



On-Demand Training: Type Calculations Transcript

Welcome to the Type Conversion Calculations Video. You can download the Exercises workbook to follow along in your own copy of Tableau.

Data Validation - Check Length

Here we have a dataset of patient IDs and patient names. A Patient ID should be at least 3 digits, and to check this we can look at the length of those IDs.

- We'll create a calculated field by
 - Right clicking in the data window and selecting Create Calculated Field
 - We'll call this "Length"
 - For the formula, we'll type LEN(
 - And then drag out [Patient ID] and close the parentheses
 - But hmm, the indicator shows that we have an error.
- Click on the indicator to bring up the error message.
- The Length formula LEN needs a string, or text, rather than numbers in order to work.
- So what we need to do is convert this number to a string. This is where the Type Conversion functions come in.
 - We'll wrap Patient ID in the string function by clicking in front of the field
 - And typing STR then wrapping the whole thing in parentheses
 - LEN(STR([Patient ID]))
- The calculation is valid because length is applied after the string conversion. We'll click OK
- We can see here that the calculation has been created as a measure, but it should be a dimension. We'll just drag it up into the dimensions area
- Let's bring this out into the view and look at Number of Records.
- Yep, it looks like we have a couple IDs that are less than 3 characters, so we're going to have to go through and make sure those errors are corrected.

Rounding Down

Here, we have a data set with students and their birthdays, but we want to see how old these students are.

- We'll right click, Create Calculated Field, and call this "Age"
 - We'll use the formula DATEDIFF to find the difference between two dates. For more information on the DATEDIFF formula, please see the Date Calculations video.
 - Here we're looking for the number of days between our start and end dates. Our start date is Birthday, and we want to know how old these students are today, so we'll use the TODAY function.

- Close the parentheses, and because we're counting the number of days between these dates, we need to divide by 365 to get the ages in years
- The calculation is valid, and we'll click ok
- Let's bring out the ages. Oh, dear. Look at these decimal points...
- What we want is just the whole number for age, to get that we need to round down to the whole number. We can do this using the integer function. This will strip away the decimals leaving just the whole numbers
- We can right click on Age and go to edit and we'll wrap the entire calculation with the INT() function
- Don't forget the parentheses at the beginning and end.
 - `INT(DATEDIFF('year', [Birthday], TODAY()))`
- This time, the DATEDIFF is evaluated first and then the Integer is applied.
- And we now get whole numbers for our ages

You may be wondering why we didn't just use year with DATEDIFF. Here we have a calculation with DATEDIFF with years.

- Let's bring this to our view.

We get some birthdays that are off by a year. This is because DATEDIFF with year simply subtracts the year values from each date instead of considering the day and month of the dates as well.

Conclusion

Thank you for watching this Type Conversion Calculation Video. We invite you to continue with the On-Demand Training videos to learn more about using Tableau.