DAX Interview Questions

The following are questions to get you thinking about various aspects of DAX. They might also make good Power BI / DAX interview questions. These questions are in no particular order. All of the answers are in the box below the question. Simply change the font color to black, from white, to see the answer.

Q1 – Calculated columns vs. Measures

When might you want to use a calculated column versus a measure?

One use case would be if you want to filter on the value. In this case, it's often better to have a calculated column over a measure.

Q2 - What is a drawback of using calculated columns?

Calculated columns are physically persisted in the table so they consume both RAM and disk space. And, if the calculated column has a low cardinality, compression will be poor, thus consuming even more space.

Q3 – RELATED and RELATEDTABLE

What is required to be able to use the RELATED and RELATEDTABLE functions?

A relationship must be defined between the source and target tables.

Q4 – CALENDAR and CALENDARAUTO

What is the difference between these two functions?

CALENDAR accepts two parameters, a start date and an end date. The CALENDARAUTO function accepts a single parameter, the fiscal year end, and automatically generates a begin date and end date by examining the full data model and finding the earliest date in any table and the last date in any table and building a dates table based on that.

Q5 – Grouping Data

What is the most common table function for grouping data?

SUMMARIZE and SUMMARIZECOLUMNS

Q6 – SUM vs. SUMX

What is the primary difference between SUM and SUMX?

SUMX is an iterator function. It must be used when you need to iterate over rows in a table such as when you might need to calcualte a sales amount by multiplying quantity * sales price. The SUM function only accepts a single table column as a parameter and will sum the contents of that column.

Q7 – String functions

Name at least three different string functions in DAX

CONCATENATE, REPLACE, SEARCH, UPPER, LOWER

Q8 – Filter Propagation

How does filter propagation work in DAX?

A filter context automatically propagates from the one side of the relationship to the many side. You can also have the ability of enabling the propagation from the many side to the one side

Q9 – DISTINCT vs. VALUES

What is the difference between these two functions?

Both are very similar; they return distinct values. However, the VALUES function might return a single blank row in cases where a child row has no matching parent row. This generally applies only to dimension tables.

Q10 – CALCULATE

Explaing context transition when using CALCULATE

This occurs when DAX takes the values of the current row and uses those values to generate a filter which it then uses to find matching rows in the table. One situation in which this can occur is when you call CALCULATE without any fiter parameters. It will then process the table, row-by-row, turning each row context into a filter context

Q11 - When can you get in trouble with context transition?

When there are duplicate rows in the table. This will usually result in double counting of values.

Q12 – Row and Filter Contexts

How is a row context created?

A row context can be created one of two ways. Either by creating a calculated column or by using an iterator function, such as SUMX, AVERAGEX etc.

Q13 - How is a filter context created?

They are created automatically by using slicers and filters on a report. Or by selecting values on a report. They can be created programmatically by using the CALCULATE function.

Q14 - Define what the initial filter context is.

The initial filter context, before a function like CALCULATE does its work, is the complete collection of filters created by filters, slicers, rows and columns. Essentially anything on a report that is able to filter data in some way.

Q15 – USERELATIONSHIP

How many relationships can exist between two tables?

One active relationship and multiple inactive relationships

Q16 - What function would you use to have DAX use an inactive relationship?

USERELATIONSHIP

Q17 – DATEADD vs. SAMEPERIODLASTYEAR

What is the difference between DATEADD('Dates', -1, YEAR) and SAMEPERIODLASTYEAR('Dates')?

Nothing. They are exactly equivalent. In fact, SAMEPERIODLASTYEAR calls DATEADD.

Q18 – DATEADD vs. SAMEPERIODLASTYEAR vs. PARALLELPERIOD

What is the difference between these two functions?

Q19 – ALL and Calculated Columns

When would you use ALL when creating calculated columns?

You never would. When creating a calculated column there will never be any existing filter context.

Q20 – ALL and ALLEXCEPT

What is the difference between ALL and ALLEXCEPT and why would you use one over the other?

The ALL function includes columns for which you want to remove filters. The ALLEXCEPT includes columns for which you don't want to remove filters. One is the opposite of the other. You might use ALLEXCEPT in situations where you know you might be adding columns to a table in the future and you want filters removed from them.

Q21 – Context Transitions

Describe a situation where a context transition can produce unexpected results

When there are duplicate rows in a table

Q22 – Creating Calculated Tables

What three DAX functions could be used to create a calculated table

FILTER, ALL and VALUES

Q23 – What tool could you use to test DAX queries outside of Power BI?

DAX Studio

Q24 – List at some requirements of dates table in order to be used by DAX time intelligence functions

The dates must be at the daily granularity. The dates must be contiguous between the first and last dates.

Q25 – Retrieving Selected Values

What DAX function would you use to retrieve all selected values from a slicer in a report?