

DAX stands for Data Analysis Expressions. Think of it like Excel formulas but designed for analyzing big datasets in Power BI. For example, you can write `[Total Sales] = SUM(Sales[Amount])` to calculate sales across millions of rows instantly.

A calculated column works row by row. Imagine you have a sales table with “Unit Price” and “Quantity.” If you add a calculated column called `Line Total = [Unit Price] * [Quantity]`, it calculates and stores the value for every row. A measure is more dynamic — say you create `[Total Sales] = SUM(Sales[Line Total])`. It doesn’t store anything but instead calculates totals on the fly depending on filters, like “Total Sales for 2024” or “Total Sales in Europe.”

`COUNTROWS()` is like asking: “How many receipts do I have in this drawer?” If your table is `Orders`, then `COUNTROWS(Orders)` would return how many orders (rows) exist. If you filter it down to “Region = Asia,” then `COUNTROWS` only counts orders from Asia.

A circular dependency error is like writing the formula for someone’s age as `= Age + 1`. The calculation points back to itself, so it never knows where to start. In Power BI, if a calculated column references another column that depends back on it, you get that circular dependency.

Row context vs. filter context can be understood with a restaurant analogy. Row context is like a waiter calculating the bill for each table individually: “Table 5 ordered 2 burgers at \$10 each, so that’s \$20.” Filter context is when the manager looks at all orders but only for “Burgers sold today in the Lunch shift.” The filters shape the result, and the measure calculates only within that slice of the data.