Lesson 9:
Topic: Understanding Context in DAX & CALCULATE and Basic Filters, Variables

1.What is row context? Give an example in a calculated column.

Row context is the current row that is being evaluated in DAX. In simple, it does the calculation row-by-row individually. In terms of calculated column , let's say we want to get the Profit from sales table where sales amount and cost of goods sold columns by subtracting cost of goods sold from sales amount. In this case, the calculation is done row-by-row.

4.What does CALCULATE(SUM(Sales[Quantity]), Sales[Category] = "Electronics") return?

It calculates the total quantity of products, where the category is electronics.

5.Explain the difference between VAR and RETURN in DAX.

VAR is used to create a variable and RETURN compute the final result with variables which are created with the help of VAR.

9.Fix this error: A calculated column in Sales uses RELATED(Customers[Region]) but returns blanks.

There are 3 reasons that can cause error.
the first one:

First, we need to check if all CustomerID column has matches in the Customers table, mismatched values might cause an error.
the second one:

we need to check the relationship between these 2 tables and ensure that the relationship is one to many. CustomerID from customers table should be the one and CustomerID from sales table should be many.

1. the third one:

   incorrect data types. If wrong data type is applied in one of the CustomerID column in Sales and Customers table, that also causes an error.

10.Why does CALCULATE override existing filters?

When you use CALCULATE, it follows a specific sequence of steps:

1. **Initial Filter Context**: It starts with the filter context that's already active from slicers, visuals, or other filters in your report.
2. **Explicit Filters**: It takes the filters you provide in its arguments (e.g., ALL(Sales[Category]), Sales[Color] = "Red") and evaluates them.
3. **Override/Addition**: For any columns that are already being filtered by the initial context **and** are also mentioned in CALCULATE's filter arguments, CALCULATE's filters take precedence and **override** the existing ones. Filters on columns not mentioned in CALCULATE's arguments remain in effect and are combined with the new filters.

15.Troubleshoot: A CALCULATE measure ignores a slicer. What's the likely cause?

The likely cause is that the **CALCULATE function contains a filter modifier argument that is intentionally overriding the slicer's filter**. The most common culprits are the ALL(), REMOVEFILTERS(), or ALLEXCEPT() functions.