# Microsoft

70-460 PRACTICE EXAM

Transition Your MCITP: Business Intelligence Developer 2008 to MCSE: Business Intelligence

TOTAL QUESTIONS: 60/3CASE STUDY

Question: 1

HOTSPOT
A SQL Server Analysis Services (SSAS) cube contains billions of rows of data and is rapidly increasing in size. The cube consists of a single measure group and a single partition. The cube is currently processed by using the Process Full process option. You have the following requirements to reduce the cube processing time:
• Partition the measure group by month.
• Create a staging table that contains only data which is more recent than the last time the cube was processed.
• Do not include data updates or deletions in the staging table.
• Insert records from the staging table into the appropriate partition.
You need to change the process option to meet the requirements. Which process option should you choose?
To answer, select the appropriate option from the drop-down list in the dialog box.
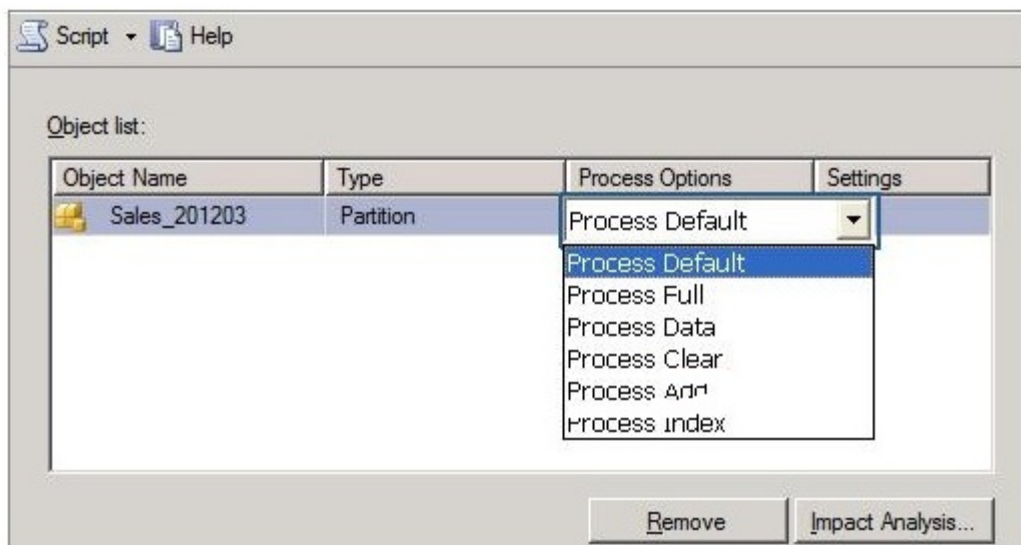
Answer:
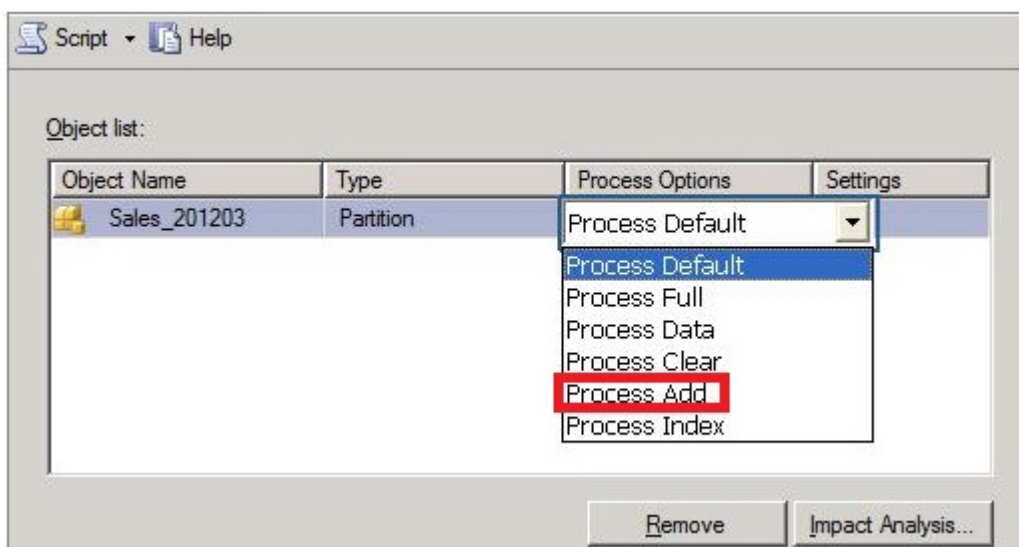
Question: 2

You are modifying a SQL Server Reporting Services (SSRS) report for a SQL Server Analysis Services (SSAS) cube. The report defines a report parameter of data type Date/Time with which users can filter the report by a single date. The parameter value cannot be directly used to filter the Multidimensional Expressions (MDX) query for the dataset. You need to ensure that the report displays data filtered by the user-entered value. You must achieve this goal by using the least amount of development effort. What should you do? (More than one answer choice may achieve the goal. Select the BEST answer.)

A. Edit the dataset query parameter. Change the Value property of the report parameter to an expression that uses the same format as the date dimension member key value.
B. Change the dataset query to Transact-SQL (T-SQL). Use the OPENROWSET function to query the cube. Output the cube results to the T-SQL query and use a Convert function to change the report parameter value into the same format as the date dimension member.
C. Edit the dataset query parameter. Create a subcube subquery that uses the StrToSet MDX function and accepts the report parameter value.
D. Edit the dataset query parameter. Change the Name property of the dataset query parameter so that it points to a name value for each date dimension member.

Answer: A

Question: 3

You are designing a subscription strategy for a SQL Server Reporting Services (SSRS) report. You have an application that populates a table with user-specific subscription schedules and report formats. You need to ensure that users can receive reports by email according to their preferences. Email messages will be sent via an internal mail server. What should you do? (More than one answer choice may achieve the goal. Select the BEST answer.)

A. Create a standard SSRS subscription for each subscription schedule.
B. Create one data-driven SSRS subscription. Schedule the subscription to frequently retrieve user preferences.
C. Create a data-driven SSRS subscription for each record in the schedule table.
D. Create a standard SSRS subscription for each record in the table.

Answer: B

Question: 4

You are using a new installation of SQL Server Reporting Services (SSRS) to create three sales reports that consume data from a stored procedure. The stored procedure is defined in a SQL Azure database. All reports must pass USA to the Country parameter of the stored procedure. Users cannot change the Country report parameter value. You need to configure the report parameter properties. How should you configure the report parameter properties?
To answer, select the appropriate setting or settings in the answer area.

Report Parameter Properties

General
Available Values
Default Values
Advanced

Change name, data type, and other options.

Name:
Country

Prompt:
Country

Data type:
Text

☐ Allow blank value ("")
☐ Allow null value
☐ Allow multiple values

Select parameter visibility:
○ Visible
○ Hidden
○ Internal

Answer: Allow null value

Question: 5

You are designing a fact table in a SQL Server database. The fact table must meet the following requirements:
•   Include a columnstore index.
•   Allow users to choose up to 10 dimension tables and up to five facts at one time.
•   Maximize performance of queries that aggregate measures by using any of the 10 dimensions.
•   Support billions of rows.
•   Use the most efficient design strategy.
You need to design the fact table to meet the requirements. What should you do? (More than one answer choice may achieve the goal. Select the BEST answer.)

A. Design a fact table with 10 dimensional key columns and 5 measure columns. Place the columnstore index on only the measure columns.
B. Design a fact table with 10 dimensional key columns and S measure columns. Place the columnstore index on the dimensional key columns and the measure columns.
C. Design a fact table with 5 dimensional key columns and 10 measure columns. Place the columnstore index on the measure columns.
D. Design a fact table with 5 dimensional key columns and 10 measure columns. Place the columnstore index on the dimensional key columns.

Answer: B

Question: 6

You are designing a SQL Server 2012 Integration Services (SSIS) deployment strategy. You currently have many SQL Server 2008 SSIS packages that require upgrading. The production environment includes SSIS 2012 and SSIS 2008. The environment includes existing command shell scripts that invoke the dtutil command-line utility. You need to design a deployment strategy that supports existing deployment strategies and requires the minimum amount of effort. What should you do? (More than one answer choice may achieve the goal. Select the BEST answer.)

A. Use a project deployment model. Change the command shell scripts to reference the SQL Server 2012 path to dtutil.
B. Use a project deployment model. Use the Integration Services Deployment Wizard.
C. Use a package deployment model. Use the Integration Services Deployment Wizard.
D. Use a package deployment model. Change the command shell scripts to reference the SQL Server 2012 path to dtutil.

Answer: D

Question: 7

You are developing a SQL Server Analysis Services (SSAS) tabular project. The model includes a table named DimEmployee. The table contains employee details, including the sales territory for each employee. The table also defines a column named EmployeeAlias which contains the Active Directory Domain Services (AD DS) domain and logon name for each employee. You create a role named Employees. You need to configure the Employees roles so that users can query only sales orders for their respective sales territory. What should you do?

A. Add a row filter that implements the LOOKUPVALUE and CUSTOMDATA functions.
B. Add a row filter that implements only the USERNAME function.
C. Add a row filter that implements the LOOKUPVALUE and USERNAME functions.
D. Add a row filter that implements only the CUSTOMDATA function.

Answer: C

Question: 8

You are developing a SQL Server Analysis Services (SSAS) tabular project. A column named City must be added to the table named Customer. The column will be used in the definition of a hierarchy. The City column exists in the Geography table that is related to the Customer table. You need to add the City column to the Customer table. How should you write the calculation?

A. =RELATED(Geography[City])
B. City:= LOOKUPVALUE(Geography[City],Geography[GeographyKey],[GeographyKey])
C. City:=VALUES(Geography[City])
D. =VALUES(Geography[City])
E. =RELATED(Geography.City)
F. City:= LOCKUP(Geography[City],Geography[GeographyKey],[GeographyKey])

Answer: A

Question: 9

You are developing a SQL Server Analysis Services (SSAS) tabular project. A model contains tables and columns that

must not be visible to the user. The columns and tables cannot be removed because they are used in calculations. You need to hide the tables and columns. What should you do?

A. Right-click the applicable tables and columns and select the Hide option.
B. Right-click the applicable tables and columns and select the Hide from Client Tools option.
C. In the Properties window for the applicable tables and columns, set the Enabled property to False.
D. In the Properties window for the applicable tables and columns, set the Visible property to True.

Answer: B

Question: 10

You are developing a SQL Server Analysis Services (SSAS) tabular project. You need to grant the minimum permissions necessary to enable users to query data in a data model. Which role permission should you use?

A. Browser
B. Process
C. Read
D. Administrator
E. Explorer
F. Select

Answer: C

Question: 11

You are troubleshooting query performance for a SQL Server Analysis Services (SSAS) cube. A user reports that a Multidimensional Expressions (MDX) query is very slow. You need to identify the MDX query statement in a trace by using SQL Server Profiler. Which event class should you use?

A. Get Data From Aggregation
B. Calculate Non Empty Begin
C. Execute MDX Script Begin
D. Query Begin
E. Progress Report Begin
F. Query Subcube

Answer: A

Question: 12

DRAG DROP
You are developing a SQL Server Analysis Services (SSAS) tabular project based on a SQL Azure database. The ProcessingOption property for the project is set to Do Not Process. Several calculated columns have been added to a table. The project has been deployed to the production server. You need to ensure that newly added data is processed on the production server. 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.)

Right-click the table and then select **Process Table**.

On the **Model** menu, select **Process** and then select **Process Table**.

Open the project in SQL Server Data Tools (SSDT).

In Object Explorer, connect to the SSAS instance, expand the database, and then expand the Tables folder.

Open SQL Server Management Studio (SSMS).

In the model designer, select the table.

Answer:

Right-click the table and then select **Process Table**.

Open the project in SQL Server Data Tools (SSDT).

In Object Explorer, connect to the SSAS instance, expand the database, and then expand the Tables folder.

In the model designer, select the table.

Open SQL Server Management Studio (SSMS).

On the **Model** menu, select **Process** and then select **Process Table**.
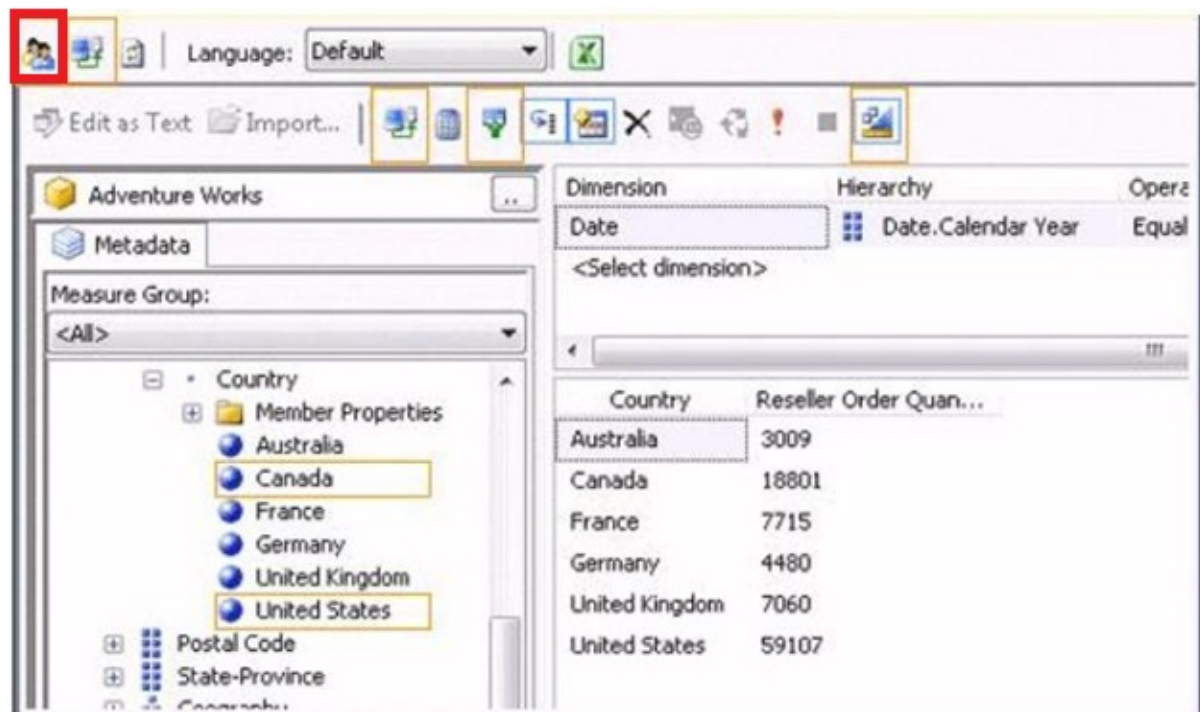
Question: 13

HOTSPOT

A SQL Server Analysis Services (SSAS) cube has roles to define dimension data security. A role named USA allows users to browse data pertaining to the United States. A role named Canada allows users to browse data pertaining to Canada. A user can browse sales data pertaining to the United States but cannot browse sales data pertaining to Canada. You validate that the user belongs to the USA and Canada roles. You need to reproduce the issue in SQL Server Management Studio (SSMS). Which option should you select? To answer, select the appropriate action in the answer area.
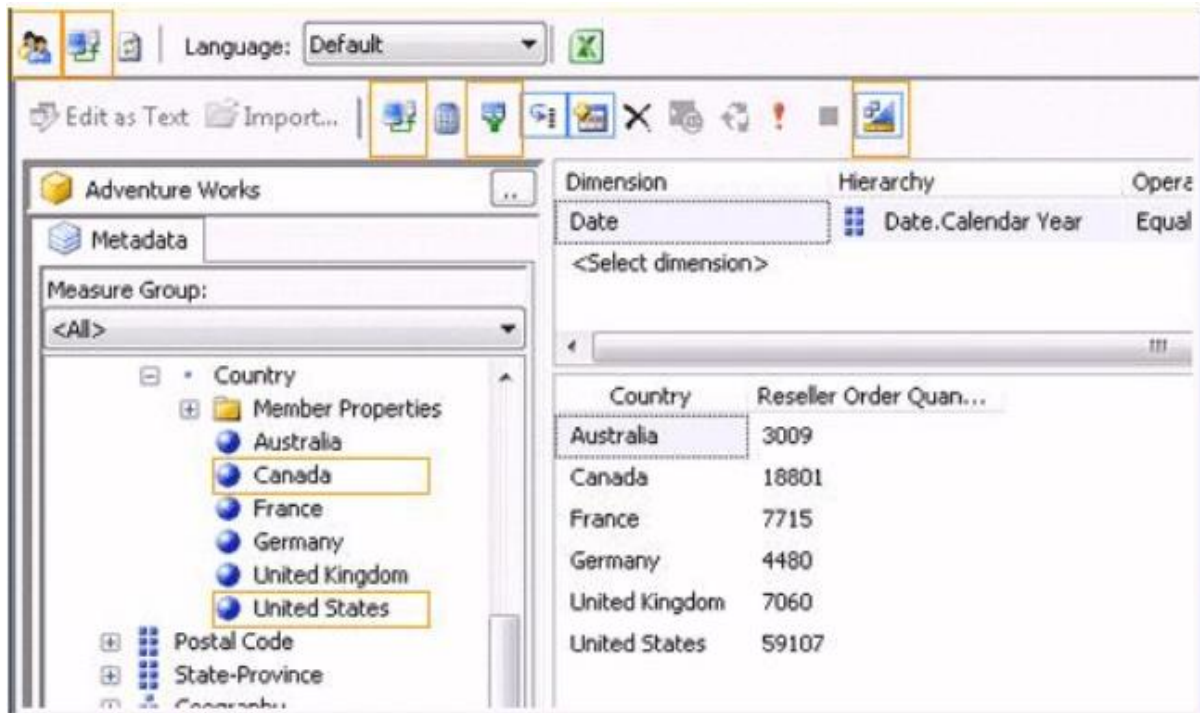
Answer:

Question: 14

DRAG DROP

You are developing a SQL Server Analysis Services (SSAS) multidimensional project that is configured to source data from a SQL Azure database. The cube is processed each night at midnight. The largest partition in the cube takes 12 hours to process, and users are unable to access the cube until noon. The partition must be available for querying as

soon as possible after processing commences. You need to ensure that the partition is available for querying as soon as possible, without using source data to satisfy the query. 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.)

Click **Storage Settings** and then click **Options** to open the Storage Options dialog box.

Open the cube for editing and then select the **Partitions** tab.

On the Properties window, change the **ProcessingMode** property to **LazyAggregations**.

Enable proactive caching and then select the **Bring Online Immediately** option.

On the Properties window, change the **ProcessingMode** property to **(default)**.

On the Partitions tab, select the partition to edit.

Answer:

On the Properties window, change the **ProcessingMode** property to **LazyAggregations**.

Click **Storage Settings** and then click **Options** to open the Storage Options dialog box.

Enable proactive caching and then select the **Bring Online Immediately** option.

Open the cube for editing and then select the **Partitions** tab.

On the Properties window, change the **ProcessingMode** property to **(default)**.

On the Partitions tab, select the partition to edit.

Question: 15

You are creating a new report in SQL Server Report Builder. You add a SQL Azure data source. Then you add a dataset that has four fields named Year, Country, Category, and Sales. You must design a matrix as shown in the following diagram.

	CY 2003	CY 2004
Accessories	293,710	407,050
Bikes	9,359,103	9,162,325
Clothing	138,248	201,525
Australia	3,033,784	2,563,884
Canada	535,784	673,628
France	1,026,325	922,179
Germany	1,058,406	1,076,891
United Kingdom	1,298,249	1,210,286
United States	2,838,512	3,324,031
Total	9,791,060	9,770,900

The category rows (the first three rows as shown in the diagram) must present total sales amount by category. The country rows (the next six rows as shown in the diagram) must present total sales amount by country. The total row must present the total sales for each year. You add a matrix to the report. You add a grouping of the Category field on the rows and a grouping of the Year field on the columns. You need to add the countries on the rows of the matrix. Which Row Group option should you select when you add the group?
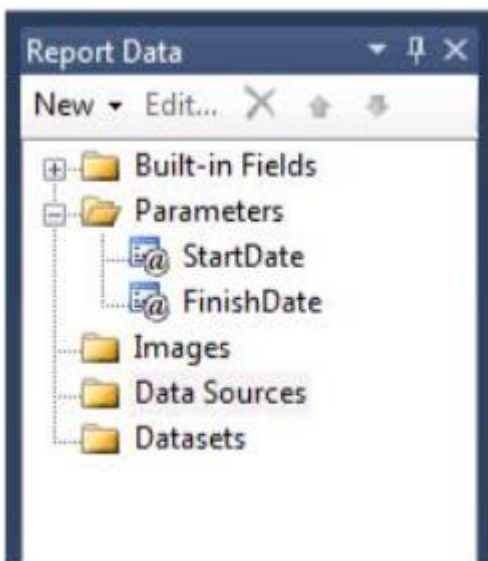
A. Adjacent Above
B. Adjacent Below
C. Child Group
D. Parent Group

Answer: D

Question: 16

DRAG DROP
You are developing a SQL Server Reporting Services (SSRS) report that sources data from a SQL Azure database and a SQL Server Analysis Services (SSAS) cube. The cube contains a date dimension and other dimensions. The report design includes two report parameters named StartDate and FinishDate as shown in the following diagram.

```
Report Data                  ▾ ⏻ ✕

New ▾  Edit...  ✕  ⬆  ⬇

⊞ 📁 Built-in Fields
⊟ 📂 Parameters
       🔲 StartDate
       🔲 FinishDate
   📁 Images
   📁 Data Sources
   📁 Datasets
```

The Data Type property of the parameters is set to Date/Time. You need to create the dataset based on the SSAS cube. You also need to ensure that the dataset is filtered by the existing report parameters. 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.)

Create a data source using the Microsoft SQL Server connection type.

Write an expression in the dataset Parameter Value textbox that converts the Date/Time parameter values to be compatible with the dimension member.

Create a dataset with a parameterized filter using a hierarchy from the date dimension that uses the **Range (Inclusive)** operator. Do not close the Dataset Properties window.

Create a dataset with a parameterized filter using a hierarchy from the date dimension that uses the **Contains** operator. Do not close the Dataset Properties window.

Create a data source using the Microsoft SQL Server Analysis Services connection type.

Select the **Parameters** page and then assign an expression to each query parameter to convert the report parameter values to the appropriate date dimension hierarchy member keys.

Modify the parameter expressions of the dataset to include the **ToString()** function.

Create two report parameters with Date/Time data types to receive their default values from the two hidden datasets.

Answer:

Create a data source using the Microsoft SQL Server connection type.

Create a dataset with a parameterized filter using a hierarchy from the date dimension that uses the **Contains** operator. Do not close the Dataset Properties window.

Create two report parameters with Date/Time data types to receive their default values from the two hidden datasets.

Create a dataset with a parameterized filter using a hierarchy from the date dimension that uses the **Range (Inclusive)** operator. Do not close the Dataset Properties window.

Write an expression in the dataset Parameter Value textbox that converts the Date/Time parameter values to be compatible with the dimension member.

Create a data source using the Microsoft SQL Server Analysis Services connection type.

Select the **Parameters** page and then assign an expression to each query parameter to convert the report parameter values to the appropriate date dimension hierarchy member keys.

Modify the parameter expressions of the dataset to include the **ToString()** function.

Question: 17

You install SQL Server Reporting Services (SSRS). You need to restore a copy of the symmetric key. Which command should you run?

A. rskeymgmc -a -f %temp%\rs.key -p Password1
B. rskeymgmt -d
C. rskeymgmt -e -f %temp%\rs.key -p Password1
D. rskeymgmt -i

Answer: A

Question: 18

You are designing a SQL Server Reporting Services (SSRS) report based on a SQL Server Analysis Services (SSAS) cube. The cube contains a Key Performance Indicator (KPI) to show if a salesperson's sales are off target, slightly off target, or on target. You need to add a report item that visually displays the KPI status value as a red, yellow, or green circle. Which report item should you add?

A. Linear Gauge
B. Sparkline
C. Data Bar
D. Indicator
E. Radial Gauge

Answer: D

Question: 19

You are designing a SQL Server Reporting Services (SSRS) report to display vineyard names and their year-to-date (YTD) grape yield. Grape yield values are classified in three bands:
•   High Yield
•   Medium Yield
•   Low Yield
You add a table to the report. Then you define two columns based on the fields named VineyardName and YTDGrapeYield. You need to set the color of the vineyard text to red, yellow, or blue, depending on the value of the YTD grape yield values. What should you do?

A. Use an expression for the TextDecoration property of the vineyard text box.
B. Use an expression for the Color property of the vineyard text box.
C. Add an indicator to the table.
D. Use an expression for the Font property of the vineyard text box.
E. Use an expression for the Style property of the vineyard text box.

Answer: B

Question: 20

You are developing a SQL Server Reporting Services (SSRS) report that renders in HTML. The report includes a dataset with fields named Description, Price, and Color. The report layout includes a table that displays product details and also includes columns named Description, Price, and Color. You need to modify the report so that users can sort

products by the Price column. What should you do?

A. Set the SortExpression property to =Fields!Price.Name for the Price text box.
B. Add a custom action to the Price text box.
C. Set the SortExpression property to =Fields!Price.Value for the Price text box.
D. In the Expression dialog box for the Price text box, enter the =SortBy Fields!Price.Value expression.

Answer: D

Question: 21

You are designing a SQL Server Reporting Services (SSRS) report for a bank. The bank has Automated Teller Machines (ATMs) in several regions. ATM operational data is stored in a SQL Azure database. The report must use a map to display the location and status of the ATMs as shown in the following exhibit. (Click the Exhibit button.)
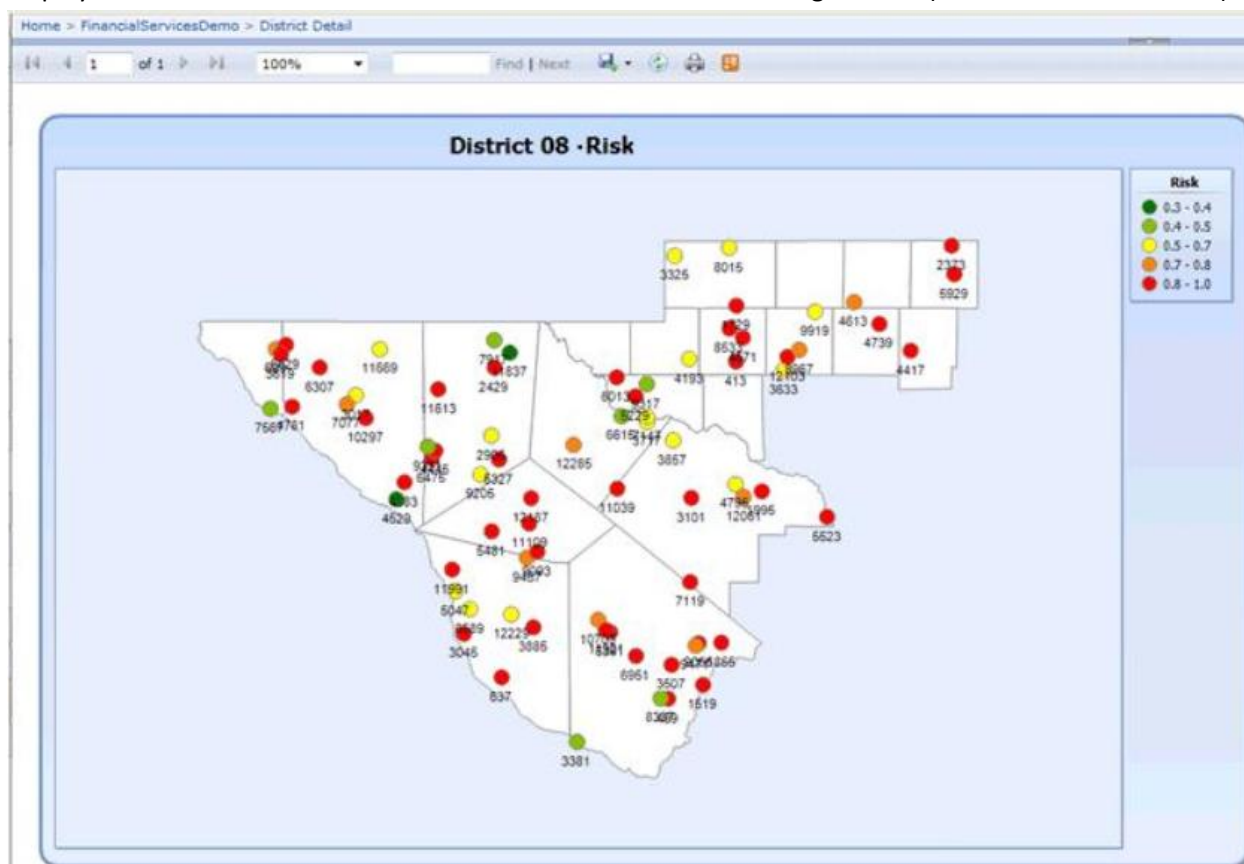
You need to ensure that the report displays only a user selected map region. Which source of spatial data should you use for the map?

A. SQL Server spatial query
B. ESRI shape file
C. Map gallery
D. Bing Maps layer

Answer: A

Question: 22

DRAG DROP
You are developing a SQL Server Analysis Services (SSAS) cube. The cube consists of a single measure group. The measure group consists of one partition that uses MOLAP. The proactive caching policy has the following requirements:
• The cache must be updated when data is changed in the table named tblOrders.
• Changes must be notified through the use of the XML for Analysis (XMLA) NotifyTableChange command.
You need to configure the proactive caching policy to meet the requirements.
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 the **Update the cache periodically** option. |
| Select the **Client initiated** notification type, and then select the **tblOrders** table. |
| Open the partition storage settings. |
| On the **Partitions** tab, click **Storage Settings**. |
| Enable proactive caching. |
| Select the **SQL Server** notification type, and then select the **tblOrders** table. |

Answer:

| Select the **Update the cache periodically** option. |
| |
| Open the partition storage settings. |
| |
| Enable proactive caching. |

| On the **Partitions** tab, click **Storage Settings**. |
| Select the **SQL Server** notification type, and then select the **tblOrders** table. |
| Select the **Client initiated** notification type, and then select the **tblOrders** table. |

Question: 23

You are developing a SQL Server Analysis Services (SSAS) cube for the sales department at your company. The sales department requires the following set of metrics:
• Unique count of customers
• Unique count of products sold
• Sum of sales
You need to ensure that the cube meets the requirements while optimizing query response time. What should you do? (Each answer presents a complete solution. Choose all that apply.)

A. Use the additive measure group functions.
B. Place the distinct count measures in separate measure groups.
C. Use the Count and Sum measure aggregation functions.
D. Place the measures in a single measure group.
E. Use the Distinct Count and Sum measure aggregation functions.
F. Use the semiadditive measure group functions.

Answer: B, F

Question: 24

DRAG DROP
You are developing a SQL Server Analysis Services (SSAS) cube. You need to reuse a Revenue measure group from a different database. In SQL Server Data Tools (SSDT), 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.)

From the **Select a Data Source** step, reference the Analysis Services data source.

From the **Select Objects** step, select the Revenue measure group that you need to link.

Launch the Linked Object Wizard.

From the **Select Objects** step, select the Revenue measure group and the dimensions that you need to link.

Launch the Business Intelligence Wizard.

Answer:

From the **Select Objects** step, select the Revenue measure group that you need to link.

Launch the Linked Object Wizard.

Launch the Business Intelligence Wizard.

From the **Select Objects** step, select the Revenue measure group and the dimensions that you need to link.

From the **Select a Data Source** step, reference the Analysis Services data source.

Question: 25

HOTSPOT
You are developing a SQL Server Analysis Services (SSAS) cube. Revenue must be compared to a goal and described by a status and a trend. Revenue, goal, status, and trend will be defined by Multidimensional Expressions (MDX) expressions. You need to add the Revenue indicator. Which tab should you select? (To answer, select the appropriate tab in the work area.)

Cube Structure | Dimension Usage | Calculations | KPIs | Actions

Answer:

Cube Structure | Dimension Usage | Calculations | KPIs | Actions

Question: 26

DRAG DROP
You are developing a SQL Server Analysis Services (SSAS) cube. You need to add a calculated member to the Customer dimension to evaluate the sum of values for the United Kingdom and the United States. Which expression should you use? (To answer, drag the appropriate expression to the answer area.)

```
[Customer].[Customer Geography].[Country].&[United
Kingdom] & [Customer].[Customer Geography].[Country].&
[United States]
```

```
{[Customer].[Customer Geography].[Country].&[United
Kingdom],[Customer].[Customer Geography].[Country].&
[United States]}
```

```
[Customer].[Customer Geography].[Country].&[United
Kingdom] UNION [Customer].[Customer Geography].
[Country].&[United States]
```

```
SUM({[Customer].[Customer Geography].[Country].&[United
Kingdom],[Customer].[Customer Geography].[Country].&
[United States]})
```

```
SUM(([Customer].[Customer Geography].[Country].&[United
Kingdom],[Customer].[Customer Geography].[Country].&
[United States]))
```

```
CREATE MEMBER
CURRENTCUBE.[Customer].[Customer Geography].[All].[UK and USA] AS
```

Answer:

```
[Customer].[Customer Geography].[Country].&[United
Kingdom] & [Customer].[Customer Geography].[Country].&
[United States]
```

```
{[Customer].[Customer Geography].[Country].&[United
Kingdom],[Customer].[Customer Geography].[Country].&
[United States]}
```

```
[Customer].[Customer Geography].[Country].&[United
Kingdom] UNION [Customer].[Customer Geography].
[Country].&[United States]
```

```
SUM(([Customer].[Customer Geography].[Country].&[United
Kingdom],[Customer].[Customer Geography].[Country].&
[United States]))
```

```
CREATE MEMBER
CURRENTCUBE.[Customer].[Customer Geography].[All].[UK and USA] AS
    SUM({[Customer].[Customer Geography].[Country].&[United
    Kingdom],[Customer].[Customer Geography].[Country].&
    [United States]})
```

Question: 27

DRAG DROP
You are developing a SQL Server Analysis Services (SSAS) multidimensional project. The project file includes two cubes named Finance and Operations. The project also includes a dimension named Date. The Date dimension includes two hierarchies named Fiscal and Calendar. The Date dimension has been added to both cubes. You need to disable the Fiscal hierarchy in the Operations cube without impacting other database objects. 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.)

Open the **Date** dimension in the dimension designer.

In the Dimensions pane of the Cube Structure tab, select the **Fiscal** hierarchy of the **Date** dimension.

In the Properties window, set the **AttributeHierarchyEnabled** property to **False**.

Open the **Operations** cube in the cube designer.

In the Properties window, set the **Visible** property to **False**.

In the Properties window, set the **Enabled** property to **False**.

Delete the **Fiscal** hierarchy from the **Operations** cube.

In the Hierarchies pane of the dimension structure tab, select the **Fiscal** hierarchy.

Answer:

In the Dimensions pane of the Cube Structure tab, select the **Fiscal** hierarchy of the **Date** dimension.

In the Properties window, set the **AttributeHierarchyEnabled** property to **False**.

In the Properties window, set the **Visible** property to **False**.

In the Properties window, set the **Enabled** property to **False**.

Delete the **Fiscal** hierarchy from the **Operations** cube.

In the Hierarchies pane of the dimension structure tab, select the **Fiscal** hierarchy.

Open the **Operations** cube in the cube designer.

Open the **Date** dimension in the dimension designer.

Question: 28

You are developing a SQL Server Analysis Services (SSAS) cube. The cube contains several dimensions, a local measure group, and a linked measure group. Both measure groups use MOLAP partitions. You need to write-enable one of the linked measure group partitions to support Microsoft Excel 2010 PivotTable What-If Analysis. What should you do before the partition can be write-enabled?

A. Implement the linked measure group as a local measure group.
B. Set the Type property of the partition's measure group to Forecast.
C. Implement the local measure group as a linked measure group.
D. Set the StorageMode property of the linked measure group to Rolap.

Answer: A

Question: 29

You are creating a SQL Server Analysis Services (SSAS) cube. You need to create a time dimension. It must be linked to a measure group named Sales at the day granularity level. It must also be linked to a measure group named Salary at the month granularity level. What should you do?

A. Use role playing dimensions.
B. Use the Business Intelligence Wizard to define dimension intelligence.
C. Add a measure that uses the Count aggregate function to an existing measure group.
D. Add a measure that uses the DistinctCount aggregate function to an existing measure group.
E. Add a measure that uses the LastNonEmpty aggregate function. Use a regular relationship between the time dimension and the measure group.
F. Add a measure group that has one measure that uses the DistinctCount aggregate function.
G. Add a calculated measure based on an expression that counts members filtered by the Exists and NonEmpty functions.
H. Add a hidden measure that uses the Sum aggregate function. Add a calculated measure aggregating the measure along the time dimension.
I. Create several dimensions. Add each dimension to the cube.
J. Create a dimension. Then add a cube dimension and link it several times to the measure group.
K. Create a dimension. Create regular relationships between the cube dimension and the measure group. Configure the relationships to use different dimension attributes.
L. Create a dimension with one attribute hierarchy. Set the IsAggregatable property to False and then set the DefaultMember property. Use a regular relationship between the dimension and measure group.
M. Create a dimension with one attribute hierarchy. Set the IsAggregatable property to False and then set the DefaultMember property. Use a many-to-many relationship to link the dimension to the measure group.
N. Create a dimension with one attribute hierarchy. Set the ValueColumn property, set the IsAggregatable property to False, and then set the DefaultMember property. Configure the cube dimension so that it does not have a relationship with the measure group. Add a calculated measure that uses the MemberValue attribute property.
O. Create a new named calculation in the data source view to calculate a rolling sum. Add a measure that uses the Max aggregate function based on the named calculation.

Answer: K

Question: 30

You are creating a SQL Server Analysis Services (SSAS) multidimensional database. Users need a time dimension for:
•   Dates
•   Delivery dates
•   Ship dates
You need to implement the minimum number of required SSAS objects. What should you do?

A. Use role playing dimensions.
B. Use the Business Intelligence Wizard to define dimension intelligence.
C. Add a measure that uses the Count aggregate function to an existing measure group.
D. Add a measure that uses the DistinctCount aggregate function to an existing measure group.
E. Add a measure that uses the LastNonEmpty aggregate function. Use a regular relationship between the time dimension and the measure group.
F. Add a measure group that has one measure that uses the DistinctCount aggregate function.
G. Add a calculated measure based on an expression that counts members filtered by the Exists and NonEmpty functions.

H. Add a hidden measure that uses the Sum aggregate function. Add a calculated measure aggregating the measure along the time dimension.

I. Create several dimensions. Add each dimension to the cube.

J. Create a dimension. Then add a cube dimension and link it several times to the measure group.

K. Create a dimension. Create regular relationships between the cube dimension and the measure group. Configure the relationships to use different dimension attributes.

L. Create a dimension with one attribute hierarchy. Set the IsAggregatable property to False and then set the DefaultMember property. Use a regular relationship between the dimension and measure group.

M. Create a dimension with one attribute hierarchy. Set the IsAggregatable property to False and then set the DefaultMember property. Use a many-to-many relationship to link the dimension to the measure group.

N. Create a dimension with one attribute hierarchy. Set the ValueColumn property, set the IsAggregatable property to False, and then set the DefaultMember property. Configure the cube dimension so that it does not have a relationship with the measure group. Add a calculated measure that uses the MemberValue attribute property.

O. Create a new named calculation in the data source view to calculate a rolling sum. Add a measure that uses the Max aggregate function based on the named calculation.

Answer: A

Question: 31

You are designing a SQL Server Analysis Services (SSAS) cube. You need to create a measure to count unique customers. What should you do?

A. Use role playing dimensions.

B. Use the Business Intelligence Wizard to define dimension intelligence.

C. Add a measure that uses the Count aggregate function to an existing measure group.

D. Add a measure that uses the DistinctCount aggregate function to an existing measure group.

E. Add a measure that uses the LastNonEmpty aggregate function. Use a regular relationship between the time dimension and the measure group.

F. Add a measure group that has one measure that uses the DistinctCount aggregate function.

G. Add a calculated measure based on an expression that counts members filtered by the Exists and NonEmpty functions.

H. Add a hidden measure that uses the Sum aggregate function. Add a calculated measure aggregating the measure along the time dimension.

I. Create several dimensions. Add each dimension to the cube.

J. Create a dimension. Then add a cube dimension and link it several times to the measure group.

K. Create a dimension. Create regular relationships between the cube dimension and the measure group. Configure the relationships to use different dimension attributes.

L. Create a dimension with one attribute hierarchy. Set the IsAggregatable property to False and then set the DefaultMember property. Use a regular relationship between the dimension and measure group.

M. Create a dimension with one attribute hierarchy. Set the IsAggregatable property to False and then set the DefaultMember property. Use a many-to-many relationship to link the dimension to the measure group.

N. Create a dimension with one attribute hierarchy. Set the ValueColumn property, set the IsAggregatable property to False, and then set the DefaultMember property. Configure the cube dimension so that it does not have a relationship with the measure group. Add a calculated measure that uses the MemberValue attribute property.

O. Create a new named calculation in the data source view to calculate a rolling sum. Add a measure that uses the Max aggregate function based on the named calculation.

Answer: F

Question: 32

You administer a SQL Server Reporting Services (SSRS) instance in native mode. You need to assign a predefined role that meets the following requirements:
•   Members of the role must be able to update shared data sources.
•   Members of the role must not be able to consume reports or manage subscriptions.
•   The role must provide only the minimum permissions required.
Which role should you assign? (More than one answer choice may achieve the goal. Select the BEST answer.)

A. The Browser role
B. The Read and Process role
C. The Content Manager role
D. The Publisher role

Answer: D

Question: 33

DRAG DROP
You are designing a SQL Server Reporting Services (SSRS) solution. An existing report aggregates data from a SQL Server database in a chart. You need to use the chart in a new report and ensure that other users can use the chart in their 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.)

| In Report Builder, insert the report part into a new report. |
| In Power View, insert the report part into a new report. |
| Select the chart for publication as a report part and publish the report. |
| In Power View, open the report that contains the chart. |
| In Report Designer, insert the report part into a new report. |
| In Report Designer, open the report that contains the chart. |

Answer:

| In Report Builder, insert the report part into a new report. |
| In Power View, insert the report part into a new report. |

| In Report Designer, open the report that contains the chart. |
| In Power View, open the report that contains the chart. |
| Select the chart for publication as a report part and publish the report. |

| In Report Designer, insert the report part into a new report. |

Question: 34

You are designing a subscription strategy for a SQL Server Reporting Services (SSRS) report. You have an application that populates a table with user-specific subscription schedules and report formats. You need to ensure that users can receive reports by email according to their preferences. What should you do? (More than one answer choice may achieve the goal. Select the BEST answer.)

A. Create one data-driven subscription. Schedule the subscription to frequently retrieve user preferences.
B. Create a standard subscription for each subscription schedule.
C. Create a standard subscription for each record in the table.
D. Create a data-driven subscription for each record in the schedule table.

Answer: A

Question: 35

You are designing a strategy for an enterprise reporting solution that uses SQL Server Reporting Services (SSRS). Many of the SSRS reports will use common utilities and functions, including the following:
•   Report utility functions and business logic in code
•   Standardized report formatting properties such as fonts and colors for report branding
Formatting may change and new functions may be added as the reporting solution evolves. You need to create a strategy for deploying the formatting and code across the entire enterprise reporting solution. You must also ensure that reports can be easily updated to reflect formatting and function changes. What should you do? (More than one answer choice may achieve the goal. Select the BEST answer.)

A. Create an assembly that contains formatting properties and code. Deploy the assembly on the Reporting Server and reference the assembly from each report.
B. Build a web service that retrieves formatting properties and runs code. Call the web service through a report dataset.
C. Store the formatting properties and code in database objects. Use stored procedures to populate a default value for report parameters and map each parameter to a corresponding formatting property.
D. Create a report as a template. Apply standardized formatting to the template. Store code in the Code section of the template.

Answer: A

Question: 36

DRAG DROP
You are designing a dataset for a SQL Server Reporting Services (SSRS) report. The report includes the report items displayed in the following graphic.
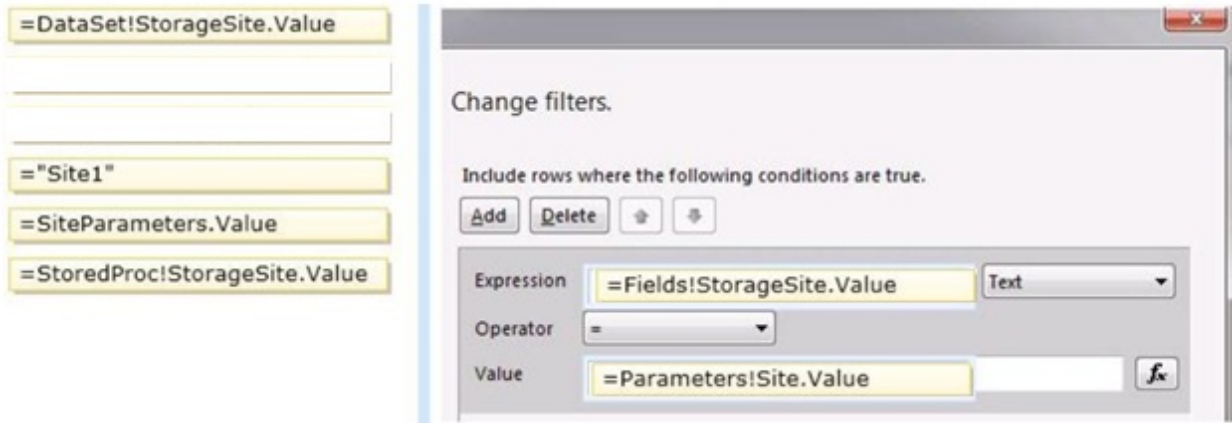
The dataset is sourced from a commonly used stored procedure in an inventory data mart hosted in a SQL Azure database. It returns the status for all products across all storage sites. The report must display data for the storage site that is selected by the Site report parameter. You cannot change the stored procedure code. You need to filter the dataset to use only data specific to the selected site. How should you configure the filter?

To answer, drag the appropriate expression or expressions to the correct location or locations in the answer area. (Answer choices may be used once, more than once, or not all.)

Answer:

=DataSet!StorageSite.Value

="Site1"

=SiteParameters.Value

=StoredProc!StorageSite.Value

Change filters.

Include rows where the following conditions are true.

Add   Delete   ⬆   ⬇

Expression	=Fields!StorageSite.Value	Text	▼
Operator	=	▼	
Value	=Parameters!Site.Value		fx

Question: 37

You are creating a Multidimensional Expressions (MDX) calculation for Projected Revenue in a cube. For Product A, Projected Revenue is defined as 150 percent of the Total Sales of the product. For all other products, Projected Revenue is defined as 110 percent of the Total Sales of the product. You need to calculate the Projected Revenue as efficiently as possible. Which calculation should you use? (More than one answer choice may achieve the goal. Select the BEST answer.)

```
○ A.   CREATE MEMBER CurrentCube.[Measures].[Projected Revenue]
       AS [Measures].[Total Sales] * 1.1;
       SCOPE ([Product].[Product Name].MEMBERS, [Measures].[Projected Revenue]);
         [Product].[Product Name].&[Product A] = [Measures].[Total Sales] * 1.5;
       END SCOPE;


○ B.   CREATE MEMBER CurrentCube.[Measures].[Projected Revenue]
       AS CASE WHEN [Product].[Product Name].CurrentMember.Name = "Product A"
       THEN [Measures].[Total Sales] * 1.5
       ELSE [Measures].[Total Sales] * 1.1 END


○ C.   CREATE MEMBER CurrentCube.[Measures].[Projected Revenue]
       AS [Measures].[Total Sales];
       SCOPE ([Product].[Product Name].MEMBERS, [Measures].[Projected Revenue]);
         [Measures].[Total Sales] * 1.1;
        IF [Product].[Product Name].CurrentMember.Name = "Product A"
          THEN [Measures].[Total Sales] * 1.5
        END IF;
       END SCOPE;


○ D.   CREATE MEMBER CurrentCube.[Measures].[Projected Revenue]
       AS [Measures].[Total Sales] * 1.1;
       SCOPE ([Product].[Product Name].&[Product A], [Measures].[Projected Revenue]);
         THIS = [Measures].[Total Sales] * 1.5;
       END SCOPE;
```

A. Option A
B. Option B
C. Option C
D. Option D

Answer: B

Question: 38

You are modifying a star schema data mart that feeds order data from a SQL Azure database into a SQL Server Analysis Services (SSAS) cube. The data mart contains two large tables that include flags and indicators for some orders. There are 100 different flag columns, each with 10 different indicator values. Some flags reuse indicators. The tables both have a granularity that matches the fact table.

A. Define the surrogate key as a BIGINT data type. Create a single fact dimension in each table for its flags and indicators.
B. Define the surrogate key as an INT data type. Combine the distinct flag/indicator combinations into a single dimension.
C. Define the surrogate key as an INT data type. Create a single fact dimension in each table for its flags and indicators.
D. Define the surrogate key as a BIGINT data type. Combine the distinct flag/indicator combinations into a single dimension.
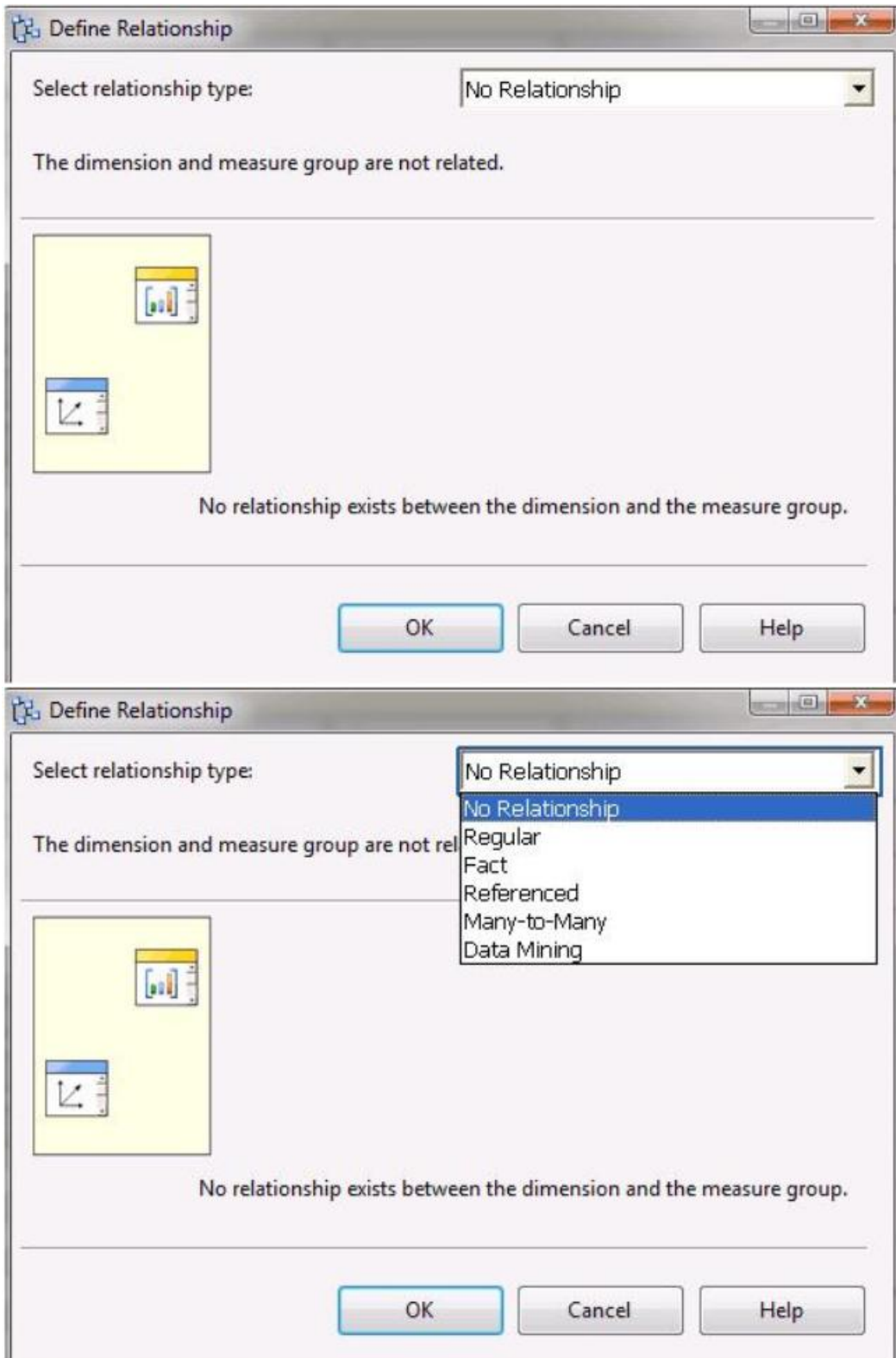
**Answer: B**

Question: 39

HOTSPOT
You are developing a SQL Server Analysis Services (SSAS) cube. A dimension named Category is based on the DimCategory table. A subset of the data source view is shown in the following graphic.
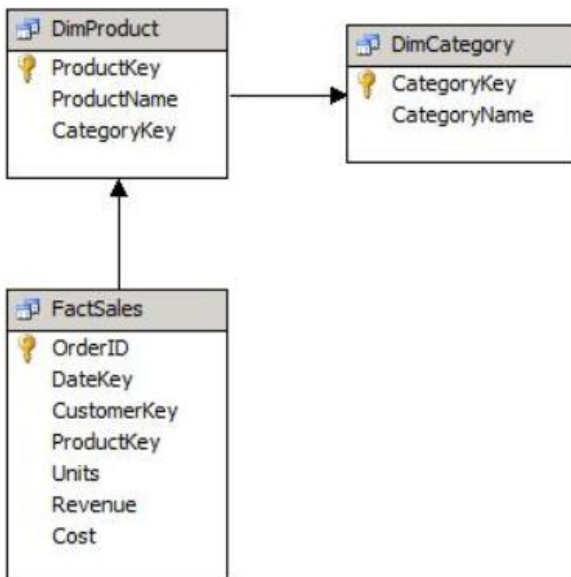
You need to relate the Category dimension to the Sales measure group. Which relationship type should you choose? To answer, select the appropriate option from the drop-down list in the dialog box.

Answer:
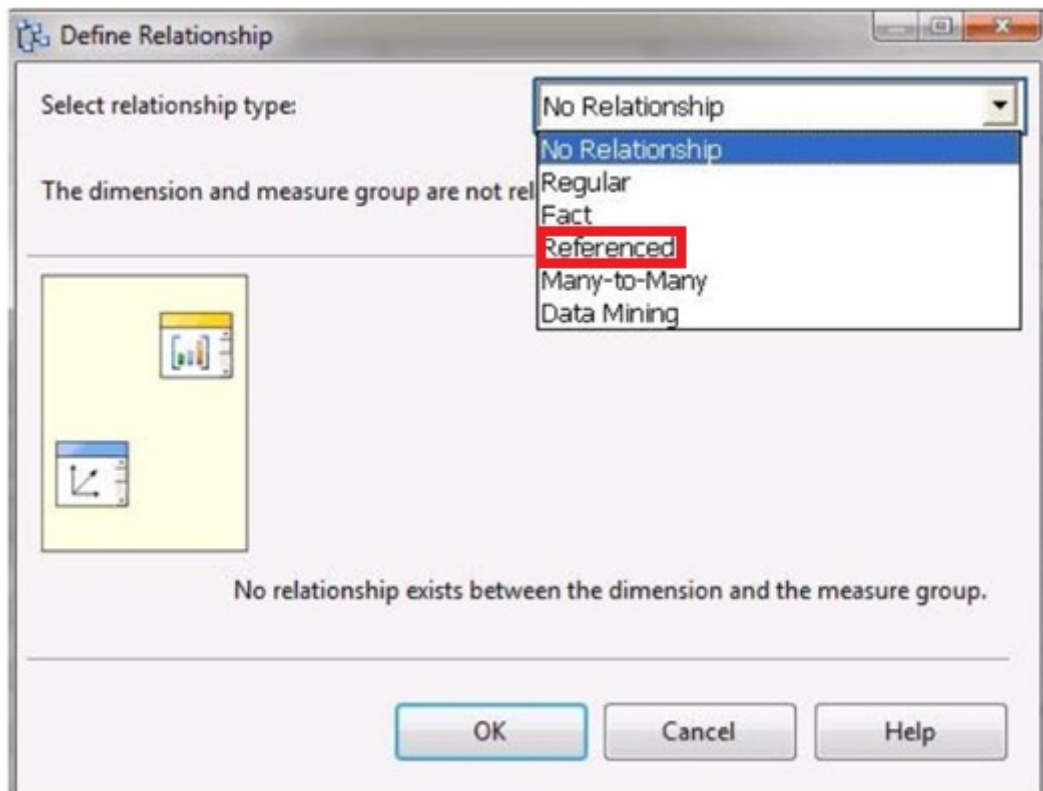
Question: 40

You are designing a SQL Server 2012 Integration Services (SSIS) deployment strategy. The production environment includes SSIS 2012 and SSIS 2008. The environment includes existing command shell scripts that invoke the dtutil command-line utility. You need to design a deployment strategy that supports existing deployment strategies and requires the minimum amount of effort. What should you do? (More than one answer choice may achieve the goal. Select the BEST answer.)

A. Use a package deployment model. Change the command shell scripts to reference the SQL Server 2012 path to dtutil.
B. Use a project deployment model. Use the Integration Services Deployment Wizard.
C. Use a project deployment model. Use an indirect configuration. Change the command shell scripts to reference the SQL Server 2012 path to dtutil.
D. Use a package deployment model. Use an indirect configuration. Use the Integration Services Deployment Wizard.

Answer: A

Case Study: 1
Tailspin Toys
Background
You are the business intelligence (BI) solutions architect for Tailspin Toys.
You produce solutions by using SQL Server 2012 Business Intelligence edition and Microsoft SharePoint Server 2010 Service Pack 1 (SP1) Enterprise edition.
Technical Background
Data Warehouse
The data warehouse is deployed on a SQL Server 2012 relational database. A subset of the data warehouse

schema is shown in the exhibit. (Click the Exhibit button.)

Data Warehouse Schema
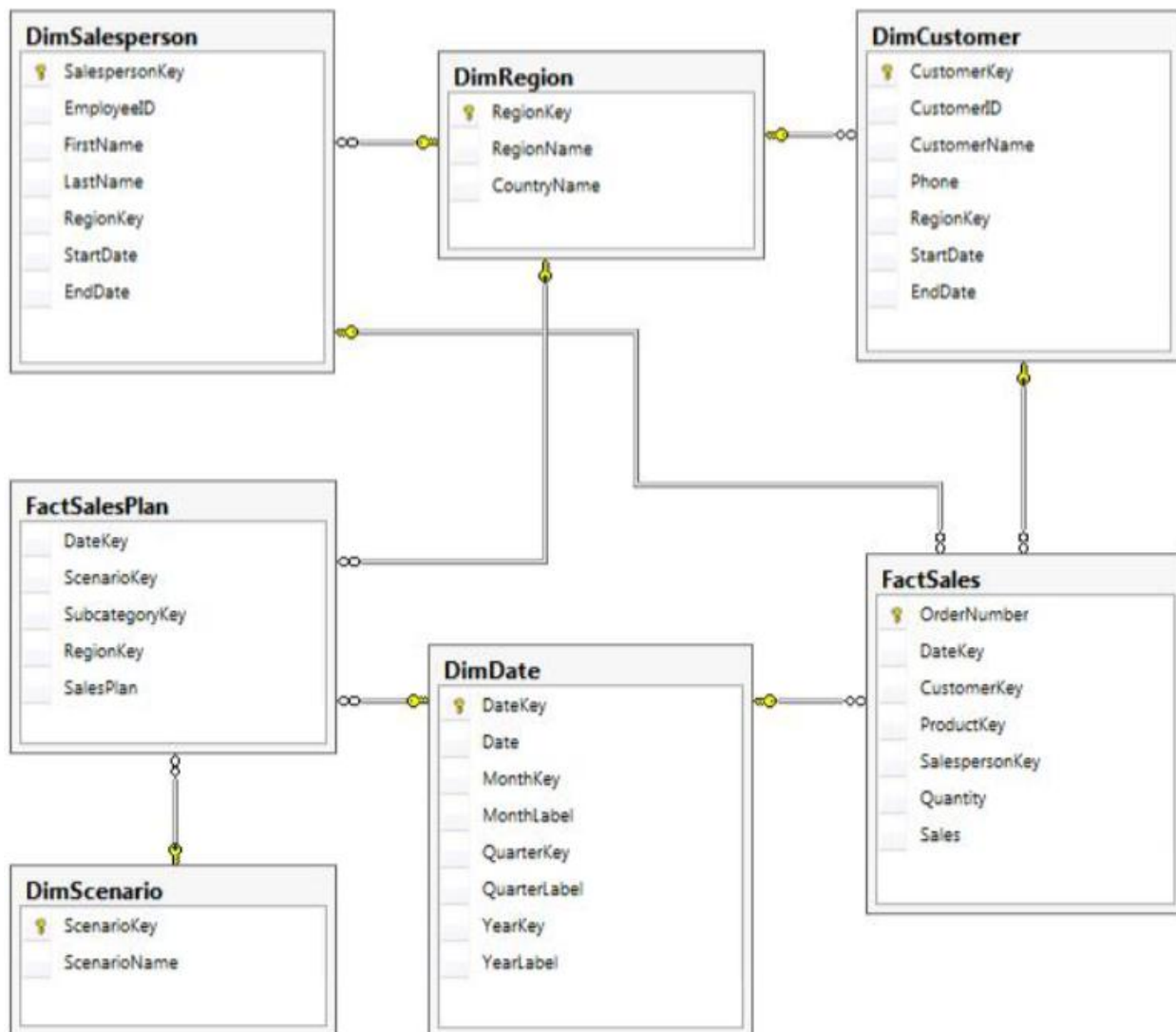
The schema shown does not include the table design for the product dimension. The schema includes the following tables:

•	The FactSalesPlan table stores data at month-level granularity. There are two scenarios: Forecast and Budget.

•	The DimDate table stores a record for each date from the beginning of the company's operations through to the end of the next year.

•	The DimRegion table stores a record for each sales region, classified by country. Sales regions do not relocate to different countries.

•	The DimCustomer table stores a record for each customer.

•	The DimSalesperson table stores a record for each salesperson. If a salesperson relocates to a different region, a new salesperson record is created to support historically accurate reporting. A new salesperson record is not created if a salesperson's name changes.

•	The DimScenario table stores one record for each of the two planning scenarios.

All relationships between tables are enforced by foreign keys. The schema design is as denormalized as possible for simplicity and accessibility. One exception to this is the DimRegion table, which is referenced

by two dimension tables. Each product is classified by a category and subcategory and is uniquely identified in the source database by using its stock-keeping unit (SKU). A new SKU is assigned to a product if its size changes. Products are never assigned to a different subcategory, and subcategories are never assigned to a different category. Extract, transform, load (ETL) processes populate the data warehouse every 24 hours.
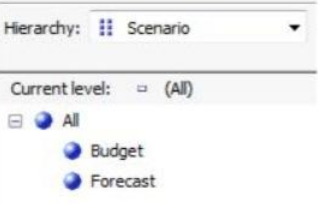
ETL Processes

One SQL Server Integration Services (SSIS) package is designed and developed to populate each data warehouse table. The primary source of data is extracted from a SQL Azure database. Secondary data sources include a Microsoft Dynamics CRM 2011 on-premises database. ETL developers develop packages by using the SSIS project deployment model. The ETL developers are responsible for testing the packages and producing a deployment file. The deployment file is given to the ETL administrators. The ETL administrators belong to a Windows security group named SSISOwners that maps to a SQL Server login named SSISOwners.

Data Models

The IT department has developed and manages two SQL Server Analysis Services (SSAS) BI Semantic Model (BISM) projects: Sales Reporting and Sales Analysis. The Sales Reporting database has been developed as a tabular project. The Sales Analysis database has been developed as a multidimensional project. Business analysts use PowerPivot for Microsoft Excel to produce self-managed data models based directly on the data warehouse or the corporate data models, and publish the PowerPivot workbooks to a SharePoint site. The sole purpose of the Sales Reporting database is to support business user reporting and ad-hoc analysis by using Power View. The database is configured for DirectQuery mode and all model queries result in SSAS querying the data warehouse. The database is based on the entire data warehouse. The Sales Analysis database consists of a single SSAS cube named Sales. The Sales cube has been developed to support sales monitorinq, analvsis, and planning. The Sales cube metadata is shown in the following graphic.
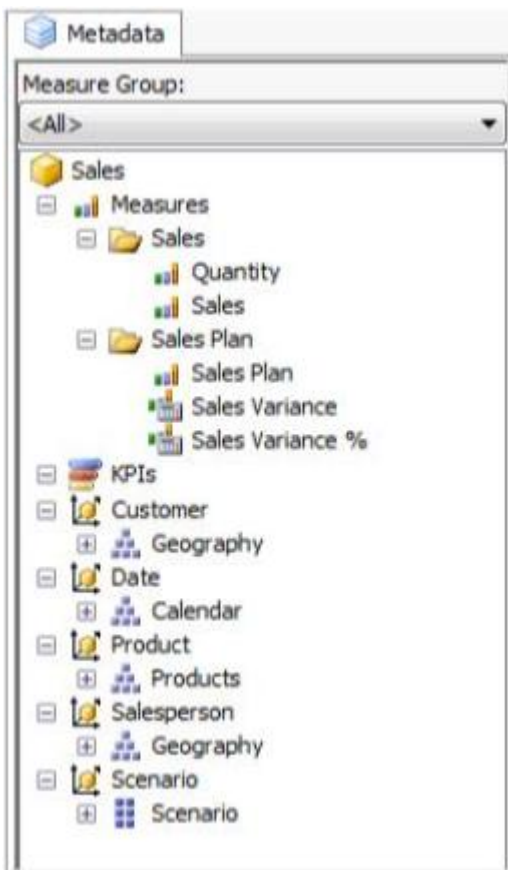
Details of specific Sales cube dimensions are described in the following table.

Dimension	Hierarchies and levels	Additional information
Date	Calendar • Year • Quarter • Month • Date	All attributes are hidden. The appropriate dimension and attribute Type properties have been configured.
Salesperson	Geography • Country • Region • Salesperson	Based on the DimSalesperson and DimRegion tables. All attributes are hidden.
Scenario	Scenario (attribute hierarchy) • Scenario	Hierarchy: Scenario Current level: (All) All Budget Forecast

The Sales cube dimension usage is shown in the following graphic.

Dimensions	Sales	Sales Plan
Date	Date	Month
Customer	Customer	
Salesperson	Salesperson	Region
Product	Product	Subcategory
Scenario		Scenario

The Sales measure group is based on the FactSales table. The Sales Plan measure group is based on the FactSalesPlan table. The Sales Plan measure group has been configured with a multidimensional OLAP (MOLAP) writeback partition. Both measure groups use MOLAP partitions, and aggregation designs are assigned to all partitions. Because the volumes of data in the data warehouse are large, an incremental processing strategy has been implemented.

The Sales Variance calculated member is computed by subtracting the Sales Plan forecast amount from Sales. The Sales Variance % calculated member is computed by dividing Sales Variance by Sales. The cube's Multidimensional Expressions (MDX) script does not set any color properties.

Analysis and Reporting

SQL Server Reporting Services (SSRS) has been configured in SharePoint integrated mode.

A business analyst has created a PowerPivot workbook named Manufacturing Performance that integrates data from the data warehouse and manufacturing data from an operational database hosted in SQL Azure. The workbook has been published in a PowerPivot Gallery library in SharePoint Server and does not contain any reports. The analyst has scheduled daily data refresh from the SQL Azure database. Several SSRS

reports are based on the PowerPivot workbook, and all reports are configured with a report execution mode to run on demand. Recently users have noticed that data in the PowerPivot workbooks published to SharePoint Server is not being refreshed. The SharePoint administrator has identified that the Secure Store Service target application used by the PowerPivot unattended data refresh account has been deleted.

Business Requirements

ETL Processes

All ETL administrators must have full privileges to administer and monitor the SSIS catalog, and to import and manage projects.

Data Models

The budget and forecast values must never be accumulated when querying the Sales cube. Queries should return the forecast sales values by default. Business users have requested that a single field named SalespersonName be made available to report the full name of the salesperson in the Sales Reporting data model. Writeback is used to initialize the budget sales values for a future year and is based on a weighted allocation of the sales achieved in the previous year.

Analysis and Reporting

Reports based on the Manufacturing Performance PowerPivot workbook must deliver data that is no more than one hour old. Management has requested a new report named Regional Sales. This report must be based on the Sales cube and must allow users to filter by a specific year and present a grid with every region on the columns and the Products hierarchy on the rows. The hierarchy must initially be collapsed and allow the user to drill down through the hierarchy to analyze sales. Additionally, sales values that are less than $5000 must be highlighted in red.

Technical Requirements

Data Warehouse

Business logic in the form of calculations should be defined in the data warehouse to ensure consistency and availability to all data modeling experiences. The schema design should remain as denormalized as possible and should not include unnecessary columns. The schema design must be extended to include the product dimension data.

ETL Processes

Package executions must log only data flow component phases and errors.

Data Models

Processing time for all data models must be minimized. A key performance indicator (KPI) must be added to the Sales cube to monitor sales performance. The KPI trend must use the Standard Arrow indicator to display improving, static, or deteriorating Sales Variance °/o values compared to the previous time period.

Analysis and Reporting

IT developers must create a library of SSRS reports based on the Sales Reporting database. A shared SSRS data source named Sales Reporting must be created in a SharePoint data connections library.

Question: 1

DRAG DROP
You need to extend the schema design to store the product dimension data. Which design should you use? To answer, drag the appropriate table or tables to the correct location or locations in the answer area. (Fill from left to right. Answer choices may be used once, more than once, or not all.)

DimCategory
- CategoryKey
- CategoryName

DimSubcategory
- SubcategoryKey
- SubcategoryName
- CategoryName

DimProduct
- ProductKey
- ProductSKU
- ProductName
- Size
- SubcategoryKey
- SubcategoryName
- CategoryName

DimProduct
- ProductKey
- ProductSKU
- ProductName
- Size
- SubcategoryKey
- SubcategoryName
- CategoryName
- StartDate
- EndDate

DimSubcategory
- SubcategoryKey
- SubcategoryName
- CategoryKey

DimProduct
- ProductKey
- ProductSKU
- ProductName
- Size
- SubcategoryKey

DimProduct
- ProductKey
- ProductSKU
- ProductName
- Size
- SubcategoryKey
- StartDate
- EndDate

Table 1

Table 2

Answer:

DimCategory
- 🔑 CategoryKey
- CategoryName

DimProduct
- 🔑 ProductKey
- ProductSKU
- ProductName
- Size
- SubcategoryKey
- SubcategoryName
- CategoryName

DimProduct
- 🔑 ProductKey
- ProductSKU
- ProductName
- Size
- SubcategoryKey
- SubcategoryName
- CategoryName
- StartDate
- EndDate

DimSubcategory
- 🔑 SubcategoryKey
- SubcategoryName
- CategoryKey

DimProduct
- 🔑 ProductKey
- ProductSKU
- ProductName
- Size
- SubcategoryKey
- StartDate
- EndDate

DimSubcategory
- 🔑 SubcategoryKey
- SubcategoryName
- CategoryName

DimProduct
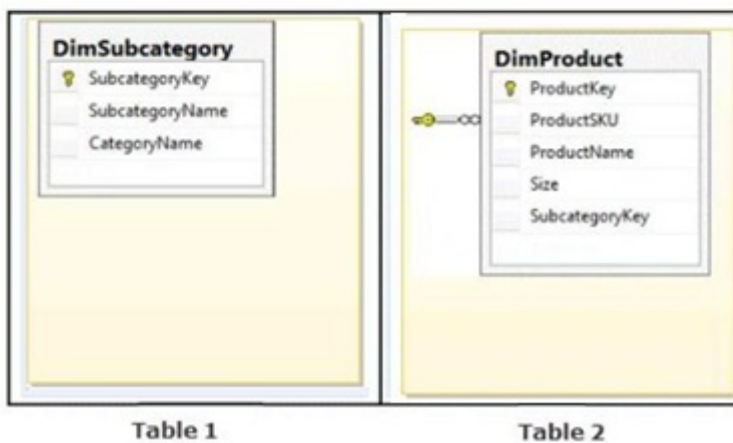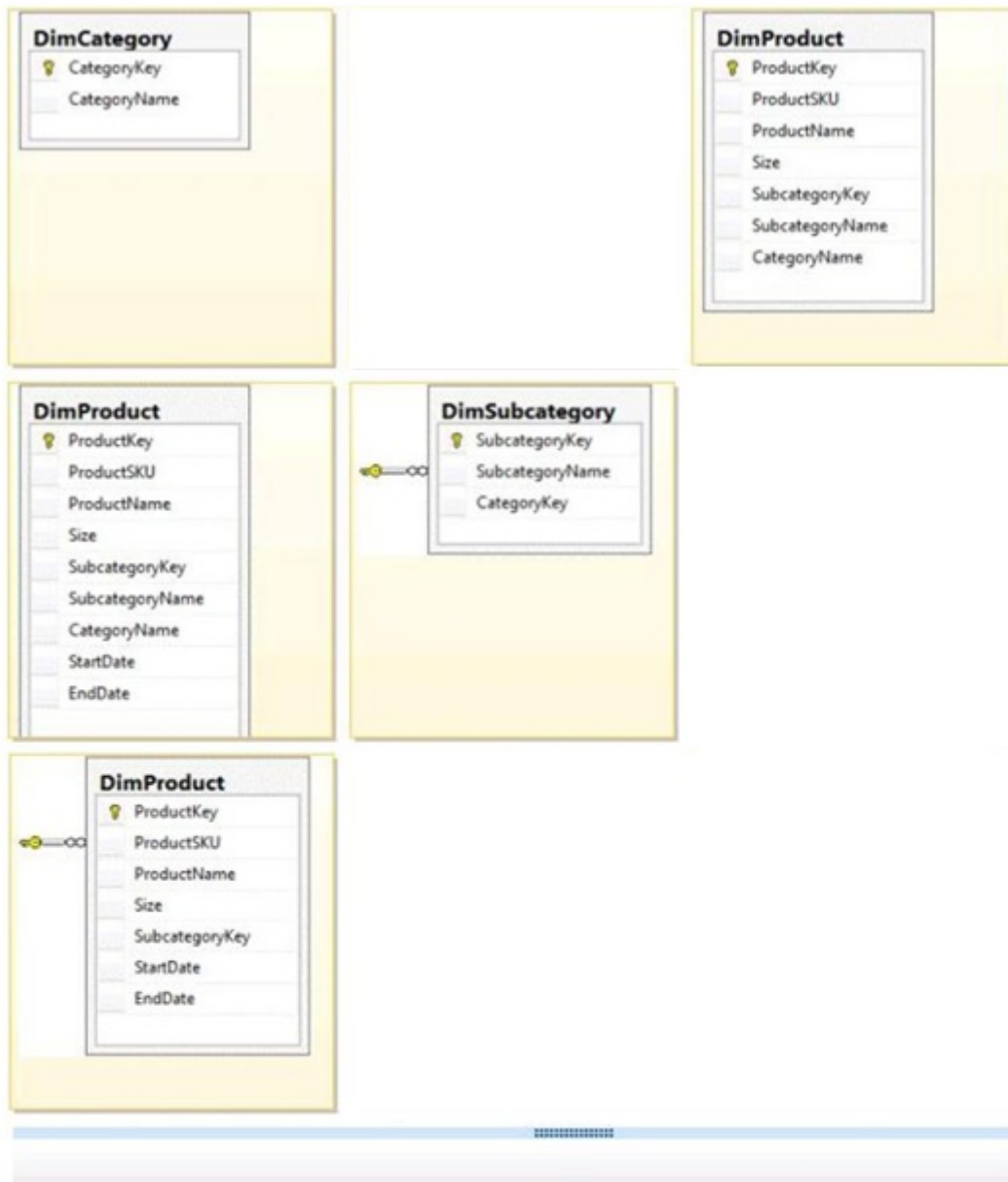- 🔑 ProductKey
- ProductSKU
- ProductName
- Size
- SubcategoryKey

Table 1   Table 2

Question: 2

You need to configure the Scenario attribute to ensure that business users appropriately query the Sales Plan measure. What should you do? (Each correct answer presents part of the solution. Choose all that apply.)

A. Set the AttributeHierarchyVisible property to False.
B. Set the Usage property to Parent.
C. Set the IsAggregatable property to False.
D. Set the RootMemberIf property to ParentIsBlank.
E. Set the MembersWithData property to NonLeafDataHidden.
F. Set the DefaultMember property to the Forecast member.

Answer: B, C

Question: 3

You need to grant appropriate permissions to the SSISOwners SQL Server login. What should you do?

A. Map the login to the SSISDB database. Assign the user to the db_owner role.
B. Map the login to the msdb database. Assign the user to the db_owner role.
C. Map the login to the msdb database. Assign the user to the db_ssisadmin role.
D. Map the login to the SSISDB database. Assign the user to the ssis_admin role.
E. Map the login to the SSISDB database. Assign the user to the db_ssisadmin role.
F. Map the login to the msdb database. Assign the user to the ssis_admin role.

Answer: D

Question: 4

You need to define the trend calculation for the sales performance KPI. Which KPI trend MDX expression should you use?

A.
```
CASE
    WHEN [Sales Variance %] > ([Sales Variance %], [Date].[Calendar].PrevMember) THEN -1
    WHEN [Sales Variance %] = ([Sales Variance %], [Date].[Calendar].PrevMember) THEN 0
    ELSE 1
END
```

B.
```
IIF([Sales Variance %] > ([Sales Variance %], [Date].[Calendar].PrevMember), 1, 0)
```

C.
```
IIF([Sales Variance %] > ([Sales Variance %], [Date].[Calendar].PrevMember), 0, 1)
```

D.
```
CASE
    WHEN [Sales Variance %] > ([Sales Variance %], [Date].[Calendar].PrevMember) THEN 1
    WHEN [Sales Variance %] = ([Sales Variance %], [Date].[Calendar].PrevMember) THEN 0
    ELSE -1
END
```

A. Option A
B. Option B
C. Option C
D. Option D

Answer: D

Question: 5

DRAG DROP
You need to configure the attribute relationship types for the Salesperson dimension. Which configuration should you use?
To answer, drag the appropriate pair of attributes and attribute relationships from the list to the correct location or locations in the answer area. (Answer choices may be used once, more than once, or not all.)

Answer:

Case Study: 2
Contoso, Ltd.
General Background
You are the SQL Server Administrator for Contoso, Ltd. You have been tasked with upgrading all existing SQL Server instances to SQL Server 2012.

Technical Background

The corporate environment includes an Active Directory Domain Services (AD DS) domain named contoso.com. The forest and domain levels are set to Windows Server 2008. All default containers are used for computer and user accounts. All servers run Windows Server 2008 R2 Service Pack 1 (SP1). All client computers run Windows 7 Professional SP1. All servers and client computers are members of the contoso.com domain.

The current SQL Server environment consists of a single instance failover cluster of SQL Server 2008 R2 Analysis Services (SSAS). The virtual server name of the cluster is SSASCIuster. The cluster includes two nodes: Node1 and Node2. Node1 is currently the active node. In anticipation of the upgrade, the prerequisites and shared components have been upgraded on both nodes of the cluster, and each node was rebooted during a weekly maintenance window.

A single-server deployment of SQL Server 2008 R2 Reporting Services (SSRS) in native mode is installed on a server named SSRS01. The Reporting Server service is configured to use a domain service account.

SSRS01 hosts reports that access the SSAS databases for sales data as well as modeling data for the Research team. SSRS01 contains 94 reports used by the organization. These reports are generated continually during business hours. Users report that report subscriptions on SSRS01 are not being delivered. You run the reports on demand from Report Manager and find that the reports render as expected.

A new server named SSRS02 has been joined to the domain. SSRS02 will host a single-server deployment of SSRS so that snapshots of critical reports are accessible during the upgrade. The server configuration is shown in the exhibit. (Click the Exhibit button.)

Server Configuration

contoso.com   SMTP01

SSASCluster

Node1   Node2   SSRS01

SSRS02   SSAS01
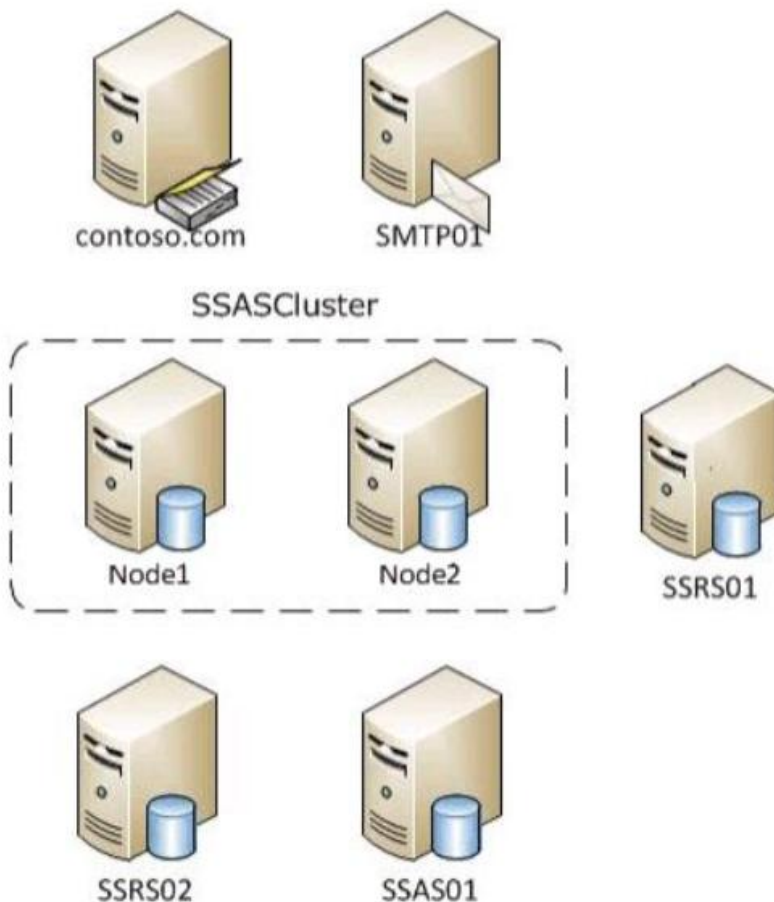
The production system includes three SSAS databases that are described in the following table.

Database name	Size
Customer Sales	350 MB
Manufacturing	1.2 GB
Research	620 MB

All SSAS databases are backed up once a day, and backups are stored offsite.

Business Requirements

After the upgrade users must be able to perform the following tasks:

•   Ad-hoc analysis of data in the SSAS databases by using the Microsoft Excel PivotTable client.

•   Daily operational analysis by executing a custom application that uses ADOMD.NET and existing Multidimensional Expressions (MDX) queries.

The detailed data must be stored in the model.

Technical Requirements

You need to minimize downtime during the SSASCIuster upgrade. The upgrade must minimize user intervention and administrative effort. The upgrade to SQL Server 2012 must maximize the use of all existing servers, require the least amount of administrative effort, and ensure that the SSAS databases are operational as soon as possible. You must implement the highest level of domain security for client computers connecting to SSRS01. The SSRS instance on SSRS01 must use Kerberos delegation to connect to the SSAS databases. Email notification for SSRS01 has not been previously configured. Email notification must be configured to use the SMTP server SMTP01 with a From address of reports@contoso.com. Report distribution must be secured by using SSL and must be limited to the contoso.com domain.

You have the following requirements for SSRS02:

• Replicate the SSRS01 configuration.
• Ensure that all current reports are available on SSRS02.
• Minimize the performance impact on SSRS01.

In preparation for the upgrade, the SSRS-related components have been installed on the new SSRS02 server by using the Reporting Services file-only installation mode. The Reporting Services databases have been restored from SSRS01 and configured appropriately.

You must design a strategy to recover the SSRS instance on SSRS01 in the event of a system failure. The strategy must ensure that SSRS can be recovered in the minimal amount of time and that reports are available as soon as possible. Only functional components must be recovered. SSRS02 is the recovery server and is running the same version of SSRS as SSRS01. A full backup of the SSRS databases on SSRS01 is performed nightly. The report server configuration files, custom assemblies, and extensions on SSRS02 are manually synchronized with SSRS01.

Prior to implementing the upgrade to SQL Server 2012, you must back up all existing SSAS databases. The backup must include only the partitioning, metadata, and aggregations to minimize the processing time required when restoring the databases. You must minimize processing time and the amount of disk space used by the backups.

Before upgrading SSAS on the SSASCIuster, all existing databases must be moved to a temporary staging server named SSAS01 that hosts a default instance of SQL Server 2012 Analysis Services. This server will be used for testing client applications connecting to SSAS 2012, and as a disaster recovery platform during the upgrade. You must move the databases by using the least amount of administrative effort and minimize downtime.

All SSAS databases other than the Research database must be converted to tabular BI Semantic Models (BISMs) as part of the upgrade to SSAS 2012. The Research team must have access to the Research database for modeling throughout the upgrade. To facilitate this, you detach the Research database and attach it to SSAS01.

While testing the Research database on SSAS01, you increase the compatibility level to 1100. You then discover a compatibility issue with the application. You must roll back the compatibility level of the database to 1050 and retest.

After completing the upgrade, you must do the following:

1. Design a role and assign an MDX expression to the Allowed member set property of the Customer dimension to allow sales representatives to browse only members of the Customer dimension that are located in their sales regions. Use the sales representatives1 logins and minimize impact on performance.

2. Deploy a data model to allow the ad-hoc analysis of data. The data model must be cached and source data from an OData feed.

Question: 1

You need to re-establish subscriptions on SSRS01. What should you do?

A. Restore the ReportServer database.
B. Start the SQL Server Agent on SSRS01.
C. Use the SQL Server Configuration Manager to reset the SQL Service account credentials.
D. Restore the ReportServerTempDB database.

Answer: B

Question: 2

You need to use SQL Server Management Studio (SSMS) to make the SSAS databases available for application testing. What should you do?

A. Restore the SSAS databases from the latest backup to SSAS01.
B. Use the Import/Export Wizard to copy the databases from the production server to the development server.
C. Script the databases as a Create script to a new window and then execute the script on SSAS01.
D. Detach the SSAS databases from the SSASCIuster, and then attach them to SSAS01.

Answer: A

Question: 3

You need to configure security for the SSRS instance on SSRS01 to connect to SSAS and minimize downtime. What should you do? (Each correct answer presents part of the solution. Choose all that apply.)

A. Register a service principal name for the Report Server service.
B. Configure SSRS01 to use the Custom authentication type.
C. Configure SSRS01 to use the Negotiate authentication type.
D. Register a service principal name for the Analysis Services service.
E. Restart the IIS service.

Answer: C, D, E

Question: 4

You need to perform the pre-upgrade database backup operation by using SQL Server Management Studio (SSMS). How should you configure the backup options?

A. Select the Apply compression check box. Select the Encrypt backup file check box and supply a password.
B. Clear the Apply compression check box. Clear the Encrypt backup file check box.
C. Select the Apply compression check box. Clear the Encrypt backup file check box.
D. Clear the Apply compression check box. Select the Encrypt backup file check box and supply a password.

Answer: C

Question: 5

You need to develop a BISM that meets the business requirements for ad-hoc and daily operational analysis. You must minimize development effort. Which development approach and mode should you use?

A. Develop a tabular project and configure the model with the DirectQuery mode setting on and the project query mode set to In-Memory with DirectQuery.
B. Develop a multidimensional project and configure the cube to use hybrid OLAP (HOLAP) storage mode.
C. Develop a multidimensional project and configure the model with the DirectQuery mode setting off.
D. Develop a tabular project and configure the model with the DirectQuery mode setting on and the project query mode set to DirectQuery.

Answer: A

Question: 6

You need to re-establish subscriptions on SSRS01. What should you do?

A. Manually failover the active node.
B. Install prerequisites and upgrade shared components on Node1 and Node2.
C. Generate a SQL Server 2012 configuration file by running the SQL Server Setup executable.
D. Upgrade Node1 by using the SQL Server 2012 Upgrade Wizard.

Answer: A

Question: 7

You need to implement the Customer Sales and Manufacturing data models. What should you do? (Each correct answer presents a partial solution. Choose all that apply.)

A. Use SQL Server Integration Services (SSIS) to copy the database design to the SSAS instance, and specify tabular mode as the destination.
B. Use SQL Server Data Tools (SSDT) to redevelop and deploy the projects.
C. Use the Database Synchronization Wizard to upgrade the database to tabular mode.
D. Use the current SSAS instance.
E. Install a new instance of SSAS in tabular mode.

Answer: B, C

Case Study: 3
Data Architect
You are a Data Architect for a company that uses SQL Server 2012 Enterprise edition. You have been tasked with designing a data warehouse that uses the company's financial database as the data source. From the data warehouse, you will develop a cube to simplify the creation of accurate financial reports and related data analysis.
**Background**

You will utilize the following three servers:

•   ServerA runs SQL Server Database Engine. ServerA is a production server and also hosts the financial database.

•   ServerB runs SQL Server Database Engine, SQL Server Analysis Services (SSAS) in multidimensional mode, SQL Server Integration Services (SSIS), and SQL Server Reporting Services (SSRS).

•   ServerC runs SSAS in multidimensional mode.

The financial database is used by a third-party application and the table structures cannot be modified. The relevant tables in the financial database are shown in the exhibit. (Click the Exhibit button.)

Financial Database tables
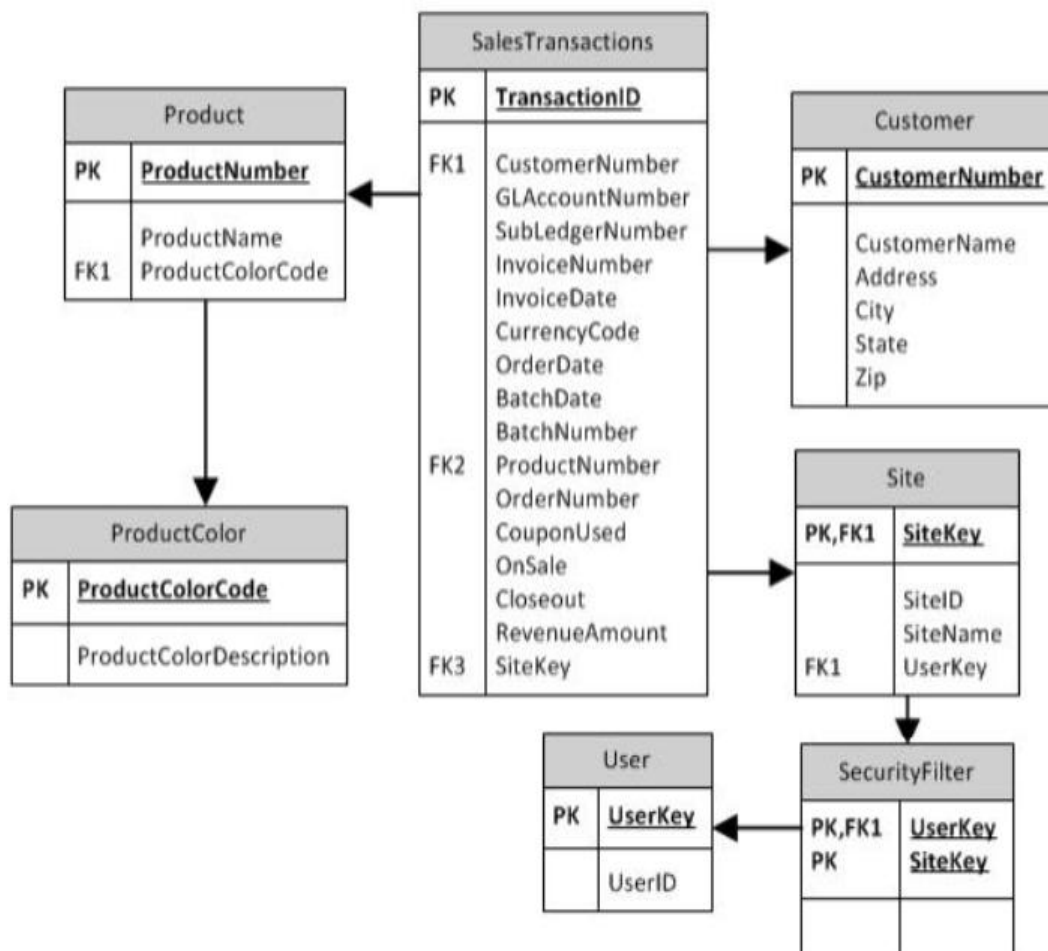
The SalesTransactions table is 500 GB and is anticipated to grow to 2 TB. The table is partitioned by month. It contains only the last five years of financial data. The CouponUsed, OnSale, and Closeout columns contain only the values Yes or No. Each of the other tables is less than 10 MB and has only one partition. The SecurityFilter table specifies the sites to which each user has access.

Business Requirements

The extract, transform, load (ETL) process that updates the data warehouse must run daily between 8:00 P.M. and 5:00 A.M. so that it doesn't impact the performance of ServerA during business hours. The cube data must be available by 8:00 A.M.

The cube must meet the following business requirements:

•   Ensure that reports display the most current information available.

• Allow fast access to support ad-hoc reports and data analysis.

Business Analysts will access the data warehouse tables directly, and will access the cube by using SSRS, Microsoft Excel, and Microsoft SharePoint Server 2010 PerformancePoint Services. These tools will access only the cube and not the data warehouse.

Technical Requirements

SSIS solutions must be deployed by using the project deployment model.

You must develop the data warehouse and store the cube on ServerB. When the number of concurrent SSAS users on ServerB reaches a specific number, you must scale out SSAS to ServerC and meet following requirements:

• Maintain copies of the cube on ServerB and ServerC.

• Ensure that the cube is always available on both servers.

• Minimize query response time.

• The cube must meet the following technical requirements:

• The cube must be processed by using an SSIS package.

• The cube must contain the prior day's data up to 8:00 P.M. but does not need to contain same-day data.

• The cube must include aggregation designs when it is initially deployed.

• A product dimension must be added to the cube. It will contain a hierarchy comprised of product name and product color.

Because of the large size of the SalesTransactions table, the cube must store only aggregations the data warehouse must store the detailed data. Both the data warehouse and the cube must minimize disk space usage.

As the cube size increases, you must plan to scale out to additional servers to minimize processing time.

The data warehouse must use a star schema design. The table design must be as denormalized as possible.

The history of changes to the Customer table must be tracked in the data warehouse. The cube must use the data warehouse as its only data source.

Security settings on the data warehouse and the cube must ensure that queries against the SalesTransactions table return only records from the sites to which the current user has access.

The ETL process must consist of multiple SSIS packages developed in a single project by using the least amount of effort. The SSIS packages must use a database connection string that is set at execution time to connect to the financial database. All data in the data warehouse must be loaded by the SSIS packages.

You must create a Package Activity report that meets the following requirements:

• Track SSIS package execution data (including package name, status, start time, end time, duration, and rows processed).

• Use the least amount of development effort.

Question: 1

You need to select the appropriate storage settings for the cube. Which settings should you choose?

A. Hybrid OLAP (HOLAP) with proactive caching disabled
B. Multidimensional OLAP (MOLAP) with proactive caching disabled
C. Multidimensional OLAP (MOLAP) with proactive caching enabled and a rebuild interval of 24 hours
D. Relational OLAP (ROLAP) with proactive caching disabled

Answer: A

Question: 2

You need to implement the aggregation designs for the cube. What should you do?

A. Use the Aggregation Design Wizard.
B. Implement cache warming in SSAS via an SSIS package.
C. Use the Usage-Based Optimization Wizard.
D. Partition the cube by month.

Answer: A

Question: 3

You need to design a cube partitioning strategy to be implemented as the cube size increases. What should you do?

A. Use hybrid OLAP (HOLAP) on all local partitions.
B. Use multidimensional OLAP (MOLAP) on all local partitions.
C. Implement daily local partitions.
D. Implement monthly remote partitions.

Answer: D

Question: 4

You need to implement security in the cube to limit the sites visible to each user. What should you do?

A. Create a view on the SalesTransactions table that uses the SecurityFilter and User table data to limit the sites for each user.
B. Create an SSAS server role for each user and assign the sites each user can access to his or her server role.
C. Create an SSAS database role and define a Multidimensional Expressions (MDX) calculation to implement dynamic dimension security.
D. Create an SSAS database role in the cube for each user and assign the sites each user can access to his or her database role.

Answer: C

Question: 5

You need to scale out SSAS. What should you do?

A. Back up the cube on ServerB and restore it on ServerC each day.
B. Process the cube on both ServerB and ServerC each day.
C. Create an empty cube on ServerC and link to the objects in the cube on ServerB.
D. Synchronize the cube from ServerB to ServerC each day.

Answer: D

Question: 6

You need to implement the aggregation designs for the cube. What should you do?

A. Use the Aggregation Design Wizard.
B. Use the CREATE CACHE statement.
C. Create relational indexes on the source tables.
D. Use the Usage-Based Optimization Wizard.

Answer: A

Question: 7

You need to restrict access to data in the tables in the data warehouse. What should you do?

A. Configure application roles.
B. Configure column-level permissions.
C. Configure database roles.
D. Create views and grant permissions to the views.

Answer: D

Question: 8

You need to select the appropriate storage settings for the cube. Which settings should you choose?

A. Multidimensional OLAP (MOLAP) with proactive caching enabled and a rebuild interval of 24 hours
B. Relational OLAP (ROLAP) with proactive caching enabled
C. Hybrid OLAP (HOLAP) with proactive caching disabled
D. Hybrid OLAP (HOLAP) with proactive caching enabled

Answer: C