id]
Targets[sales_target]
Weekly_Returns[total_returns]

Trend axis:

Date[month]
Date[month]
Sales[sales_amount]
Sales[sales_id]
Targets[sales_target]
Weekly_Returns[total_returns]

Target goals:

Date[month]
Sales[sales_amount]
Sales[sales_id]
Targets[sales_target]
Weekly_Returns[total_returns]

Explanation:

Scenario: The sales managers require a visual to analyze sales performance versus sales targets.

Box 1: Sales[sales_amount]

Box 2: Date[month]

Time > FiscalMonth. This value will represent the trend.

Box 3: Targets[sales_target]

Reference:

<https://docs.microsoft.com/en-us/power-bi/visuals/power-bi-visualization-kpi>

Visualize the Data -

Question 44 (Testlet 6)



Case Study -

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When you are ready to answer a question, click the Question button to return to the question.

Overview -

Contoso, Ltd. is a manufacturing company that produces outdoor equipment. Contoso has quarterly board meetings for which financial analysts manually prepare

Microsoft Excel reports, including profit and loss statements for each of the company's four business units, a company balance sheet, and net income projections for the next quarter.

Existing Environment -

Data and Sources -

Data for the reports comes from three sources. Detailed revenue, cost, and expense data comes from an Azure SQL database. Summary balance sheet data comes from Microsoft Dynamics 365 Business Central. The balance sheet data is not related to the profit and loss results, other than they both relate dates.

Monthly revenue and expense projections for the next quarter come from a Microsoft SharePoint Online list. Quarterly projections relate to the profit and loss results by using the following shared dimensions: date, business unit, department, and product category.

Net Income Projection Data -

Net income projection data is stored in a SharePoint Online list named Projections in the format shown in the following table.

MonthStartDate	Projection type	ProductCategory	Department	Projection
1-Apr-20	Revenue	Bikes	N/A	200,000
1-Apr-20	Revenue	Components	N/A	250,000
1-Apr-20	Revenue	Clothing	N/A	300,000
1-Apr-20	Revenue	Accessories	N/A	150,000
1-May-20	Revenue	Bikes	N/A	200,000
1-May-20	Revenue	Components	N/A	250,000
1-Apr-20	Expense	Bikes	Bike Manufacture	50,000
1-Apr-20	Expense	Bikes	Bike Sales	3,333

Revenue projections are set at the monthly level and summed to show projections for the quarter.

Balance Sheet Data -

The balance sheet data is imported with final balances for each account per month in the format shown in the following table.

AccountCategory	Account	Month	Year	BalanceAmount
Current assets	Cash and cash equivalents	3	2020	20,289
Current assets	Inventories	3	2020	4,855
Long-term liabilities	Long-term debt	3	2020	50,207
Current assets	Cash and cash equivalents	2	2020	28,209
Current assets	Inventories	2	2020	5,845
Long-term liabilities	Long-term debt	2	2020	49,887
Current assets	Cash and cash equivalents	1	2020	25,567
Current assets	Inventories	1	2020	65,998
Long-term liabilities	Long-term debt	1	2020	46,124

There is always a row for each account for each month in the balance sheet data.

Dynamics 365 Business Central Data

Business Central contains a product catalog that shows how products roll up to product categories, which roll up to business units.

Revenue data is provided at the date and product level. Expense data is provided at the date and department level.

Business Issues -

Historically, it has taken two analysts a week to prepare the reports for the quarterly board meetings. Also, there is usually at least one issue each quarter where a value in a report is wrong because of a bad cell reference in an Excel formula. On occasion, there are conflicting results in the reports because the products and departments that roll up to each business unit are not defined consistently.

Requirements -

Planned Changes -

Contoso plans to automate and standardize the quarterly reporting process by using Microsoft Power BI. The company wants to know how long it takes to populate reports to less than two days. The company wants to create common logic for business units, products, and departments to be used across all reports, including, but not limited, to the quarterly reporting for the board.

Technical Requirements -

Contoso wants the reports and datasets refreshed with minimal manual effort.

The company wants to provide a single package of reports to the board that contains custom navigation and links to supplementary information.

Maintenance, including manually updating data and access, must be minimized as much as possible.

Security Requirements -

The reports must be made available to the board from powerbi.com. A mail-enabled security group will be used to share information with the board.

The analysts responsible for each business unit must see all the data the board sees, except the profit and loss data, which must be restricted to only their business unit's data. The analysts must be able to build new reports from the dataset that contains the profit and loss data, but any reports that the analysts build must not be included in the quarterly reports for the board. The analysts must not be able to share the quarterly reports with anyone.

Report Requirements -

You plan to relate the balance sheet to a standard date table in Power BI in a many-to-one relationship based on the last day of the month. At least one of the balance sheet reports in the quarterly reporting package must show the ending balances for the quarter, as well as for the previous quarter.

Projections must contain a column named RevenueProjection that contains the revenue projection amounts. A relationship must be created from Projections to a table named Date that contains the columns shown in the following table.

Name	Data type	Example
Date	Date	4-Apr-2020
Month	Integer	202004
Month Name	Text	February

Quarter	Integer	20,202
Year	Integer	2,020

The definitions and attributes of products, departments, and business units must be consistent across all reports.

The board must be able to get the following information from the quarterly reports:

Revenue trends over time

Ending balances for each account

A comparison of expenses versus projections by quarter

Changes in long-term liabilities from the previous quarter

A comparison of quarterly revenue versus the same quarter during the prior year

DRAG DROP -

You need to create a DAX measure in the data model that only allows users to see projections at the appropriate level of granularity.

How should you complete the measure? To answer, drag the appropriate values to the correct targets. Each value may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Select and Place:

Values	Answer Area
AND	Total Projected Revenue =
IF	(
ISFILTERED	NOT ([] ('Date' [Date])),
KEEPFILTERS	[] (Projection[Revenue Projection])
SUM)
SUMX	

Answer :

Values	Answer Area
AND	Total Projected Revenue =
IF	IF (
ISFILTERED	NOT (ISFILTERED ('Date' [Date])),
KEEPFILTERS	SUM (Projection[Revenue Projection])
SUM)
SUMX	

Explanation:

Scenario: Revenue projections are set at the monthly level and summed to show projections for the quarter.

Box 1: IF -

Box 2: ISFILTERED -

ISFILTERED returns TRUE when columnName is being filtered directly. If there is no filter on the column or if the filtering happens because a different column in the same table or in a related table is being filtered then the function returns FALSE.

Box 3: SUM -

Reference:

<https://docs.microsoft.com/en-us/dax/isfiltered-function-dax>

Question 45 (Testlet 6)



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Data and Sources -

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Requirements -

Planned Changes -

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Report Requirements -

You plan to relate the balance sheet to a standard date table in Power BI in a many-to-one relationship based on the last day of the month. At least one of the balance sheet reports in the quarterly reporting package must show the ending balances for the quarter, as well as for the previous quarter.

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Name	Data type	Example
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Month	Integer	202004
Month Name	Text	February
Quarter	Integer	20.202
Year	Integer	2,020

The definitions and attributes of products, departments, and business units must be consistent across all reports.

The board must be able to get the following information from the quarterly reports:

Revenue trends over time

Ending balances for each account

A comparison of expenses versus projections by quarter

Changes in long-term liabilities from the previous quarter

A comparison of quarterly revenue versus the same quarter during the prior year

Which two types of visualizations can be used in the balance sheet reports to meet the reporting goals? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- A. a line chart that shows balances by quarter filtered to account categories that are long-term liabilities.
- B. a clustered column chart that shows balances by date (x-axis) and account category (legend) without filters.
- C. a clustered column chart that shows balances by quarter filtered to account categories that are long-term liabilities.
- D. a pie chart that shows balances by account category without filters.
- E. a ribbon chart that shows balances by quarter and accounts in the legend.

Answer : AC

Visualize the Data -

Question 46 (Question Set 3)



Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question in this scenario, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You have a clustered bar chart that contains a measure named Salary as the value and a field named Employee as the axis. Salary is present in the data as numerical amount representing US dollars.

You need to create a reference line to show which employees are above the median salary.

Solution: You create a constant line and set the value to .5.

Does this meet the goal?

- A. Yes
- B. No

Answer : B

Explanation:

Instead create a percentile line by using the Salary measure and set the percentile to 50%.

Note: The 50th percentile is also known as the median or middle value where 50 percent of observations fall below.

Reference:

https://dash-intel.com/powerbi/statistical_functions_percentile.php

Question 47 (Question Set 3)



You need to create a visualization that compares revenue and cost over time.

Which type of visualization should you use?

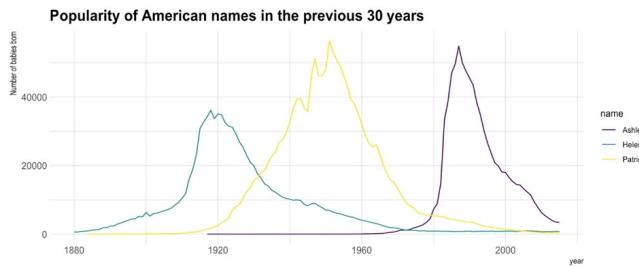
- A. stacked area chart
- B. donut chart
- C. line chart
- D. waterfall chart

Answer : C

Explanation:

A line chart or line graph displays the evolution of one or several numeric variables. Data points are connected by straight line segments. A line chart is often used to visualize a trend in data over intervals of time "" a time series "" thus the line is often drawn chronologically.

Example:



Incorrect Answers:

A: Stacked area charts are not appropriate to study the evolution of each individual group: it is very hard to subtract the height of other groups at each time point.

Note: A stacked area chart is the extension of a basic area chart. It displays the evolution of the value of several groups on the same graphic. The values of each group are displayed on top of each other, what allows to check on the same figure the evolution of both the total of a numeric variable, and the importance of each group.

Reference:

<https://www.data-to-viz.com/graph/line.html>

Question 48 (Question Set 3)



You are developing a sales report that will have multiple pages. Each page will answer a different business question.

You plan to have a menu page that will show all the business questions.

You need to ensure that users can click each business question and be directed to the page where the question is answered. The solution must ensure that the menu page will work when deployed to any workspace.

What should you include on the menu page?

- A. Create a text box for each business question and insert a link.
- B. Create a button for each business question and set the action type to Bookmark.
- C. Create a Power Apps visual that contains a drop-down list. The drop-down list will contain the business questions.

Answer : C

Explanation:

Power BI enables data insights and better decision-making, while Power Apps enables everyone to build and use apps that connect to business data.

Using the

Power Apps visual, you can pass context-aware data to a canvas app, which updates in real time as you make changes to your report. Now, your app users can derive business insights and take actions from right within their Power BI reports and dashboards.

Reference:

<https://docs.microsoft.com/en-us/powerapps/maker/canvas-apps/powerapps-custom-visual>

Question 49 (Question Set 3)

You are developing a report page. Some users will navigate the report by using a keyboard, and some users will consume the report by using a screen reader.

You need to ensure that the users can consume the content on a report page in a logical order.

What should you configure in Microsoft Power BI Desktop?

- A. the tab order
- B. the layer order
- C. the bookmark order
- D. the X position

Answer : A

Explanation:

If you find yourself unable to navigate to an object or visual while using a keyboard, it may be because the report author has decided to hide that object from the tab order. Report authors commonly hide decorative objects from the tab order. If you find that you cannot tab through a report in a logical manner, you should contact the report author. Report authors can set the tab order for objects and visuals.

Reference:

<https://docs.microsoft.com/en-us/power-bi/create-reports/desktop-accessibility-consuming-tools>

Question 50 (Question Set 3)

You use an R visual to produce a map of 500,000 customers. You include the values of CustomerID, Latitude, and Longitude in the fields sent to the visual. Each customer ID is unique.

In powerbi.com, when users load the visual, they only see some of the customers.

What is the cause of the issue?

- A. The visual was built by using a different version of R.
- B. The data comes from a Microsoft SQL Server source.
- C. The data is deduplicated.
- D. Too many records were sent to the visual.

Answer : D

Explanation:

R visuals in the Power BI service have a few limitations including:

☞ Data size limitations "" data used by the R visual for plotting is limited to 150,000 rows. If more than 150,000 rows are selected, only the top 150,000 rows are used and a message is displayed on the image. Additionally, the input data has a limit of 250 MB.

Reference:

<https://docs.microsoft.com/en-us/power-bi/visuals/service-r-visuals>

Question 51 (Question Set 3)

You have a line chart that shows the number of employees in a department over time.

You need to see the total salary costs of the employees when you hover over a data point.

What are two possible ways to achieve this goal? Each correct answer presents a complete solution.

NOTE: Each correct selection is worth one point.

- A. Add a salary to the tooltips.
- B. Add a salary to the visual filters.
- C. Add salary to the drillthrough fields.

Answer : AB

Explanation:

A: When a visualization is created, the default tooltip displays the data point's value and category. There are many instances when customizing the tooltip information is useful. Customizing tooltips provides additional context and information for users viewing the visual. Custom tooltips enable you to specify additional data points that display as part of the tooltip.

B: Visual Filter applies to a single visual/tile on a report page. You can only see visual level filters selected visual on the report canvas.

Incorrect Answers:

C: With drill through in Power BI reports, you can create a page in your report that focuses on a specific entity such as a supplier, customer, or manufacturer.

When your report readers use drill through, they right-click a data point in other report pages, and drill through to the focused page to get details that are filtered to that context. You can also create a button that drills through to details when they click it.

Reference:

<https://docs.microsoft.com/en-us/power-bi/create-reports/desktop-custom-tooltips> <https://technovids.com/power-bi-filters/>

Question 52 (Question Set 3)



You have a report that contains a bar chart and a column chart. The bar chart shows customer count by customer segment. The column chart shows sales by month.

You need to ensure that when a segment is selected in the bar chart, you see which portion of the total sales for the month belongs to the customer segment.

How should the visual interactions be set on the column chart when the bar chart is selected?

- A. no impact
- B. highlight
- C. filter

Answer : C

Explanation:

Filters remove all but the data you want to focus on. Highlighting isn't filtering. It doesn't remove data, but instead highlights a subset of the visible data; the data that isn't highlighted remains visible but dimmed.

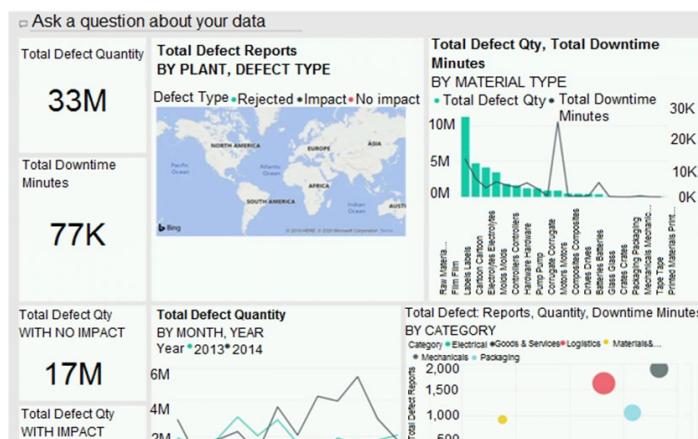
Reference:

<https://docs.microsoft.com/en-us/power-bi/create-reports/service-reports-visual-interactions>

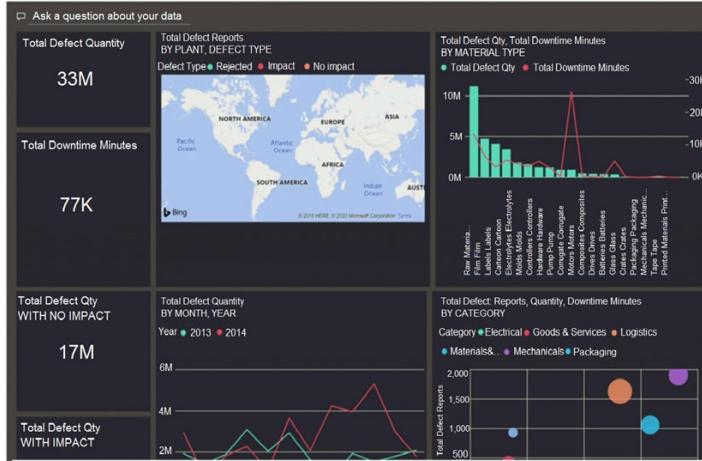
Question 53 (Question Set 3)



You have a dashboard that contains tiles pinned from a single report as shown in the Original Dashboard exhibit. (Click the Original Dashboard tab.)



You need to modify the dashboard to appear as shown in the Modified Dashboard exhibit. (Click the Modified Dashboard tab.)



What should you do?

- Edit the details of each tile.
- Change the report theme.
- Change the dashboard theme.
- Create a custom CSS file.

Answer : B

Explanation:

With Power BI Desktop report themes, you can apply design changes to your entire report, such as using corporate colors, changing icon sets, or applying new default visual formatting. When you apply a report theme, all visuals in your report use the colors and formatting from your selected theme as their defaults.

Reference:

<https://docs.microsoft.com/en-us/power-bi/create-reports/desktop-report-themes>

Question 54 (Question Set 3)



DRAG DROP -

You are using existing reports to build a dashboard that will be viewed frequently in portrait mode on mobile phones.

You need to build the dashboard.

Which four actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

Select and Place:

Actions

Answer Area

Pin items from the reports to the dashboard.



Rearrange, resize, or remove items from the phone view.



Change the dashboard view to **Phone view**.

Open the dashboard.

Create a phone layout for the existing reports.

Answer :

Actions	Answer Area
Pin items from the reports to the dashboard.	Open the dashboard.
Rearrange, resize, or remove items from the phone view.	Change the dashboard view to Phone view .
Change the dashboard view to Phone view.	Pin items from the reports to the dashboard.
Open the dashboard.	Rearrange, resize, or remove items from the phone view.
Create a phone layout for the existing reports.	

Explanation:

When you view dashboards in portrait mode on a phone, you notice the dashboard tiles are laid out one after another, all the same size. In the Power BI service, you can create a customized view of a dashboard, specifically for portrait mode on phones.

Step 1: Open the Dashboard.

Step 2: Change the dashboard view to Phone view

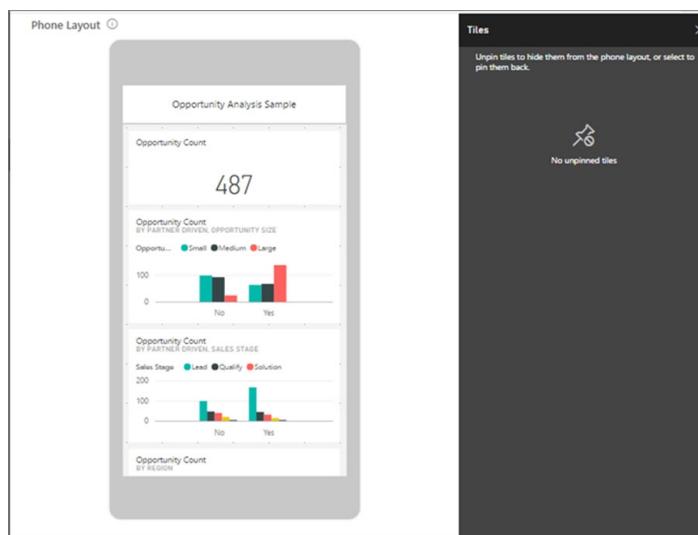
Step 3: Pin items from the reports to the dashboard.

Step 4: Rearrange, resize, or remote items from the Phone view.

Create a phone view of a dashboard

1. In the Power BI service, open a dashboard (Step 1)

2. Select the arrow next to Web view in the upper-right corner > select Phone view. (Step 2)



The phone dashboard edit view opens. Here you can unpin, resize, and rearrange tiles to fit the phone view.

The web version of the dashboard doesn't change.

3. Select a tile to drag, resize, or unpin it. You notice the other tiles move out of the way as you drag a tile.

The unpinned tiles go in the Unpinned tiles pane, where they stay unless you add them back.

4. If you change your mind, select Reset tiles to put them back in the size and order they were before.

5. When you're satisfied with the phone dashboard layout, select the arrow next to Phone view in the upper-right corner > select Web view.

Power BI saves the phone layout automatically.

Reference:

<https://docs.microsoft.com/en-us/power-bi/create-reports/service-create-dashboard-mobile-phone-view>



You build a report to help the sales team understand its performance and the drivers of sales.

The team needs to have a single visualization to identify which factors affect success.

Which type of visualization should you use?

- A. Line and clustered column chart
- B. Key influencers
- C. Q&A
- D. Funnel chart

Answer : B

Explanation:

The key influencers visual helps you understand the factors that drive a metric you're interested in. It analyzes your data, ranks the factors that matter, and displays them as key influencers.

The key influencers visual is a great choice if you want to:

☞ See which factors affect the metric being analyzed.

☞ Contrast the relative importance of these factors. For example, do short-term contracts have more impact on churn than long-term contracts?

Reference:

<https://docs.microsoft.com/en-us/power-bi/visuals/power-bi-visualization-influencers>

Question 56 (Question Set 3)



HOTSPOT -

You have a dataset named Pens that contains the following columns:

☞ Unit Price

☞ Quantity Ordered

You need to create a visualization that shows the relationship between Unit Price and Quantity Ordered. The solution must highlight orders that have a similar unit price and ordered quantity.

Which type of visualization and which feature should you use? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Visualization:

A column chart of Quantity Ordered and Unit Price by year
A line chart of Quantity Ordered and Unit Price by item
A scatter plot of Quantity Ordered and Unit Price by item

Feature:

Automatically find clusters
Explain the decrease
Find where the distribution is different

Answer :

Answer Area

Visualization:

A column chart of Quantity Ordered and Unit Price by year
A line chart of Quantity Ordered and Unit Price by item
A scatter plot of Quantity Ordered and Unit Price by item

Feature:

Automatically find clusters
Explain the decrease

Find where the distribution is different

Explanation:

Box 1: A scatter plot...

A scatter chart always has two value axes to show: one set of numerical data along a horizontal axis and another set of numerical values along a vertical axis. The chart displays points at the intersection of an x and y numerical value, combining these values into single data points. Power BI may distribute these data points evenly or unevenly across the horizontal axis. It depends on the data the chart represents.

Box 2: Automatically find clusters

Scatter charts are a great choice to show patterns in large sets of data, for example by showing linear or non-linear trends, clusters, and outliers.

Reference:

<https://docs.microsoft.com/en-us/power-bi/visuals/power-bi-visualization-scatter>

Question 57 (Question Set 3)

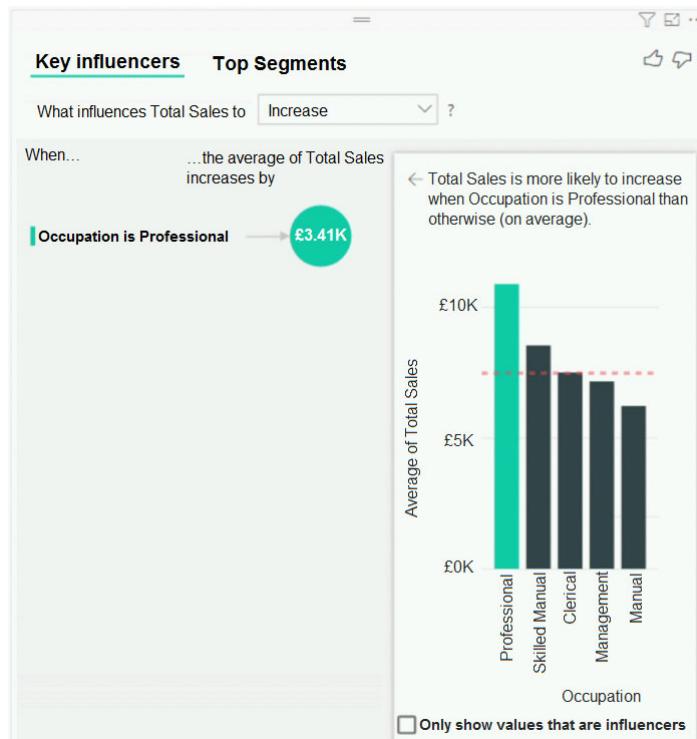


HOTSPOT -

You have a table that contains the following three columns:

- City
- Total Sales
- Occupation

You need to create a key influencers visualization as shown in the exhibit. (Click the Exhibit tab.)



How should you configure the visualization? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Analyze:

City
Occupation
Total Sales

Explain by:

City
Occupation
Total Sales

Expand by:

City
Occupation
Total Sales

Answer :

Answer Area

Analyze:

City
Occupation
Total Sales

Explain by:

City
Occupation
Total Sales

Expand by:

City
Occupation
Total Sales

Explanation:

Box 1: Total Sales -

Box 2: Occupation -

Box 3: City -

You can use Expand By to add fields you want to use for setting the level of the analysis without looking for new influencers.

Reference:

<https://docs.microsoft.com/en-us/power-bi/visuals/power-bi-visualization-influencers>

Question 58 (Question Set 3)



You have the dataset shown in the following exhibit.

City	Sales Profit
Abbottsburg	\$173,947
Absecon	\$129,358
Accomac	\$157,768
Aceitunas	\$119,283
Airport Drive	\$162,500
Akhiok	\$259,554
Alcester	\$127,040
Alden Bridge	\$152,138
Alstead	\$106,147
Amado	\$136,718
Amanda Park	\$117,444
Andrix	\$130,710
Annamoriah	\$139,499
Antares	\$147,562
Antonio	\$113,056
Total	\$85,729,181

You need to ensure that the visual shows only the 10 cities that have the highest sales profit.

What should you do?

- A. Add a Top N filter to the visual.
- B. Configure the Sales Profit measure to use the RANKX function.
- C. Add a calculated column to the table that uses the TOPN function. In the visual, replace Sales Profit with the calculated column.
- D. Add a calculated column to the table that returns the city name if the city is in the top 10, otherwise the calculated column will return "Not in Top 10". In the visual, replace Sales Profit with the calculated column.

Answer : A

Explanation:

https://www.itexams.com/exam/DA-100?qpp_select=100

Power BI Top N Filters are useful to display the top performing records, and Bottom N filters are helpful to display the least performing records. For example, we can display top or bottom 10 products by orders or sales.

Note:

1. Select the Column you want to display the Top Sales Profit
2. Then change the Filter Type of that Column to Top N
3. Fill in Top / Bottom number field
4. And lastly drag to the By Value field your Sales Profit

Incorrect Answers:

B: You would need a filter as well.

Reference:

<https://www.tutorialgateway.org/power-bi-top-10-filters/>

Question 59 (Question Set 3)



Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question in this scenario, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You have a clustered bar chart that contains a measure named Salary as the value and a field named Employee as the axis. Salary is present in the data as numerical amount representing US dollars.

You need to create a reference line to show which employees are above the median salary.

Solution: You create an average line by using the Salary measure.

Does this meet the goal?

- A. Yes
- B. No

Answer : B

Explanation:

Instead create a percentile line by using the Salary measure and set the percentile to 50%.

Note: The 50th percentile is also known as the median or middle value where 50 percent of observations fall below.

Reference:

https://dash-intel.com/powerbi/statistical_functions_percentile.php

Question 60 (Question Set 3)



Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question in this scenario, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You have a clustered bar chart that contains a measure named Salary as the value and a field named Employee as the axis. Salary is present in the data as numerical amount representing US dollars.

You need to create a reference line to show which employees are above the median salary.

Solution: You create a percentile line by using the Salary measure and set the percentile to 50%.

Does this meet the goal?

- A. Yes
- B. No

Answer : A

Explanation:

The 50th percentile is also known as the median or middle value where 50 percent of observations fall below.

Reference:

https://dash-intel.com/powerbi/statistical_functions_percentile.php

Question 61 (Question Set 3)





You have a Microsoft SharePoint Online site that contains several document libraries. One of the document libraries contains manufacturing reports saved as Microsoft Excel files. All the manufacturing reports have the same data structure.
 You need to use Power BI Desktop to load only the manufacturing reports to a table for analysis.
 What should you do?

- Get data from a SharePoint Online folder, enter the site URL, and then select Combine & Load.
- Get data from a SharePoint Online list and enter the site URL. Edit the query and filter by the path to the manufacturing reports library.
- Get data from a SharePoint Online folder and enter the site URL. Edit the query and filter by the path to the manufacturing reports library.
- Get data from a SharePoint Online list, enter the site URL, and then select Combine & Load.

Answer : C

Explanation:

Example:

My SharePoint site root url is <https://powerbipanama.sharepoint.com/>, but all of my files are actually in another site that starts with <https://powerbipanama.sharepoint.com/sites/externalsales/> URL.

In order to use the correct URL, we need to be in the folder of the data that we're trying to get and check the url that our browser shows. If it has the if it starts with the format of <https://<site address>/sites/<sitename>> then we need to use that url, otherwise we use the much simpler <https://<site address>>

In my own case, I'll be using the <https://powerbipanama.sharepoint.com/sites/externalsales> url in order to connect to my site.

Reference:

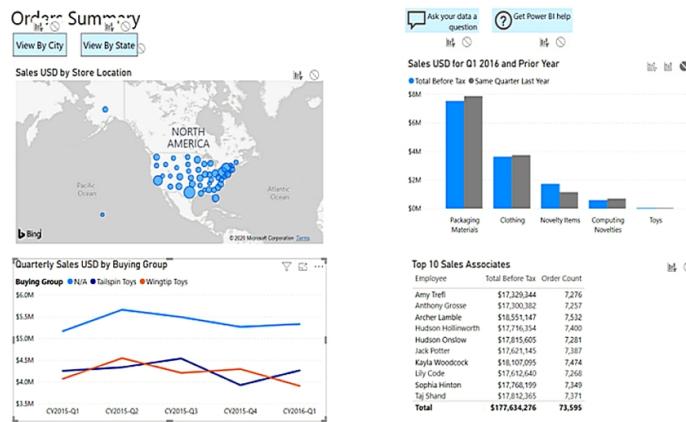
<https://powerbi.microsoft.com/sv-se/blog/combining-excel-files-hosted-on-a-sharepoint-folder/>

Question 62 (Question Set 3)



HOTSPOT -

You have a report page that contains the visuals shown in the following exhibit.



Use the drop-down menus to select the answer choice that completes each statement based on the information presented in the graphic.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Selecting a quarter on the line chart will [answer choice] the clustered column chart.

cross-filter
cross-highlight
not affect

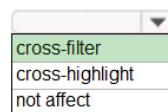
cross-filter
cross-highlight
not affect

Selecting a data point on the Tailspin Toys line on the line chart will [answer choice] the map.

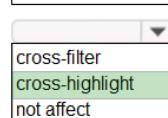
Answer :

Answer Area

Selecting a quarter on the line chart will [answer choice] the clustered column chart.



Selecting a data point on the Tailspin Toys line on the line chart will [answer choice] the map.



Explanation:

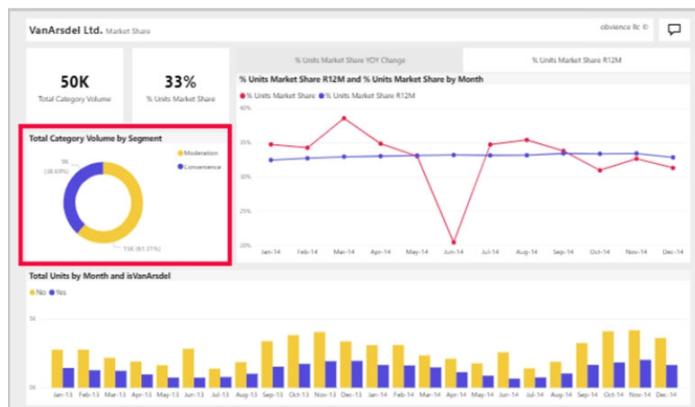
Box 1: cross-filter -

By default, selecting a data point in one visual on a report page will cross-filter or cross-highlight the other visuals on the page.

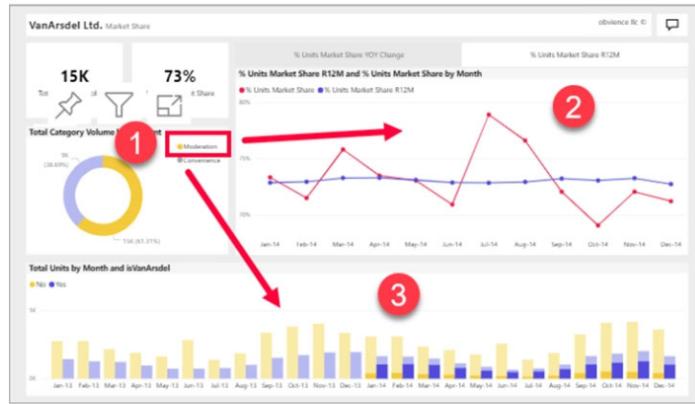
Box 2: cross-highlight -

Example:

By default, selecting a data point in one visual on a report page will cross-filter or cross-highlight the other visuals on the page.



1. Let's see what happens when we select Moderation.



2. Cross-filtering removes data that doesn't apply. Selecting Moderation in the doughnut chart cross-filters the line chart. The line chart now only displays data points for the Moderation segment.

3. Cross-highlighting retains all the original data points but dims the portion that does not apply to your selection. Selecting Moderation in the donut chart cross-highlights the red portion of the line chart. The blue portion of the line chart is dimmed.

selection. Selecting moderation in the doughnut chart cross-highlights the column chart. The column chart dims all the data that applies to the Convenience segment and highlights all the data that applies to the Moderation segment.

Reference:

<https://docs.microsoft.com/en-us/power-bi/consumer/end-user-interactions>

Question 63 (Question Set 3)



You have a report that contains four pages. Each page contains slicers for the same four fields.

Users report that when they select values in a slicer on one page, the selections are not persisted on other pages.

You need to recommend a solution to ensure that users can select a value once to filter the results on all the pages.

What are two possible recommendations to achieve this goal? Each correct answer presents a complete solution.

NOTE: Each correct selection is worth one point.

- A. Replace the slicers with report-level filters.
- B. Sync the slicers across the pages.
- C. Create a bookmark for each slicer value.
- D. Replace the slicers with page-level filters.
- E. Replace the slicers with visual-level filters.

Answer : AB

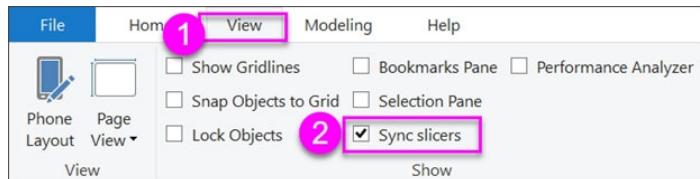
Explanation:

A: Add a report-level filter to filter an entire report.

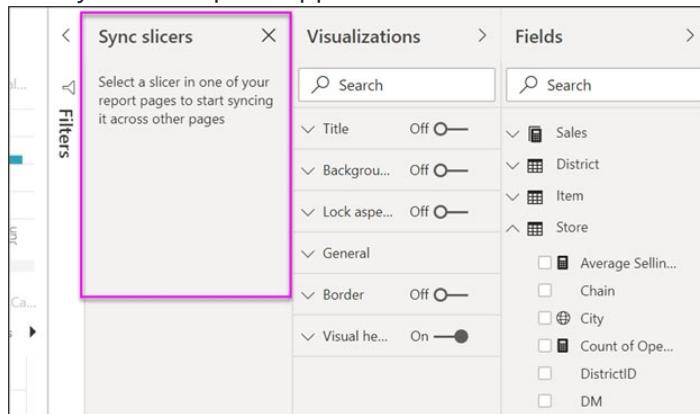
The visuals on the active page, and on all pages in the report, change to reflect the new filter.

B: You can sync a slicer and use it on any or all pages in a report.

1. On the Power BI Desktop View menu, select Sync slicers.



The Sync slicers pane appears between the Filters and Visualizations panes.



Reference:

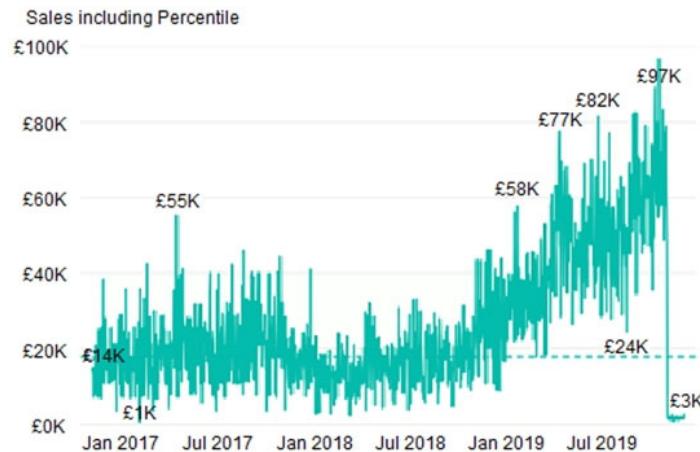
<https://docs.microsoft.com/en-us/power-bi/create-reports/power-bi-report-add-filter>

<https://docs.microsoft.com/en-us/power-bi/visuals/power-bi-visualization-slicers>



Question 64 (Question Set 3)

You plan to create the chart shown in the following exhibit.



How should you create the dashed horizontal line denoting the 40th percentile of daily sales for the period shown?

- A. Add a measure to the visual that uses the following DAX expression. Measure1 = PERCENTILEX.INC (Sales,Sales[Total Sales],0.40)
- B. Add a new percentile line that uses Total Sales as the measure and 40% as the percentile.
- C. Create a horizontal line that has a fixed value of 24,000.
- D. Add a measure to the visual that uses the following DAX expression. Measure1 = PERCENTILEX.EXC (Sales,Sales[Total Sales],0.40)

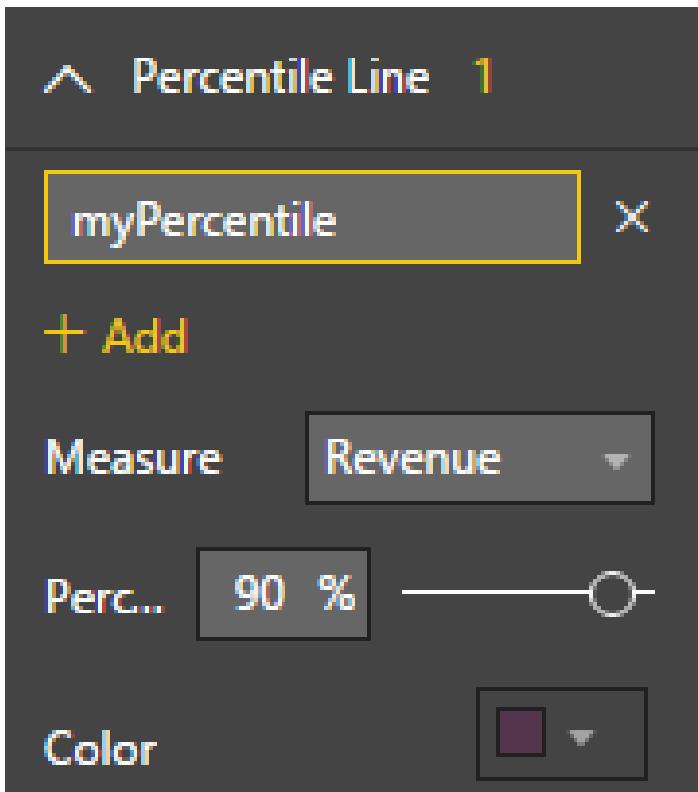
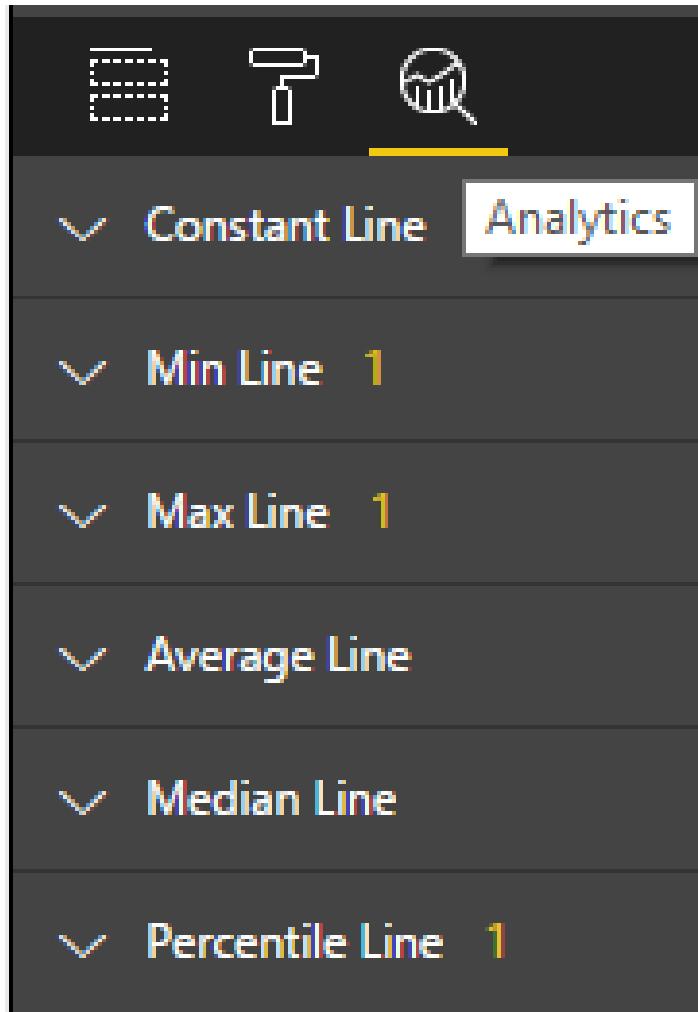
Answer : B

Explanation:

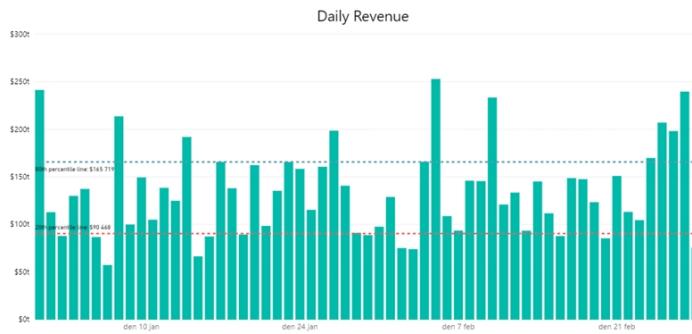
The analytics feature enables you to show percentiles across groups specified along a specific axis.

Example:

1. Click on the analytics tab
2. Select Percentile
3. You can choose a specific percentile along with other formatting options.
4. Drag a date or non-numeric dimension into the Axis of a column chart



Add percentile lines to monitor daily revenue



Incorrect Answers:

A, D: There are two main percentile functions in Power BI:

`PERCENTILE.EXC(column, kth percentile)`

`PERCENTILE.INC(column, kth percentile)`

The first parameter is the column which you want the percentile value for.

The second parameter is the kth percentile where k percentage of values will fall below.

Both formulas use a slightly different algorithm. The second algorithm works for any value of k between 0 and 1 (the 0th and 100th percentile). In the EXC version the data excludes both lower and upper bounds, while INC

Question 65 (Question Set 3)



You have a table that contains sales data and approximately 1,000 rows.

You need to identify outliers in the table.

Which type of visualization should you use?

- A. donut chart
- B. pie chart
- C. area chart
- D. scatter plot

Answer : D

Explanation:

Outliers are those data points that lie outside the overall pattern of distribution & the easiest way to detect outliers is through graphs. Box plots, Scatter plots can help detect them easily.

Reference:

<https://towardsdatascience.com>this-article-is-about-identifying-outliers-through-funnel-plots-using-the-microsoft-power-bi-d7ad16ac9ccc>

Question 66 (Question Set 3)



HOTSPOT -

You need to create a visual as shown in the following exhibit.

MonthName	Total Sales	Sales Last Year	% Growth to Last Year
January	£559,263.79	£144,365.51	74.19%
February	£583,915.29	£215,923.28	63.02%
March	£684,091.92	£211,347.46	69.11%
April	£957,686.49	£350,270.97	63.43%
May	£841,473.26	£310,708.65	63.08%
June	£876,911.71	£298,356.83	65.98%
July	£922,410.09	£348,435.28	62.23%
August	£1,002,219.24	£388,213.68	61.26%
September	£1,152,976.22	£407,595.76	64.65%
October	£1,262,647.67	£465,583.06	63.13%
November	£555,548.44	£555,548.44	0.00%
December	£553,615.45	£553,615.45	0.00%
Total	£9,952,759.56	£4,249,964.36	57.30%

The indicator color for Total Sales will be based on % Growth to Last Year.

The solution must use the existing calculations only.

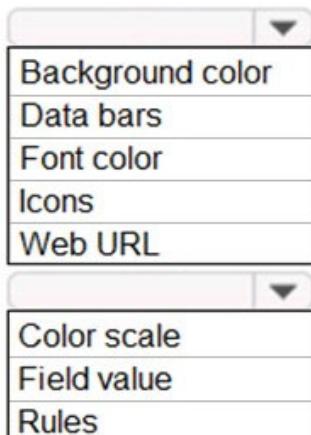
How should you configure the visual? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

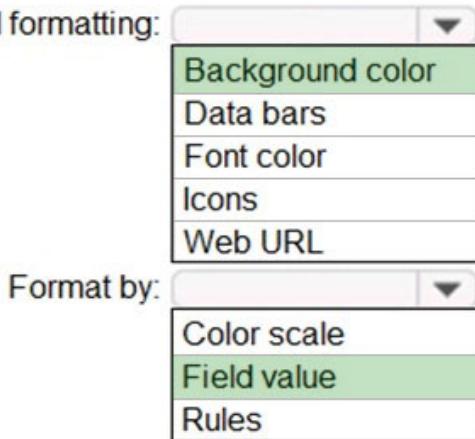
Conditional formatting:



Answer :

Answer Area

Conditional formatting:



Explanation:

Box 1: Background color -

To format the Color column based on its field values, select Conditional formatting for the Color field, and then select Background color or Font color. In the Background color or Font color dialog box, select Field value from the Format by drop-down field.

Box 2: Field value -

With conditional formatting for tables in Power BI Desktop, you can specify customized cell colors, including color gradients, based on field values.

Reference:

<https://docs.microsoft.com/en-us/power-bi/create-reports/desktop-conditional-table-formatting>

Analyze the Data -

Question 67 (Question Set 4)



DRAG DROP -

You have a query named Customer that imports CSV files from a data lake. The query contains 50,000 rows as shown in the exhibit. (Click the Exhibit tab.)

	Source.Name	Customer ID	Modified Date	Customer	Category
1	Customer20200104.csv	1	1/1/2020 12:00:00 AM	Tailspin Toys (Head Office)	Novelty Shop
2	Customer20200104.csv	2	1/1/2020 12:00:00 AM	Tailspin Toys (Sylvanite, MT)	Novelty Shop
3	Customer20200104.csv	3	1/1/2020 12:00:00 AM	Tailspin Toys (Peeples Valley, AZ)	Novelty Shop
4	Customer20200104.csv	4	1/4/2020 12:00:00 AM	Tailspin Toys (Medicine Lodge, KS)	Novelty Shop
5	Customer20200104.csv	5	1/4/2020 12:00:00 AM	Tailspin Toys (Gasport, NY)	Novelty Shop
6	Customer20200104.csv	6	1/4/2020 12:00:00 AM	Tailspin Toys (Jessie, ND)	Novelty Shop
7	Customer20200104.csv	7	1/4/2020 12:00:00 AM	Tailspin Toys (Frankewing, TN)	Novelty Shop
8	Customer20200104.csv	8	1/4/2020 12:00:00 AM	Tailspin Toys (Bow Mar, CO)	Novelty Shop
9	Customer20200104.csv	9	1/4/2020 12:00:00 AM	Tailspin Toys (Netcong, NJ)	Novelty Shop
10	Customer20200104.csv	10	1/4/2020 12:00:00 AM	Tailspin Toys (Wimbledon, ND)	Novelty Shop
11	Customer20200112.csv	11	1/12/2020 12:00:00 AM	Tailspin Toys (Head Office)	Novelty Shop
12	Customer20200112.csv	2	1/12/2020 12:00:00 AM	Tailspin Toys (Sylvanite, MT)	Novelty Shop
13	Customer20200112.csv	3	1/12/2020 12:00:00 AM	Tailspin Toys (Peeples Valley, AZ)	Novelty Shop
14	Customer20200112.csv	4	1/12/2020 12:00:00 AM	Tailspin Toys (Medicine Lodge, KS)	Novelty Shop
15	Customer20200112.csv	5	1/12/2020 12:00:00 AM	Tailspin Toys (Gasport, NY)	Novelty Shop
16	Customer20200112.csv	2	1/22/2020 12:00:00 AM	Tailspin Toys (Sylvanite, MT)	Novelty Shop
17	Customer20200112.csv	7	1/22/2020 12:00:00 AM	Tailspin Toys (Frankewing, TN)	Novelty Shop
18	Customer20200112.csv	8	1/22/2020 12:00:00 AM	Tailspin Toys (Bow Mar, CO)	Novelty Shop
19	Customer20200112.csv	9	1/22/2020 12:00:00 AM	Tailspin Toys (Netcong, NJ)	Novelty Shop
20	Customer20200112.csv	10	1/22/2020 12:00:00 AM	Tailspin Toys (Wimbledon, ND)	Novelty Shop

Each file contains deltas of any new or modified rows from each load to the data lake. Multiple files can have the same customer ID.

You need to keep only the last modified row for each customer ID.

Which three actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

Select and Place:

Actions	Answer Area
Filter the Customer query on Modified Date is Latest.	
Merge the CustomerGrouped query into the Customer query based on Customer ID and Modified Date by using a left outer join.	
Remove duplicates in the Customer ID column.	
Duplicate the Customer query and name the new query CustomerGrouped.	
Group the CustomerGrouped query by Customer ID and output the max Modified Date value into a column named Modified Date.	
Merge the two queries based on Customer ID and Modified Date by using an inner join.	

Answer :

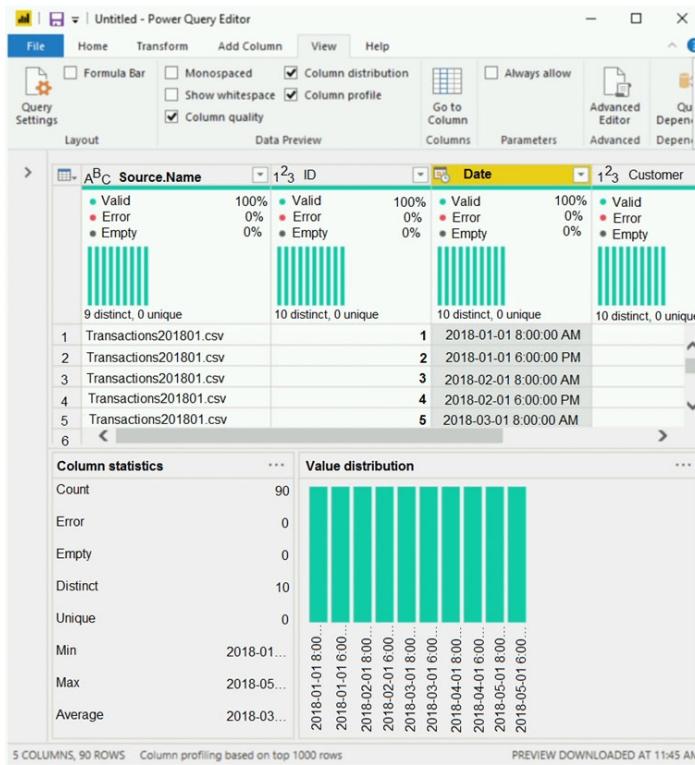
Actions	Answer Area
Filter the Customer query on Modified Date is Latest.	Duplicate the Customer query and name the new query CustomerGrouped.
Merge the CustomerGrouped query into the Customer query based on Customer ID and Modified Date by using a left outer join.	Group the CustomerGrouped query by Customer ID and output the max Modified Date value into a column named Modified Date.
Remove duplicates in the Customer ID column.	Remove duplicates in the Customer ID column.
Duplicate the Customer query and name the new query CustomerGrouped.	
Group the CustomerGrouped query by Customer ID and output the max Modified Date value into a column named Modified Date.	
Merge the two queries based on Customer ID and Modified Date by using an inner join.	

Question 68 (Question Set 4)



HOTSPOT -

You view a query named Transactions as shown in the following exhibit.



The query gets CSV files from a folder.

Use the drop-down menus to select the answer choice that completes each statement based on the information presented in the graphic.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

There are [answer choice] CSV files:

9
10
25
90
1,000

Removing duplicates based on the Date column will reduce the dataset to [answer choice] rows:

9
10
25
90
1,000

Answer :

Answer Area

There are [answer choice] CSV files:

9
10
25
90
1,000

Removing duplicates based on the Date column will reduce the dataset to [answer choice] rows:

9
10
25
90
1,000

Explanation:

Question 69 (Question Set 4)



Your company has employees in 10 states.

The company recently decided to associate each state to one of the following three regions: East, West, and North. You have a data model that contains employee information by state. The model does NOT include region information.

You have a report that shows the employees by state.

You need to view the employees by region as quickly as possible.

What should you do?

- A. Create a new aggregation that summarizes by employee.
- B. Create a new group on the state column and set the Group type to List.
- C. Create a new group on the state column and set the Group type to Bin.
- D. Create a new aggregation that summarizes by state.

Answer : C

Explanation:

With grouping you are normally working with dimensional attributes.

Here we add three new groups (East, West, and North) and add each state to the appropriate group.

Incorrect Answers:

C: You can set the bin size for numerical and time fields in Power BI Desktop.

Reference:

<https://www.mssqltips.com/sqlservertip/4720/binning-and-grouping-data-with-power-bi/>

Question 70 (Question Set 4)



DRAG DROP -

You have the line chart shown in the exhibit. (Click the Exhibit tab.)



You need to modify the chart to meet the following requirements:

- ⇒ Identify months that have order counts above the mean.
- ⇒ Display the mean monthly order count.

Which three actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

Select and Place:

Actions	Answer Area
Create a 12-month rolling average quick measure and add the measure to the line chart value.	
From the Analytics pane, add a Median line.	(L)
Select the line chart.	(X)
From the Analytics pane, add an Average line.	(A)
Turn on data labels for the new line.	

Answer :

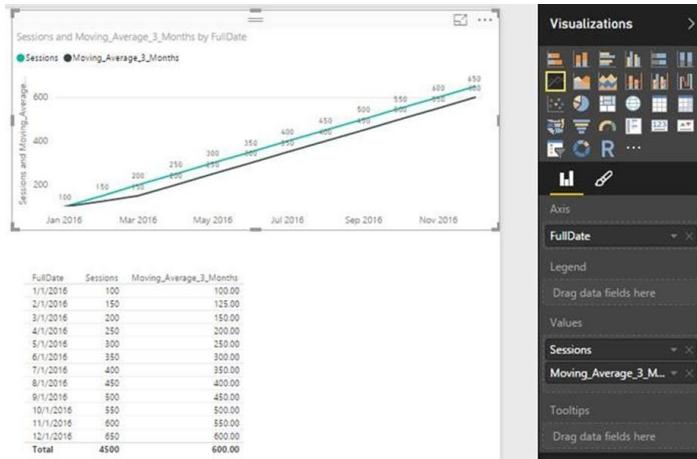
Actions	Answer Area
Create a 12-month rolling average quick measure and add the measure to the line chart value.	Create a 12-month rolling average quick measure and add the measure to the line chart value.
From the Analytics pane, add a Median line.	Select the line chart.
Select the line chart.	From the Analytics pane, add a Median line.
From the Analytics pane, add an Average line.	
Turn on data labels for the new line.	

Explanation:

Step 1: Create a 12-month...

You can use calculated measure to get the expected result.

1. Create a calculated column for the date.
2. Create a measure for 12 months moving average.
3. Drag the Line Chart into your canvas as below. (step 2 below)



Step 2: Select the line chart -

Question 71 (Testlet 7)



Case Study -

This is a case study. Case studies are not timed separately. You can use as much exam time as you would like to complete each case. However, there may be additional case studies and sections on this exam. You must manage your time to ensure that you are able to complete all questions included on this exam in the time provided.

To answer the questions included in a case study, you will need to reference information that is provided in the case study. Case studies might contain exhibits and other resources that provide more information about the scenario that is described in the case study. Each question is independent of the other question on this case study.

At the end of this case study, a review screen will appear. This screen allows you to review your answers and to make changes before you move to the next section of the exam. After you begin a new section, you cannot return to this section.

To start the case study -

To display the first question on this case study, click the Next button. Use the buttons in the left pane to explore the content of the case study before you answer the questions. Clicking these buttons displays information such as business requirements, existing environment, and problem statements. If the case study has an All Information tab, note that the information displayed is identical to the information displayed on the subsequent tabs. When you are ready to answer a question, click the Question button to return to the question.

Overview -

Contoso, Ltd. is a manufacturing company that produces outdoor equipment. Contoso has quarterly board meetings for which financial analysts manually prepare

Microsoft Excel reports, including profit and loss statements for each of the company's four business units, a company balance sheet, and net income projections for the next quarter.

Existing Environment -

Data and Sources -

Data for the reports comes from three sources. Detailed revenue, cost, and expense data comes from an Azure SQL database. Summary balance sheet data comes from Microsoft Dynamics 365 Business Central. The balance sheet data is not related to the profit and loss results, other than they both relate dates.

Monthly revenue and expense projections for the next quarter come from a Microsoft SharePoint Online list. Quarterly projections relate to the profit and loss results by using the following shared dimensions: date, business unit, department, and product category.

Net Income Projection Data -

Net income projection data is stored in a SharePoint Online list named Projections in the format shown in the following table.

MonthStartDate	Projection type	ProductCategory	Department	Projection
1-Apr-20	Revenue	Bikes	N/A	200,000
1-Apr-20	Revenue	Components	N/A	250,000
1-Apr-20	Revenue	Clothing	N/A	300,000
1-Apr-20	Revenue	Accessories	N/A	150,000
1-May-20	Revenue	Bikes	N/A	200,000
1-May-20	Revenue	Components	N/A	250,000
1-Apr-20	Expense	Bikes	Bike Manufacture	50,000
1-Apr-20	Expense	Bikes	Bike Sales	3,333

Revenue projections are set at the monthly level and summed to show projections for the quarter.

Balance Sheet Data -

The balance sheet data is imported with final balances for each account per month in the format shown in the following table.

AccountCategory	Account	Month	Year	BalanceAmount
Current assets	Cash and cash equivalents	3	2020	20,289
Current assets	Inventories	3	2020	4,855
Long-term liabilities	Long-term debt	3	2020	50,207
Current assets	Cash and cash equivalents	2	2020	28,209
Current assets	Inventories	2	2020	5,845
Long-term liabilities	Long-term debt	2	2020	49,887
Current assets	Cash and cash equivalents	1	2020	25,567
Current assets	Inventories	1	2020	65,998
Long-term liabilities	Long-term debt	1	2020	46,124

There is always a row for each account for each month in the balance sheet data.

Dynamics 365 Business Central Data

Business Central contains a product catalog that shows how products roll up to product categories, which roll up to business units.

Revenue data is provided at the date and product level. Expense data is provided at the date and department level.

Business Issues -

Historically, it has taken two analysts a week to prepare the reports for the quarterly board meetings. Also, there is usually at least one issue each quarter where a value in a report is wrong because of a bad cell reference in an Excel formula. On occasion, there are conflicting results in the reports because the products and departments that roll up to each business unit are not defined consistently.

Requirements -

Planned Changes -

Contoso plans to automate and standardize the quarterly reporting process by using Microsoft Power BI. The company wants to know how long it takes to populate reports to less than two days. The company wants to create common logic for business units, products, and departments to be used across all reports, including, but not limited, to the quarterly reporting for the board.

Technical Requirements -

Contoso wants the reports and datasets refreshed with minimal manual effort.

The company wants to provide a single package of reports to the board that contains custom navigation and links to supplementary information.

Maintenance, including manually updating data and access, must be minimized as much as possible.

Security Requirements -

The reports must be made available to the board from powerbi.com. A mail-enabled security group will be used to share information with the board.

The analysts responsible for each business unit must see all the data the board sees, except the profit and loss data, which must be restricted to only their business unit's data. The analysts must be able to build new reports from the dataset that contains the profit and loss data, but any reports that the analysts build must not be included in the quarterly reports for the board. The analysts must not be able to share the quarterly reports.

included in the quarterly reports for the board. The analysis must not be able to share the quarterly reports with anyone.

Report Requirements -

You plan to relate the balance sheet to a standard date table in Power BI in a many-to-one relationship based on the last day of the month. At least one of the balance sheet reports in the quarterly reporting package must show the ending balances for the quarter, as well as for the previous quarter.

Projections must contain a column named RevenueProjection that contains the revenue projection amounts. A relationship must be created from Projections to a table named Date that contains the columns shown in the following table.

Name	Data type	Example
Date	Date	4-Apr-2020
Month	Integer	20,204
Month Name	Text	February
Quarter	Integer	20,202
Year	Integer	2,020

The definitions and attributes of products, departments, and business units must be consistent across all reports.

The board must be able to get the following information from the quarterly reports:

Revenue trends over time

Ending balances for each account

A comparison of expenses versus projections by quarter

Changes in long-term liabilities from the previous quarter

A comparison of quarterly revenue versus the same quarter during the prior year

HOTSPOT -

How should you distribute the reports to the board? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Grant access by:

Sharing individual reports
Using a workspace membership
Using an app

Grant access to:

A dynamic distribution list
A mail-enabled security group
Individual user emails

Answer :

Answer Area

Grant access by:

- Sharing individual reports
- Using a workspace membership**
- Using an app

Grant access to:

- A dynamic distribution list
- A mail-enabled security group**
- Individual user emails

Explanation:

Box 1: Using a workspace membership

Scenario:

The company wants to provide a single package of reports to the board that contains custom navigation and links to supplementary information.

Note: Workspace is a shared environment for a group of people. You can have multiple Power BI content in a workspace. One workspace can have hundreds of dashboards, reports, and datasets in it.

Box 2: A mail-enabled security group

Question 72 (Testlet 7)



Case Study -

This is a case study. Case studies are not timed separately. You can use as much exam time as you would like to complete each case. However, there may be additional case studies and sections on this exam. You must manage your time to ensure that you are able to complete all questions included on this exam in the time provided.

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Requirements -

Planned Changes -

Contoso plans to automate and standardize the quarterly reporting process by using Microsoft Power BI. The company wants to know how long it takes to populate reports to less than two days. The company wants to create common logic for business units, products, and departments to be used across all reports, including, but not limited, to the quarterly reporting for the board.

Technical Requirements -

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Maintenance, including manually updating data and access, must be minimized as much as possible.

Security Requirements -

The reports must be made available to the board from powerbi.com. A mail-enabled security group will be used to share information with the board.

The analysts responsible for each business unit must own all the data the board uses, except the profit and loss.

The analysts responsible for each business unit must see all the data the board sees, except the profit and loss data, which must be restricted to only their business unit's data. The analysts must be able to build new reports from the dataset that contains the profit and loss data, but any reports that the analysts build must not be included in the quarterly reports for the board. The analysts must not be able to share the quarterly reports with anyone.

Report Requirements -

You plan to relate the balance sheet to a standard date table in Power BI in a many-to-one relationship based on the last day of the month. At least one of the balance sheet reports in the quarterly reporting package must show the ending balances for the quarter, as well as for the previous quarter.

Projections must contain a column named RevenueProjection that contains the revenue projection amounts. A relationship must be created from Projections to a table named Date that contains the columns shown in the following table.

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The definitions and attributes of products, departments, and business units must be consistent across all reports.

The board must be able to get the following information from the quarterly reports:

Revenue trends over time

Ending balances for each account

A comparison of expenses versus projections by quarter

Changes in long-term liabilities from the previous quarter

A comparison of quarterly revenue versus the same quarter during the prior year

HOTSPOT -

You need to grant access to the business unit analysts.

What should you configure? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Permissions required in powerbi.com:

Access permissions to an app
The Member role to the workspace
The Viewer role to the workspace

Permissions for the profit and loss dataset:

Build
Delete
Reshare

Answer :

Answer Area

Permissions required in powerbi.com:	<table border="1"> <tr><td>Access permissions to an app</td></tr> <tr><td>The Member role to the workspace</td></tr> <tr style="background-color: #90EE90;"><td>The Viewer role to the workspace</td></tr> </table>	Access permissions to an app	The Member role to the workspace	The Viewer role to the workspace
Access permissions to an app				
The Member role to the workspace				
The Viewer role to the workspace				
Permissions for the profit and loss dataset:	<table border="1"> <tr><td>Build</td></tr> <tr><td>Delete</td></tr> <tr><td>Reshare</td></tr> </table>	Build	Delete	Reshare
Build				
Delete				
Reshare				

Explanation:**Box 1: The Viewer role to the workspace**

The Viewer role gives a read-only experience to its users. They can view dashboards, reports, or workbooks in the workspace, but can't browse the datasets or dataflows. Use the Viewer role wherever you would previously use a classic workspace set to "Members can only view Power BI content".

Capability	Admin	Member	Contributor	Viewer
Update and delete the workspace.	X			
Add/remove people, including other admins.	X			
Add members or others with lower permissions.	X	X		
Publish and update an app.	X	X		
Share an item or share an app.	X	X		
Allow others to reshare items.	X	X		
Create, edit, and delete content in the workspace.	X	X	X	
Publish reports to the workspace, delete content.	X	X	X	
View an item.	X	X	X	X ¹
Create a report in another workspace based on a dataset in this workspace.	X	X	X	X ¹
Copy a report.	X	X	X	X ¹

Box 2: Build -

The analysts must be able to build new reports from the dataset that contains the profit and loss data.

Scenario: The reports must be made available to the board from powerbi.com.

The analysts responsible for each business unit must see all the data the board sees, except the profit and loss data, which must be restricted to only their business unit's data. The analysts must be able to build new reports from the dataset that contains the profit and loss data, but any reports that the analysts build must not be included in the quarterly reports for the board. The analysts must not be able to share the quarterly reports with anyone.

Reference:

Question 73 (Question Set 5)



Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question in this scenario, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You have several reports and dashboards in a workspace.

You need to grant all organizational users read access to a dashboard and several reports.

Solution: You create an Azure Active Directory group that contains all the users. You share each report and dashboard to the group.

Does this meet the goal?

- A. Yes
- B. No

Answer : B

Explanation:

Instead assign all the users the Viewer role to the workspace.

Note: The Viewer role gives a read-only experience to its users. They can view dashboards, reports, or workbooks in the workspace, but can't browse the datasets or dataflows. Use the Viewer role wherever you would previously use a classic workspace set to "Members can only view Power BI content".

Reference:

<https://powerbi.microsoft.com/en-us/blog/announcing-the-new-viewer-role-for-power-bi-workspaces/>



Question 74 (Question Set 5)

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question in this scenario, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You have several reports and dashboards in a workspace.

You need to grant all organizational users read access to a dashboard and several reports.

Solution: You assign all the users the Viewer role to the workspace.

Does this meet the goal?

A. Yes

B. No

Answer : A

Explanation:

The Viewer role gives a read-only experience to its users. They can view dashboards, reports, or workbooks in the workspace, but can't browse the datasets or dataflows. Use the Viewer role wherever you would previously use a classic workspace set to "Members can only view Power BI content".

Reference:

<https://powerbi.microsoft.com/en-us/blog/announcing-the-new-viewer-role-for-power-bi-workspaces/>



Question 75 (Question Set 5)

You publish a Microsoft Power BI dataset to powerbi.com. The dataset appends data from an on-premises Oracle database and an Azure SQL database by using one query.

You have admin access to the workspace and permission to use an existing On-premises data gateway for which the Oracle data source is already configured.

You need to ensure that the data is updated every morning. The solution must minimize configuration effort.

Which two actions should you perform when you configure scheduled refresh? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

A. Configure the dataset to use the existing On-premises data gateway.
B. Deploy an On-premises data gateway in personal mode.

C. Set the refresh frequency to Daily.
D. Configure the dataset to use the personal gateway.

Answer : BC

Explanation:

B: The on-premises data gateway acts as a bridge to provide quick and secure data transfer between on-premises data (data that isn't in the cloud) and several Microsoft cloud services. These cloud services include Power BI.

On-premises data gateway (personal mode) allows one user to connect to sources, and can't be shared with others. An on-premises data gateway (personal mode) can be used only with Power BI. This gateway is well-suited to scenarios where you're the only person who creates reports, and you don't need to share any data sources with others.

C: For Power BI users, refreshing data typically means importing data from the original data sources into a dataset, either based on a refresh schedule or on-demand. You can perform multiple dataset refreshes daily, which might be necessary if the underlying source data changes frequently.

Incorrect Answers:

A: On-premises data gateway allows multiple users to connect to multiple on-premises data sources. You can use an on-premises data gateway with all

An on-premises data gateway allows multiple users to connect to multiple on-premises data sources. You can use an on-premises data gateway with all supported services, with a single gateway installation. This gateway is well-suited to complex scenarios with multiple people accessing multiple data

sources.

Reference:

Question 76 (Question Set 5)



You need to provide a user with the ability to add members to a workspace. The solution must use the principle of least privilege. Which role should you assign to the user?

- A. Viewer
- B. Contributor
- C. Member
- D. Admin

Answer : C

Explanation:

A Member can add members or others with lower permissions.

Note:

Capability	Admin	Member	Contributor	Viewer
Update and delete the workspace.	✓			
Add/remove people, including other admins.	✓			
Allow Contributors to update the app for the workspace	✓			
Add members or others with lower permissions.	✓	✓		

Question 77 (Question Set 5)



DRAG DROP -

You have a Microsoft Power BI workspace.

You need to grant the user capabilities shown in the following table.

User name	Task
User1	Create and publish apps.
User2	Publish reports to the workspace and delete dashboards

The solution must use the principle of least privilege.

Which user role should you assign to each user? To answer, drag the appropriate roles to the correct users.

Each role may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Select and Place:

Roles

Answer Area

Admin

Contributor

User1:

Member	Viewer
--------	--------

User2:

Answer :

Roles	Answer Area
Admin	User1: Member
Member	User2: Contributor

Explanation:

Box 1: Member -

Capability	Admin	Member	Contributor	Viewer
Update and delete the workspace.	✓			
Add/remove people, including other admins.	✓			
Allow Contributors to update the app for the workspace	✓			
Add members or others with lower permissions.	✓	✓		
Publish and change permissions for an app	✓	✓		
Update an app.	✓	✓		If allowed ¹

Incorrect Answers:

Contributors can update the app metadata but not publish a new app or change who has permission to the app.

Box 2: Contributor -

Capability	Admin	Member	Contributor	Viewer
Create, edit, and delete content in the workspace.	✓	✓	✓	
Publish reports to the workspace, delete content.	✓	✓	✓	

Reference:

<https://docs.microsoft.com/en-us/power-bi/collaborate-share/service-new-workspaces>

Question 78 (Question Set 5)

You create a dataset sourced from dozens of flat files in Azure Blob storage. The dataset uses incremental refresh. From powerbi.com, you deploy the dataset and several related reports to Microsoft Power BI Premium capacity. You discover that the dataset refresh fails after the refresh runs out of resources. What is a possible cause of the issue?

- A. Query folding is not occurring.
- B. You selected Only refresh complete periods.
- C. The data type of the column used to partition the data changed.
- D. A filter is missing on the report.

Answer : A

Explanation:

The Power BI service partitions data based on date range. This is what enables only certain partitions to be refreshed incrementally. To make this work, the partition filter conditions are pushed down to the source system by including them in the queries. Using Power Query terminology, this is called "query folding". It is not recommended that incremental refresh is used when the required query folding cannot take place.

Reference:

<https://powerbi.microsoft.com/en-us/blog/incremental-refresh-query-folding/>

Question 79 (Question Set 5)

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question in this scenario, you will NOT be able to return to it. As a result, these questions will not appear in the review screen. You have several reports and dashboards in a workspace.

You need to grant all organizational users read access to a dashboard and several reports.

Solution: You publish an app to the entire organization.

Does this meet the goal?

- A. Yes
- B. No

Answer : B

Explanation:

Instead assign all the users the Viewer role to the workspace.

Note: The Viewer role gives a read-only experience to its users. They can view dashboards, reports, or workbooks in the workspace, but can't browse the datasets or dataflows. Use the Viewer role wherever you would previously use a classic workspace set to "Members can only view Power BI content".

Reference:

<https://powerbi.microsoft.com/en-us/blog/announcing-the-new-viewer-role-for-power-bi-workspaces/>

Question 80 (Question Set 5)

You have multiple dashboards.

You need to ensure that when users browse the available dashboards from powerbi.com, they can see which dashboards contain Personally Identifiable

Information (PII). The solution must minimize configuration effort and impact on the dashboard design.

What should you use?

- A. comments

- B. tiles
- C. Microsoft Information Protection sensitivity labels
- D. Active Directory groups

Answer : C

Explanation:

Microsoft Information Protection sensitivity labels provide a simple way for your users to classify critical content in Power BI without compromising productivity or the ability to collaborate.

Sensitivity labels can be applied to datasets, reports, dashboards, and dataflows.

Reference:

<https://docs.microsoft.com/en-us/power-bi/admin/service-security-sensitivity-label-overview>

Question 81 (Question Set 5)



You have a Power BI tenant.

You have reports that use financial datasets and are exported as PDF files.

You need to ensure that the reports are encrypted.

What should you implement?

- A. dataset certifications
- B. row-level security (RLS)
- C. sensitivity labels
- D. Microsoft Intune policies

Answer : C

Explanation:

General availability of sensitivity labels in Power BI.

Microsoft Information Protection sensitivity labels provide a simple way for your users to classify critical content in Power BI without compromising productivity or the ability to collaborate. Sensitivity labels can be applied on datasets, reports, dashboards, and dataflows. When data is exported from Power BI to Excel,

PowerPoint or PDF files, Power BI automatically applies a sensitivity label on the exported file and protects it according to the label™'s file encryption settings. This way your sensitive data remains protected no matter where it is.

Reference:

<https://powerbi.microsoft.com/en-us/blog/announcing-power-bi-data-protection-ga-and-introducing-new-capabilities/>

Question 82 (Question Set 5)



Your company plans to completely separate development and production assets such as datasets, reports, and dashboards in Microsoft Power BI.

You need to recommend an application lifecycle strategy. The solution must minimize access to production assets and prevent end users from viewing the development assets.

What should you recommend?

- A. Create production reports in a separate workspace that uses a shared dataset from the development workspace. Grant the end users access to the production workspace.
- B. Create one workspace for development. From the new workspace, publish an app for production.
- C. Create a workspace for development and a workspace for production. From the production workspace, publish an app.
- D. In one workspace, create separate copies of the assets and append DEV to the names of the copied assets. Grant the end users access to the workspace.

Answer : C

Explanation:

Use different work stages (Development, Test, and Production).

Deploy from the Development workspace.

Reference:

<https://visualbi.com/blogs/microsoft/powerbi/application-lifecycle-management-power-bi/>

Question 83 (Question Set 5)



You have a collection of reports for the HR department of your company. The datasets use row-level security (RLS). The company has multiple sales regions that each has an HR manager.

You need to ensure that the HR managers can interact with the data from their region only. The HR managers must be prevented from changing the layout of the reports.

How should you provision access to the reports for the HR managers?

- A. Publish the reports to a different workspace other than the one hosting the datasets.
- B. Publish the reports in an app and grant the HR managers access permission.
- C. Add the HR managers as members of the existing workspace that hosts the reports and the datasets.
- D. Create a new workspace, copy the datasets and reports, and add the HR managers as members of the workspace.

Answer : A

Explanation:

Note: Row-level security (RLS) with Power BI can be used to restrict data access for given users. Filters restrict data access at the row level, and you can define filters within roles. In the Power BI service, members of a workspace have access to datasets in the workspace. RLS doesn't restrict this data access.

Reference:

<https://docs.microsoft.com/en-us/power-bi/admin/service-admin-rls>

Question 84 (Question Set 5)



You create a report by using Microsoft Power BI Desktop.

The report uses data from a Microsoft SQL Server Analysis Services (SSAS) cube located on your company™s internal network.

You plan to publish the report to the Power BI Service.

What should you implement to ensure that users who consume the report from the Power BI Service have the most up-to-date data from the cube?

- A. a subscription
- B. a scheduled refresh of the dataset
- C. an OData feed
- D. an On-premises data gateway

Answer : D

Explanation:

When you™ve created dynamic reports in Power BI Desktop, you can share them by publishing to your Power BI site. When you publish a Power BI Desktop file with a live connection to a tabular model to your Power BI site, an on-premises data gateway must be installed and configured by an administrator.