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Hands-on Lab: Putting the FUN in Functions: Table Calculations



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Knowledge



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Select the **Putting the FUN in Functions: An Intro to Table Calculations** lab in the drop-down



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Training Content Developer



Agenda

Why would I need a table calculation?

What are table calculations?

Exercises

How can I learn more?

Why would I need a table calculation?

Table calcs answer questions like...

- How do I divide two values in my data in Looker?
- How do I add a field to my report without waiting on an analyst?
- What if I need a field just one time, and don't want to add it permanently to my model?

What are table calculations?

Pretty on-the-fly for a calculation guy

Table calcs are...

- Similar to Excel functions, they perform transformations on **data in the data table**.
- Only able to reference fields included in the report.
- An easy way for everyone to create their own calculations on the fly without the help of an analyst!

Table calcs are...

Based on Looker expressions (Lexp)

Edit Table Calculation

Calculation 1

Default Formatting

sum()

abs(Number)
acos(Number)
add_days(Number, Date)
add_hours(Number, Date)
add_minutes(Number, Date)
add_months(Number, Date)
add_seconds(Number, Date)
add_years(Number, Date)

Function "sum" requires 1 argument, 0 given

sum(expression)
Returns the sum of the column created by
expression unless expression defines a
column of Lists, in which case returns the sum of
each List

Help + Syntax Reference

Cancel

Save

substring()

sum()

if()

mean()

diff_days()

concat()

Exercises

Let's get our hands in there!

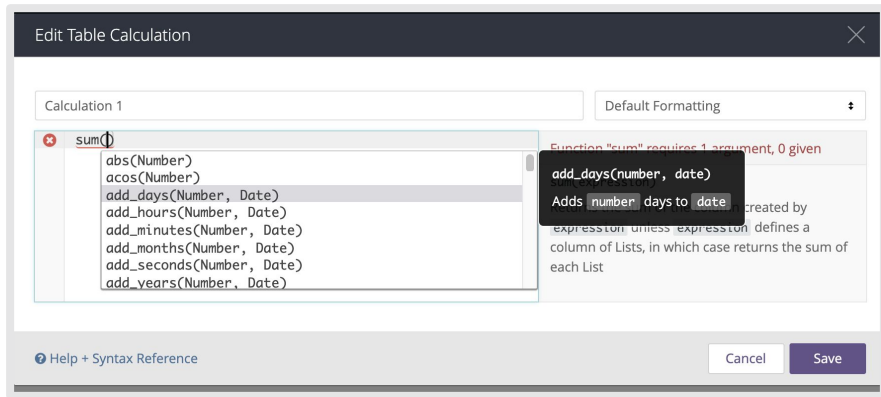


sum()

Things are adding up

What region makes the largest percent of the world's GDP?

- ✓ Use a sum function to find the total world GDP.
- ✓ Divide the GDP of each region by the total to find a percentage.



sum()

Things are adding up

Question: What region makes the largest percent of the world's GDP?

1. Add the fields **Region** and **GDP** to an Explore.
2. Open the calculations modal and type
`sum(${education_international_education.total_GDP})` to get the [total world GDP](#).
3. Open the calculations modal and change the calculation [to](#)
`${education_international_education.total_GDP}/sum(${education_international_education.total_GDP})`
4. [Optional](#): Repeat the process with world population by region, to compare GDP and population percentages.

if()

If not now, when?

Just how much of the world uses a “dollar” as a form of currency? There are American Dollars, Canadian Dollars, Barbados Dollars...

- ✓ Use `contains()` to single out currencies that have “dollar” in the name.
- ✓ Use a combination of the `sum()` and `if()` functions to sum the number of people who use dollar currencies.

```
if(yesno_expression, value_if_yes,  
value_if_no)  
  
If yesno_expression evaluates to yes, returns  
the value_if_yes value. Otherwise, returns the  
value_if_no value
```

if()

If not now, when?

What percent of the world's population uses a "dollar" currency?

1. Add the fields for **Currency Unit** and **Population**.
2. Use `contains(${education_country_summary.currency_unit}, "dollar")` to find all of the currency units with "dollar" in the name.
3. `if(contains(${education_country_summary.currency_unit}, "dollar"),
${education_international_education.total_population}, null)`
4. To get the final percent,
`sum(if(contains(${education_country_summary.currency_unit}, "dollar"),
${education_international_education.total_population}, null))/
sum(${education_international_education.total_population})`
5. Bonus: Change the currency to Euros or Yuan.

substring()

I'll take the first three characters, please.

Our data looks a little messy with country codes combined and names in the same column. I want just the first three values of each value of the country code.

- ✓ Use `substring()` to break apart the string values.

```
substring(string, start_position, length)  
Returns the substring of string beginning at  
start_position consisting of length  
characters
```

substring()

I'll take the first three characters, please.

I want the first three values of the country code.

1. Add the field for **Country Codes**.

2. Use the function

`substring(${education_country_summary.country_codes},0,3)` to grab the first three values of the column.

3. Bonus: How would I go about grabbing the last three values?

If a string is n characters long, we want `substring(${field_name}, n - 2, 3)`

How can I learn more?

Sky's the limit

Resources for more table calculations!

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On This Page

Some Functions Are Only Available for Table Calculations

Mathematical Functions and Operators

String Functions

Date Functions

Logical Functions, Operators, and Constants

Positional Functions

Filter Functions for Custom Filters and Custom Fields

Looker Functions and Operators

Table calculations, custom fields, and custom filters use Looker expressions. A major part of these expressions are the functions and operators that you can use in them. This page includes information about all of these functions and operators.

The functions and operators can be divided into a few basic categories:

- Mathematical: Number-related functions
- String: Word- and letter-related functions
- Dates: Date- and time-related functions
- Logical Transformation: Includes boolean (true or false) functions and comparison operators
- Positional Transformation: Retrieving values from different rows or pivots

Some Functions Are Only Available for Table Calculations

Looker expressions for custom filters and custom fields can use most functions and operators while table calculations can use any function or operator. This page is organized to make it clear which functions and operators are available, depending on where you are using your Looker expression.

The functions that are available only for table calculations are typically functions that convert datatypes, aggregate data from multiple rows, or refer to other rows or pivot columns.

Mathematical Functions and Operators

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User Guide

Getting Started

Help Center

Documentation

Search results

131 results for "table calculations"

Knowledge base

Subtotals with Table Calculations

Looker Help Center > Exploring Data > How To · Sean Higgins · 5 months ago

Using Table Calculations, we can create a 4th column, that will show this inline with the last row of each Brand:

Rolling Average Using offset_list in Table Calculations

Looker Help Center > Exploring Data > How To · Lindsey Meyer · 5 months ago

The offset function in table calculations allows you to reference a single value in a previous or following row.

Other Buckets Using Table Calculations

Looker Help Center > Development > Patterns · Zev Lebowitz · 5 months ago

Using table calculations, however, we can replace the last row in this table with the sum of events from all rows excluded

Conditional Formatting using Table Calculations


Looker Help Center > Exploring Data > How To · Mike Slovich · 5 months ago


The second approach, leveraging table calculations for conditional formatting, is detailed in this article, with two examples

Looker Functions and Operators
documentation









help.looker.com

Resources for more table calculations!

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Topic		Replies	Views	Activity
⚡ About the Table Calculations category This category is for anything and everything table calculations!		0	3.1k	Jul '15
Stats table calcs: comparing rates over time (Bonus: anomaly detection!) statistics, tablecalcs	   	11	4.5k	Oct 16
Table calculation (division) is showing huge number	 	1	265	Oct 15
Table calculation total wrong		0	501	Oct 3



Looker Community

Questions?

The background is a solid purple color. A central point has numerous thin, light-purple lines radiating outwards across the entire frame. There are three distinct clusters of small, light-purple squares: one on the left side, one in the upper right quadrant, and one in the lower right quadrant.



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Thank you

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