# Microsoft

## DA-100

### Analyzing Data with Microsoft Power BI (beta)

### QUESTION & ANSWERS

## QUESTION 1

You need to address the data concerns before creating the data model. What should you do in Power Query Editor?

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

## Correct Answer: C

## QUESTION 2

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

## Correct Answer: B

## Explanation/Reference:

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.
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 3

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** ⓘ

1

**Periods after** ⓘ

0

**Fields**

🔍 Search

✓ ▦ Customer

✓ ▦ Product

⌃ ▦ Sales

  ▸ 📅 Date

  ▤ Gross Margin

  Month

  Σ MonthNumberOfYear

  Σ Quarter

  Σ Sales_SRC

  ▸ ■ Time Intelligence

  ▤ Total Cost

  ▤ Total Order Qty

  ▤ Total Sales

  ▤ Total Sales rolling average

  ▤ Unit Price

  Σ 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.

### Answer Area

Base value:
| Month |
| Total Cost |
| Total Order Qty |
| Total Sales |
| Year |

Date:
| Date |
| Month |
| Total Sales |
| Year |

Period:
| Days |
| Months |
| Quarters |
| Years |

**Correct Answer:**

Answer Area

Base value:
| Month |
| Total Cost |
| Total Order Qty |
| **Total Sales** |
| Year |

Date:
| **Date** |
| Month |
| Total Sales |
| Year |

Period:
| Days |
| **Months** |
| Quarters |
| Years |

**Explanation/Reference:**

https://docs.microsoft.com/en-us/power-bi/transform-model/desktop-quick-measures

## QUESTION 4

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.
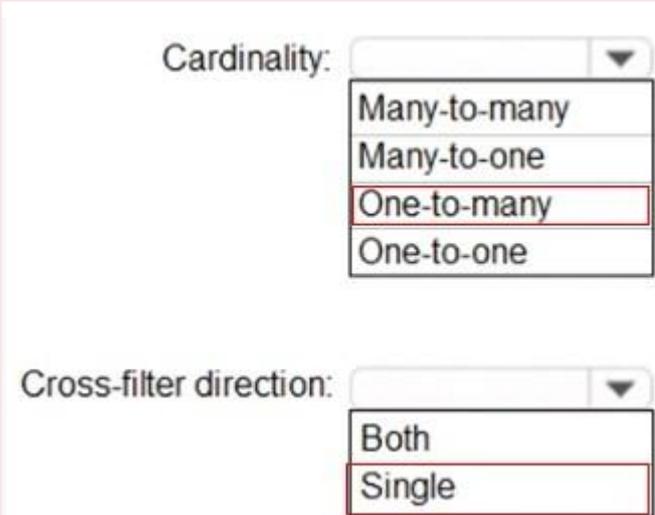NOTE: Each correct selection is worth one point.

Cardinality:

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

Cross-filter direction:

| Both |
| Single |

**Correct Answer:**

Cardinality:

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

Cross-filter direction:

| Both |
| Single |

**Explanation/Reference:**

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

## QUESTION 5

You have a prospective customer list that contains 1,500 rows of dat
a. 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.

## Correct Answer:C,E

## Explanation/Reference:

In Power query, the load preview by default is 1000 row. By default, the column quality also only looks at the first 1000 row. You can verify this by the status bar at the bottom of the Power query window. To change the profiling so it analyses the entire column of data, select the profiling status in the status bar. Then select Column profiling based on the entire data set.
https://theexcelclub.com/data-profiling-views-in-power-query-excel-and-power-bi/

## QUESTION 6

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

## Correct Answer:D

## Explanation/Reference:

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

You are enhancing a Power BI model that has DAX calculations.
You need to create a measure that returns the year-to-date total sales from the same date of the previous calendar year.
Which DAX functions should you use? To answer, select the appropriate options in the answer area.
NOTE: Each correct selection is worth one point.

```
Sales PYTD =

VAR startyear =

      STARTOFYEAR ( PREVIOUSYEAR ( 'Date' [Date] ) )

VAR enddate =

      LASTDATE ( Sales[Date] ) - 365

RETURN
```

| ▼ | ( Sales[Sales] ), |
|---|---|
| CALCULATE ( | |
| DATESBETWEEN ( | |
| SAMEPERIODLASTYEAR ( | |
| SLIM ( | |

| ▼ | ( 'Calendar' [Date], startyear, enddate ) |
|---|---|
| CALCULATE | |
| DATESBETWEEN | |
| SAMEPERIODLASTYEAR | |
| SLIM | |

```
      )
```

```
Sales PYTD =

VAR startyear =

    STARTOFYEAR ( PREVIOUSYEAR ( 'Date' [Date] ) )

VAR enddate =

    LASTDATE ( Sales[Date] ) - 365
```

**Correct Answer:** RETURN

```
                              ▼  ( Sales[Sales] ),
CALCULATE (
DATESBETWEEN (
SAMEPERIODLASTYEAR (
SLIM (

                              ▼  ( 'Calendar' [Date], startyear, enddate )
CALCULATE
DATESBETWEEN
SAMEPERIODLASTYEAR
SLIM

    )
```

## Explanation/Reference:

https://www.kasperonbi.com/get-the-ytd-of-the-same-period-last-year/

## QUESTION 8

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 Bl. 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 report-level filter that filters based on the order date.

Does this meet the goal?

A. Yes

B. No

**Explanation/Reference:**

The filter is applied after the data is imported.
Instead add a WHERE clause to the SQL statement.
https://docs.microsoft.com/en-us/power-bi/connect-data/service-gateway-sql-tutorial

## QUESTION 9

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

A. Add a description of 'subscriber count' to the Customer Count measure.
B. Set Summarize By to None for the CustomerID column.
C. Add a description of 'Subscriber' to the Customer table.
D. Add a synonym of 'subscriber' to the Customer table.

**Correct Answer:D**

**Explanation/Reference:**

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

## QUESTION 10

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.

**Explanation/Reference:**

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

## QUESTION 11

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

**Explanation/Reference:**

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.
https://powerbi.microsoft.com/en-us/blog/announcing-power-bi-data-protection-ga-and-introducing-new-capabilities/