**Question 1:**

This is a case study. The case study presents a scenario with an overview, data sources, issues, and requirements. You can read all the information but you can also read the questions first and then have a look at the requirements to find the right solution.

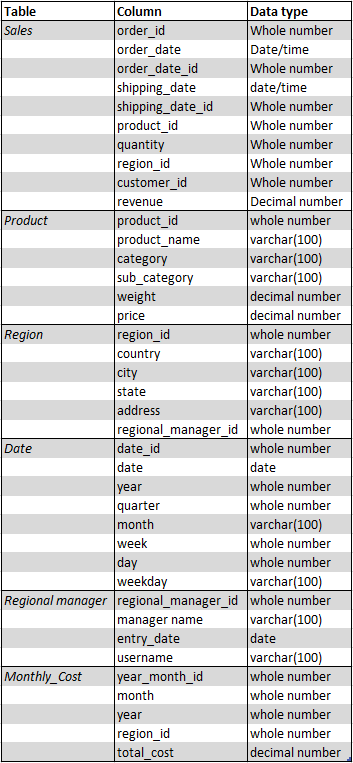
There will be multiple questions for each case study

**Overview:**

You are working as data analyst for Dataline Ltd. This is a company that produces different types of products. In the company are multiple employees that prepare monthly finance reports. These reports are built in Microsoft Excel and include profit analysis for each category, revenue forecasts for the next months and more.

**Data sources:**

The data comes from different tables such as csv files and tables in a database.



The date\_id column in the Date table has the format yyyymmdd.

The year\_month\_id column in the Monthly\_Cost table has the format yyyymm.

**Issues:**

The company is concerned with null values and the Products table.

**Requirements:**

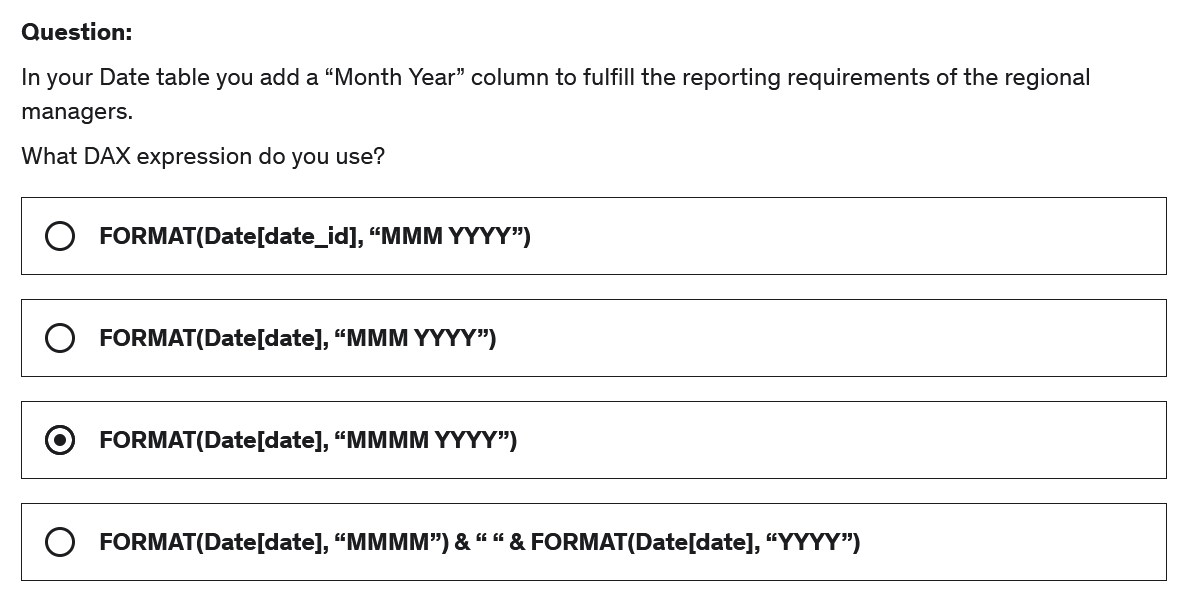
~ The top-level managers need to be able to see a chart with the total sales by region. They should be able to see all sales data of all 23 cities.

~Regional managers should only be allowed to see the data of their region.

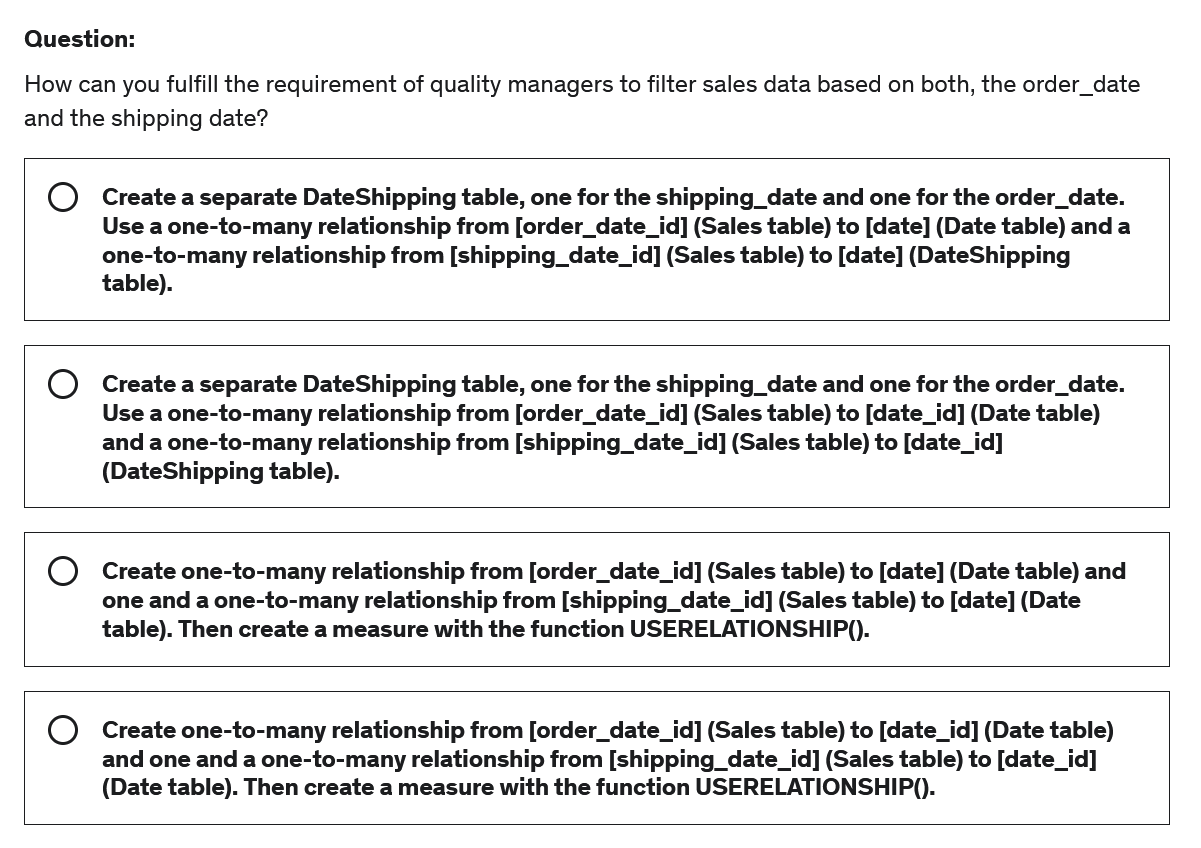
~Regional managers need to see the number of sales in a table with the months in the following format “January 2022”.

~Financial managers need to see the monthly sales revenue and monthly costs.

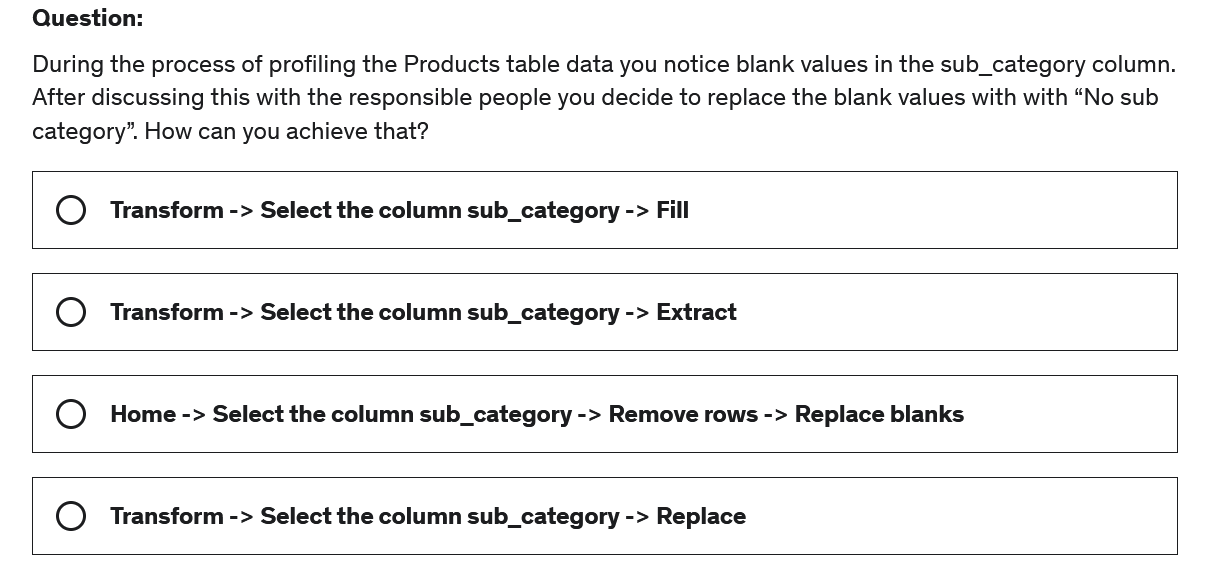
~ Quality managers need to be able to filter the data based on the shipping\_date as well as the order\_date.



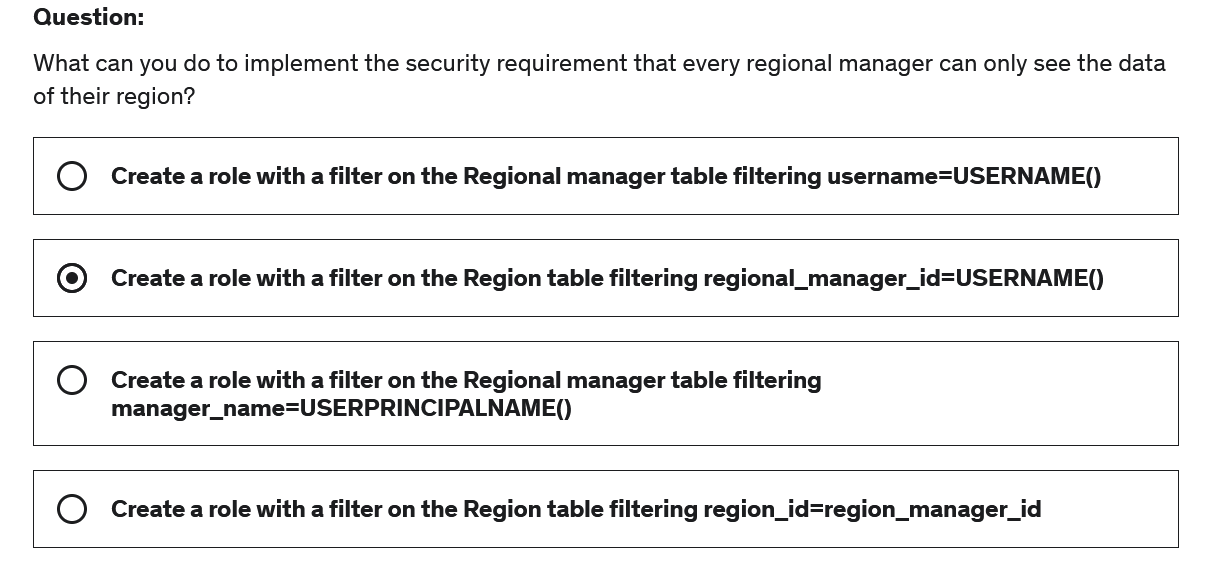
Question 2



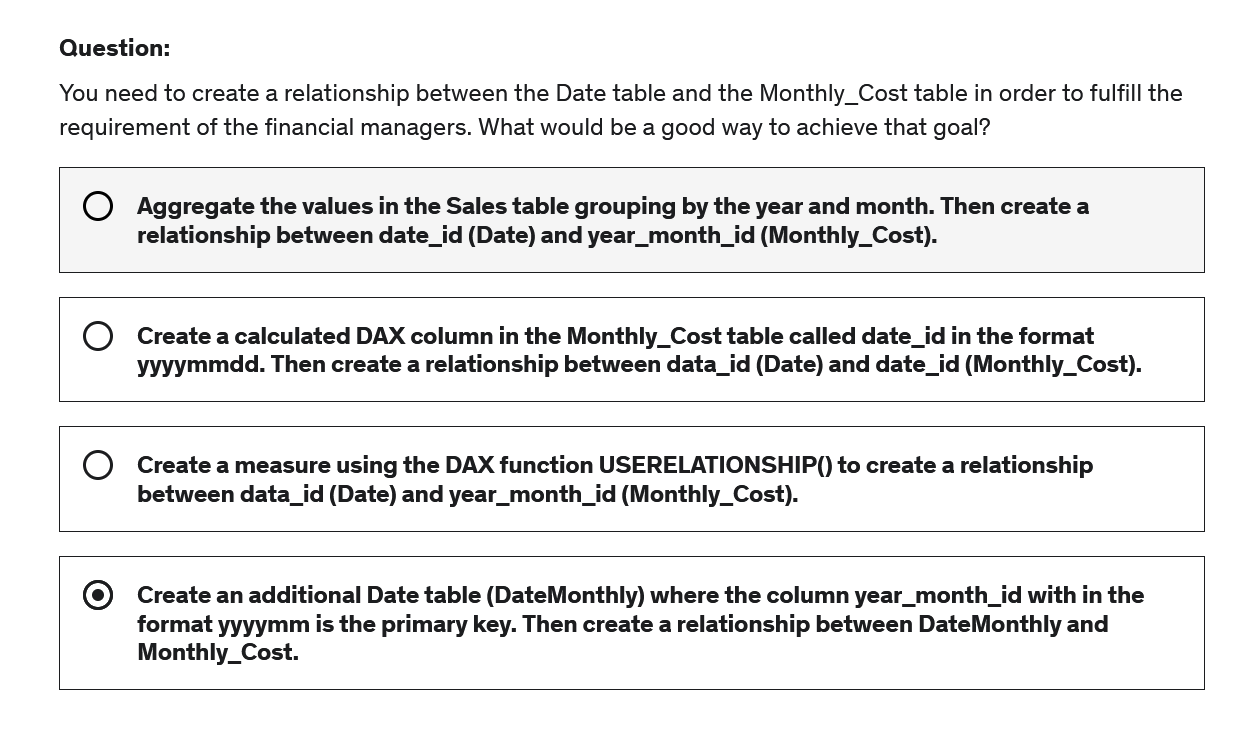
Question 3:



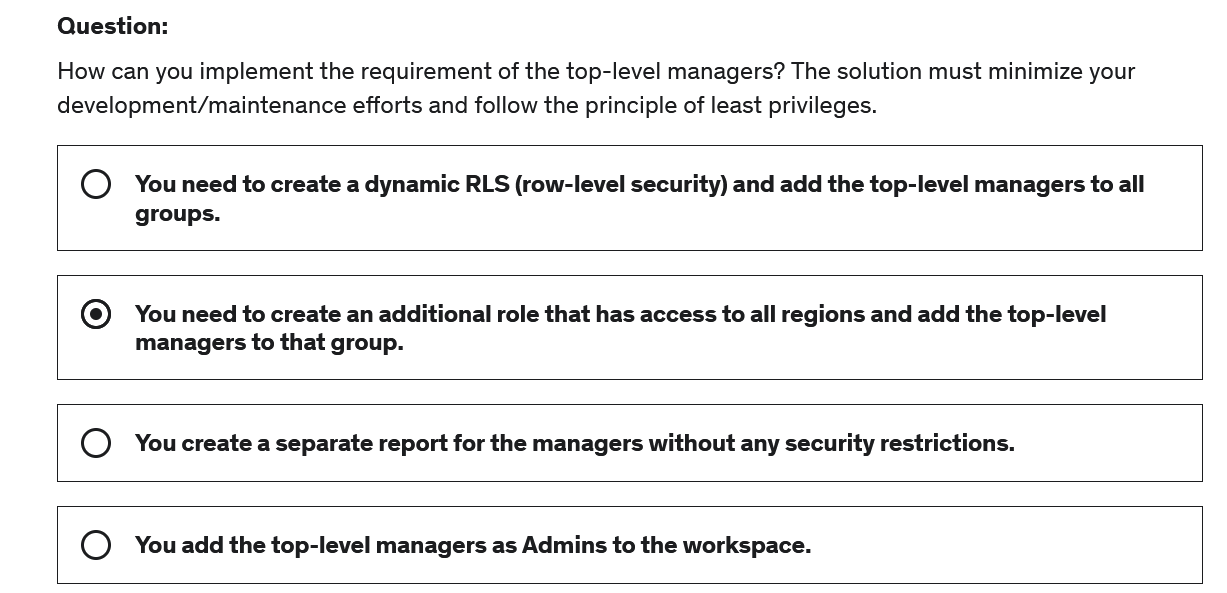
Question 4



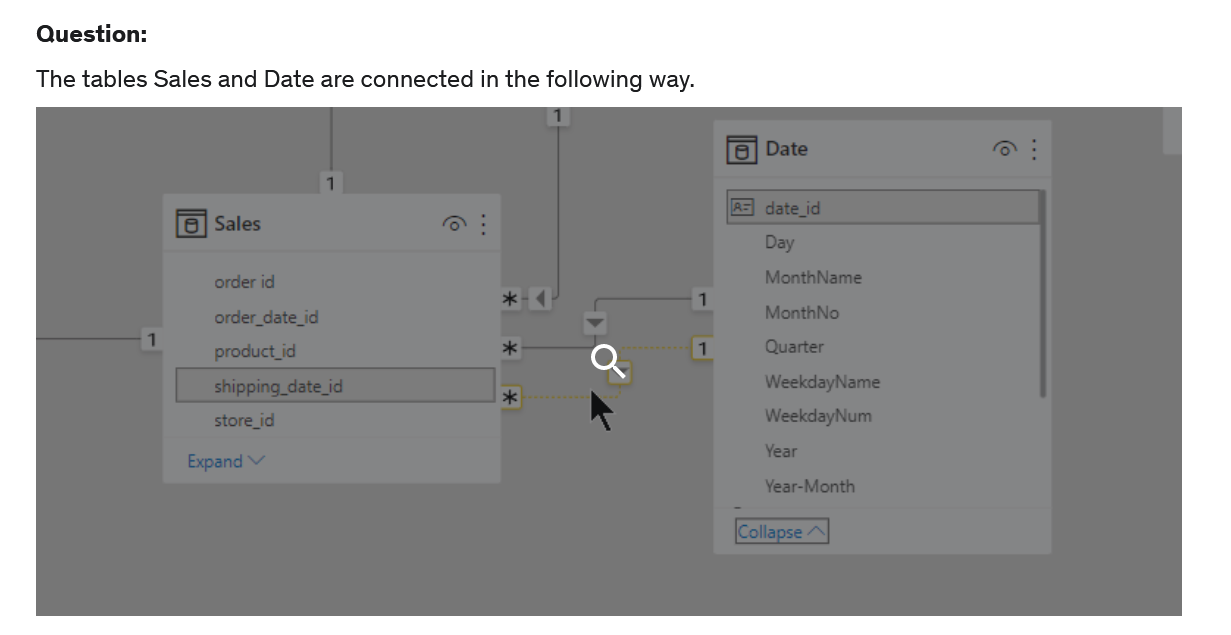
Questio 5:

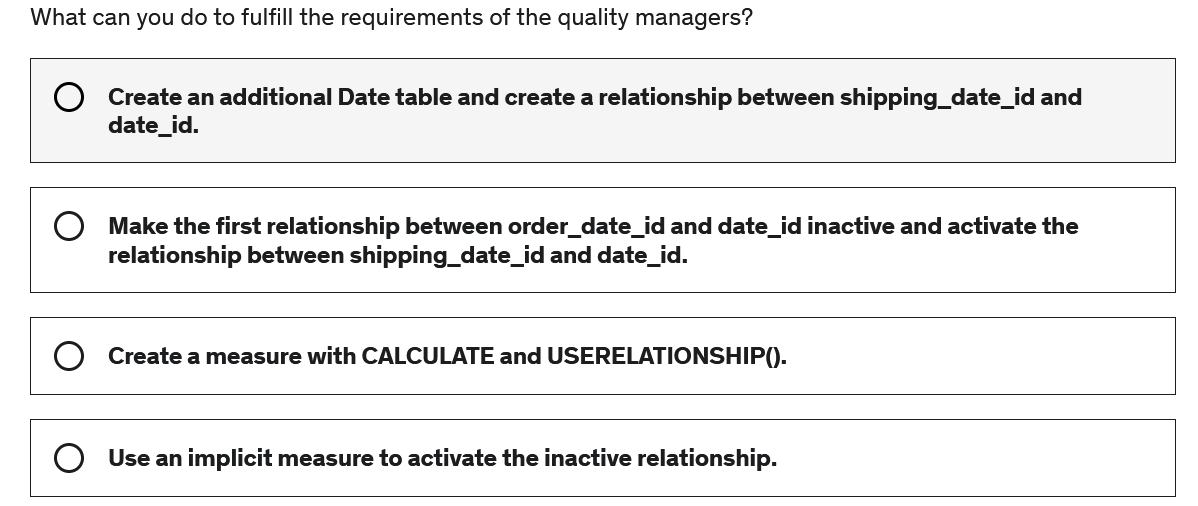


Question 6 :

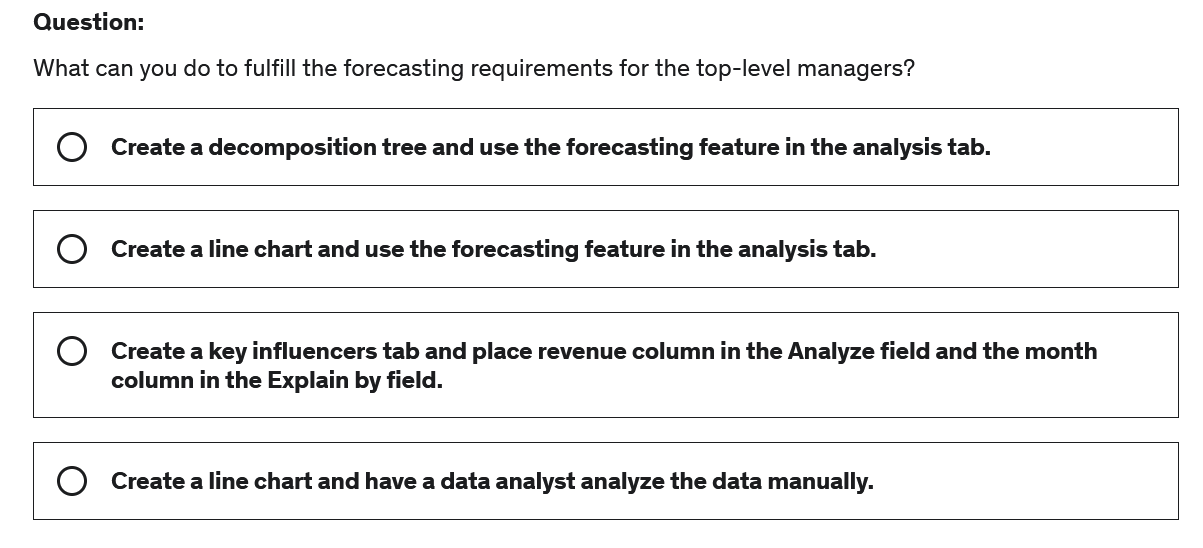


Question 7





Question 8:



Question 9 :

