



On-Demand Training: Calculation Syntax Transcript

Welcome to this video on the syntax of basic calculations in Tableau.

You can download the Exercises workbook to follow along in your own copy of Tableau.

Syntax for Calculations in Tableau

Calculated fields are created by defining a formula. The formula is composed of built-in functions or operators and fields from the data window. Let's right click on "IF Calculation" and select Edit to take a look

The right hand side of the calculation editor provides information about the functions. For example, if we select the Logical category, and then IF, we see information on how to use the IF function.

- We need to say IF (something) THEN (what to do if it's true)
- We could add an ELSEIF (which is another expression for evaluation) and then we'd have to say (what to do if that expression is true)
- Concluding with ELSE (a final condition if nothing else has been true)
- followed by END

The right hand side of the calculation editor can be collapsed to save space

To break that down with a concrete example, let's create a simple logical calculation on our profit field. Right click in the data window and select "Create Calculated Field"

- We'll name it Profit cutoff
 - First, we'll type IF
 - Note the autocomplete coming up as I type
 - Down here, we see that the calculation contains errors. We can ignore that for now because we're not done, but it's a good idea to keep an eye on this indicator as we build our calculations
- Next we'll type SUM(
 - This is because we want to aggregate the measure so that our results are computed correctly regardless of the structure of the view
 - For more information, see the Aggregation, Granularity, & Profit Ratio video.
 - Aggregations are colored light blue in the formula
- Here we can either type in "Profit" or drag the field in from the data window
 - Note those square brackets – this isn't necessary for a single-word field name, but if we were using a field like Shipping Cost, we'd need those brackets because of the space.
 - We'll close the parentheses to wrap up the aggregation SUM
 - Note that field names are colored orange in the formula
- Now let's think about what we want to show – if profits are over 150,000 dollars, we want to call those Sub-Categories High Profit

- To write this in a calculation, we'd use the greater than operator and then our value
 - > 150000
 - standard operators (like addition, multiplication, and comparisons like less than or equal to) are supported
- And we tell the calculation what to do if that condition of greater than 150,000 is met – call those marks “High Profit” by saying
 - THEN “High Profit”
 - THEN doesn't need to be in all caps, but it can be a good habit to get into
 - And note that the words themselves must be set off in quotes to let the calculation editor know they are text
- We have to specify what will happen if the condition is NOT met
 - ELSE “Not High Profit”
- Hmm. We see the indicator at the bottom says the calculation still contains errors.
 - Clicking on the indicator gives us more information – ahh, an IF statement needs to end with END
- Add that in and now the calculation is valid
- We'll hit OK

Now if we bring that calculated field to Color, we see that all bars above our reference line are coded High Profit, and all anything below is coded Not High Profit.

Conclusion

Thank you for watching this Calculation Syntax training video. We invite you to continue with the On-Demand Training videos to learn more about using Tableau.