

Continue































Share — copy and redistribute the material in any medium or format for any purpose, even commercially. Adapt — remix, transform, and build upon the material for any purpose, even commercially. The licensor cannot revoke these freedoms as long as you follow the license terms. Attribution — You must give appropriate credit , provide a link to the license, and indicate if changes were made . You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use. ShareAlike — If you remix, transform, or build upon the material, you must distribute your contributions under the same license as the original. No additional restrictions — You may not apply legal terms or technological measures that legally restrict others from doing anything the license permits. You do not have to comply with the license for elements of the material in the public domain or where your use is permitted by an applicable exception or limitation . No warranties are given. The license may not give you all of the permissions necessary for your intended use. For example, other rights such as publicity, privacy, or moral rights may limit how you use the material. Every now and then we need to create a calculation containing filtered values. Like on the picture below.As you can see, among others, we can use the KEEPFILTERS() or FILTER() function. What is the difference? Performance of course.As an example, we use an Iowa Liquor Sales dataset. It contains 21 million records.Source: Iowa Liquor Sales | data.iowa.govWhen we go with the KEEPFILTERS() solution...DEFINE MEASUREIowa\_Liquor\_Sales[KeepFiltersMeasure] = CALCULATE( SUM(Iowa\_Liquor\_Sales[Volume Sold (Liters)]), KEEPFILTERS( Iowa\_Liquor\_Sales[City] IN { "Aurelia", "Avoca", "Baxter" } && AND( Iowa\_Liquor\_Sales[Sale (Dollars)] >= 10, Iowa\_Liquor\_Sales[Sale (Dollars)] < 55 ) ) )EVALUATESUMMARIZECOLUMNS( Iowa\_Liquor\_Sales[County], Iowa\_Liquor\_Sales[City], Iowa\_Liquor\_Sales, "KeepFiltersMeasure", Iowa\_Liquor\_Sales[KeepFiltersMeasure])...we get following statistics and a plan.Once you use the FILTER() function...DEFINE MEASUREIowa\_Liquor\_Sales[FilterMeasure] = CALCULATE( SUM(Iowa\_Liquor\_Sales[Volume Sold (Liters)]), FILTER( Iowa\_Liquor\_Sales, Iowa\_Liquor\_Sales[City] IN { "Aurelia", "Avoca", "Baxter" } && AND( Iowa\_Liquor\_Sales[Sale (Dollars)] >= 10, Iowa\_Liquor\_Sales[Sale (Dollars)] < 55 ) ) )EVALUATESUMMARIZECOLUMNS( Iowa\_Liquor\_Sales[County], Iowa\_Liquor\_Sales[City], Iowa\_Liquor\_Sales, "FilterMeasure", Iowa\_Liquor\_Sales[FilterMeasure] )...you get this result.As you can see, here is the performance difference for the benefit of the KEEPFILTERS() function.In this case the KEEPFILTERS() function is faster than the FILTER() calculation. Total time is 15 ms in comparison to 30 ms. The FILTER() uses two queries as opposed to the KEEPFILTERS() which uses only one query.How the KEEPFILTERS() works? It keeps an existing context and compares context filters to function's arguments. In other words, a query result is a combination of a filtered context and values from the function's arguments.How the CALCULATE() + FILTER() works? The FILTER() is an iterator. So, placed inside the CALCULATE() function it evaluates every row of a provided table (by function arguments) inside a particular filter context. In the dynamic landscape of Power BI and DAX (Data Analysis Expressions), managing and manipulating data based on specific criteria is essential for crafting insightful analyses. Two functions that play pivotal roles in this context are FILTERS and FILTER. Let's embark on a journey to demystify these functions, exploring their distinctions and understanding how they contribute to effective data filtering.I. Understanding FILTERS and Its RoleThe FILTERS function in Power BI is used to retrieve a table that contains all the active filters for the entire report. This means it captures the context filters, slicers, and any other filters applied globally.Syntax : FILTERS()Example : All Active Filters = FILTERS()In this example, 'All Active Filters' would return a table containing information about all the active filters currently influencing the data in the report.II. Decoding FILTER and Its FunctionalityOn the other hand, the FILTER function in Power BI is a more versatile tool that allows for targeted data filtering based on specified conditions. It can be applied to both columns and tables, and it is often used within calculations to filter data dynamically.Syntax : FILTER(